The Commonwealth

Tender for the development of a Public Debt Management System

Information Memorandum

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1 INTRODUCTION

The Commonwealth is a voluntary association of 53 countries that support each other and work together towards shared goals in democracy and development. The Commonwealth Secretariat (www.thecommonwealth.org) is mandated by Commonwealth Heads of Government to provide technical assistance and policy advice to member countries.

The Commonwealth Secretariat's debt management programme focusses on technical assistance needs of its member countries to build capacity in debt management. At the heart of the programme is assistance through its globally renowned system – Commonwealth Secretariat - Debt Recording and Management System (CS-DRMS), developed and maintained in-house at the Secretariat. The system is promoted as a global public good for the Commonwealth, and is widely regarded as a world leading system in the field.

First deployed in 1985, the software is provided free of charge to Commonwealth member states. The software is also made available to non-Commonwealth countries through a UK based distributor. As of now, the software has been made available to more than 60 countries around the world at over 100 sites.

The current generation of CS-DRMS running on the Windows platform came into being in 2001. Since then a number of major versions have been released in addition to regular service packs to ensure that the application remains relevant as an operational and debt management tool for debt managers.

With significant advancement in technology and new developments in debt management practices, the Secretariat has launched a project to design and develop a new public debt management system based on state-of-the-art Microsoft.Net technologies. The new system will also provide functionalities to incorporate comprehensive requirements for public debt management.

It is in this context that the Secretariat is seeking to enlist the services of an established software development firm for the design, development, testing and documentation of the new system.

On the successful conclusion of the development activities, pilot implementation of the new software and warranty, the Secretariat will assume maintenance and support activities of the system in-house. However, the services of the software development firm may be enlisted for further development work depending on the nature and size of future enhancements to the system.

2 TENDER PROCESS TIMETABLE

Set out below is the indicative timetable for this tender process. This is intended as a guide and whilst the Commonwealth Secretariat does not intend to depart from the timetable, it reserves the right to do so at any time.

Milestones	Date
Stage 1	
Information Memorandum available to download and PQQ available on request	8 October 2014
PQQ submission date	10 November 2014
Notification of up to 8 shortlisted Bidders for Stage 2	28 November 2014
Stage 2	
Issue of Business Requirements Specification (BRS) and Invitation to Submit Outline Proposal (ISOP) to shortlisted Bidders	1 December 2014
Commonwealth Secretariat WebEx presentation to all shortlisted Bidders	w/c 15 December 2014
Outline Proposal submission date	02 February 2015
Presentation of Outline Proposal to Commonwealth Secretariat by Bidders	w/c 16 February 2015
Notification of up to 3 shortlisted Bidders for Stage 3	13 March 2015
Stage 3	
Issue of Invitation to Tender (ITT) to shortlisted Bidders	16 March 2015
Individual Bidder meetings	w/c 30 March 2015
Final Tenders submission date	8 May 2015
Presentation of Final Tenders to Commonwealth Secretariat by Bidders	w/c 18 May 2015
Selection of Preferred Bidder	5 June 2015
Award of contract	By 29 June 2015

3   DEBT MANAGEMENT PROGRAMME

The Commonwealth Secretariat's debt management programme is funded from the Commonwealth Fund for Technical Cooperation (CFTC) and focusses, amongst others, on meeting the debt management technical assistance needs of its member countries. At the heart of the programme is assistance through its in-house developed software – CS-DRMS, which is deployed in over 60 countries globally. The Secretariat also offers two other systems the Securities Auctioning System (CS-SAS) which supports the auctioning of Government securities and Horizon which is designed to assist countries formulate and implement their medium term debt strategies.

The scope of this project is for the development of a new public debt management system to replace CS-DRMS. The new system will however seamlessly share data with Horizon and CS-SAS through pre-defined electronic data templates.

3.1 CS-DRMS

CS-DRMS (www.csdrms.org), launched in 1985, is an integrated tool for recording, monitoring and reporting public debt. The scope of CS-DRMS has significantly evolved over the years, undergoing a series of enhancements to take into account (i) changes in debt management practices, (ii) global debt initiatives, (iii) changes in creditor practices and (iv) changes in information technology. (See brochure at http://www.csdrms.org/uploads/public/documents/publications/CS-DRMS%20Version%202.pdf)

The software provides a central repository for several categories of public and publicly guaranteed external and domestic debt covering a wide range of debt instruments. The system, available in English and French, has been developed using Delphi 7 programming language. It is based on client/server architecture, runs on Windows Server and clients and supports Oracle and SQL Server databases. It comprises different modules for loans and securities management.

The **Loans Management Module** allows recording of loan data, terms and conditions from multilateral, bilateral and commercial creditors. It can also handle complex instruments such as multicurrency and multi-tranche loans.

The **Securities Management Module** provides for capturing details of a wide range of securities covering treasury bills, bonds, promissory notes and commercial papers.

The system integrates a powerful feature for **forecasting** disbursement and debt service flows. Debt managers can record actual disbursements and payments based on which the system can compute arrears, future payment obligations and penalties.

CS-DRMS comes with a **Debt Re-organisation** utility which allows for the implementation of various types of debt restructuring covering loans and securities such as refinancing, rescheduling and write-off.

The software enables debt managers to record and execute a number of **liability management options** such as currency conversion, interest rate conversion, etc. to hedge their debt against currency and interest rate risks.

CS-DRMS also comes with an **Analytical Module** designed to assist debt managers to conduct sensitivity analysis and portfolio reviews.

The software comes with an extensive set of Standard Reports which can run across loans and securities and that can be generated either on aggregate or instrument-wise basis. Specialised tools are also available for generating debt data according to the reporting requirements of the IMF/World Bank's Medium Term Debt Strategy (MTDS), Quarterly External Debt Statistics (QEDS), World Bank's Debtor Reporting System (DRS) and World Bank Quarterly Public Sector Debt Database (QPSD). CS-DRMS is also provided with a Report Writing Tool which allows clients to develop their own country specific reports.

3.2 OPERATIONAL ENVIRONMENT

Sound international practices in public debt management require an operational environment that facilitates clearly defined roles for the entities mandated to manage the government's debt portfolio. However, institutional arrangements for public debt management vary among countries, from a structure that is highly centralised with an integrated debt management office, to a decentralised structure where the responsibilities of managing the debt portfolio are dispersed across various agencies. Notwithstanding the differences in institutional arrangements, the debt management functions are typically organised into front, middle and back offices.

A detailed overview of the operational environment in which the new software needs to work is set out in Annex I.

4 SCOPE OF WORK

The Commonwealth Secretariat is planning to invite proposals from appropriately qualified software development companies for the design and development of the new public debt management system. The subsequent maintenance of the system following training, piloting, warranty and handover will be handled in-house by the Secretariat.

The system will be web-based, developed using Microsoft .Net technologies (e.g. c#, Silverlight, etc.), run on the Windows platform and support clients that use either SQL Server or Oracle databases.

The system will reflect latest industry trends and standards. The system together with other deliverables will be submitted to the Commonwealth Secretariat, Quadrant House, Pall Mall, London SW1Y 5HX.

All deliverables will be finalised after discussion and acceptance by the Secretariat in accordance with agreed contract terms.

All draft, intermediary and final deliverables produced as part of this assignment will be the property of the Commonwealth Secretariat who will hold the copyright to their use and distribution.

4.1 OBJECTIVES

The system will be a business-friendly debt management system meeting a number of broad objectives including the following:

	Objectives
1.	Comprehensive system to record, manage and analyse public and publicly guaranteed debt, lending instruments, derivatives and private sector external debt.
2.	Better response to client's expectations through the support of more complex financial instruments and better abidance with creditor practices.
3.	Closely mirror and enforce debt management best practice business processes, information flows and internal controls; ability to model client's workflow arrangement/institutional structure for debt management.
4.	Built around data driven work flow to bring accountability and transparency; Driven by alerts and notifications integrated with mail exchange systems to support the business workflow process.
5.	Real-time reporting on debt stocks and flows of the entire portfolio through easy-to-use reporting and data mining facilities.
6.	Catering for both cash and accrual accounting.
7.	Compliance with accounting standards based on the guidelines provided by the International Public Sector Accounting Standards (IPSAS) Board.

	Objectives
8.	Built-in interactive and richer analytical functionalities to support decision making.
9.	Integration with government financial management information systems and other systems such as SWIFT, Book Entry System, etc.
10.	Better compliance with international recording and reporting standards as set out in the "External Debt Statistics: Guide for Compilers and Users", the "Handbook on Securities Statistics" and the "Public Debt Statistic: Guide for Compilers and Users".
11.	Increased modularity and re-use of components for ease of maintenance.
12.	System to be based on "industry-standard" platform for which development skills at reasonable rates are readily available; the maintenance of the system will as such be economically feasible over the long term.
13.	Easy deployment of customised system in a centralised, de-centralised or hybrid debt management operational environment.

4.2 SYSTEM REQUIREMENTS

4.2.1 Broad functional requirements

The system will provide an integrated tool for recording, accounting, reporting, monitoring and analysing public and publicly guaranteed debt, lending portfolio and derivatives. As well as providing a comprehensive repository for external and domestic debt and guarantees on an instrument-by-instrument and aggregate basis, the system will also allow users to record and manage grants and private sector external debt.

The table below, broadly gives a list of the system functions, requirements and objectives in relation to the various instrument cycles.

No	Function	Functional requirements	Objectives
1.	Mandate and Planning	- Create Mandate, giving the Debt Management Office the authority to borrow.	The system shall allow the recording of the legal limits on overall borrowing, the annual gross borrowing requirements as well as the agreed annual borrowing plan.
2.	Pre-Agreement	- Record and Monitor Negotiations - Manage Pipeline Instruments (Loans, Grants, Securities, Guarantees)	The system should provide for features to support the debt management office to record and manage all the activities and documents during the negotiation stage of contracting financial instruments. This will include comparison of loan offers, process for requesting, receiving and processing international offers for securities, pricing of guarantee and lending fees.
3.	Contracting	- Managing the legal opinion process - Recording of the prospectus for securities issuance - Converting pipeline agreements into active instruments	The system will manage the contracting process of the preferred instrument/agreement and the activation thereof.
4.	Instrument Recording	- Record instrument details (including auction results and the order book)	Recording of instrument details including the borrowing terms will be through a financial product

No	Function	Functional requirements	Objectives
		- Record instrument borrowing terms and conditions - Record relevant legal provisions applicable to the instrument - Record embedded options details - Record user defined data items relevant to the instrument - Manage effectiveness conditions of instruments	template based approach. These templates will be set up for particular creditors or borrowers specifying many of the instrument characteristics common for that particular creditor/borrower. A creditor/borrower may have a number of templates if they have a number of different types of instruments. The features provided should allow for instrument-by-instrument recording as well as period based-aggregate recording.
5.	Stocks, Flows and Indicators	- Generate instrument forecast cash flows for principal repayments, interest payments and other payments in instrument and local currency - Generate instrument daily stock balances in instrument and local currency - Generate other instrument based indicators i.e. Present Value, Grant Element, Average Time to Maturity, Yield, Duration, Average Time to Refixing.	The system will provide flexible and easy to use features for generating and calculating stocks, flows and indicators at the instrument level on daily basis. The stocks, flows forecast will be based on the borrowing terms defined in the recording of the instruments.
6.	Payments and Receipts	- Record disbursements transactions - Record bills and invoices based on creditor practices - Generate bills in case of lending - Record actual debt service transactions - Record other instrument based	The payments and receipts features to be provided in the system shall model the billing practices of the creditor and also support borrower accounting procedures and practices.

No	Function	Functional requirements	Objectives
		transactions	
7.	Enhancement, Re-opening and Cancellation	- The system shall provide features to record cancellation and enhancement/re-opening transactions against instruments to decrease or increase overall instrument amount.	The system will provide for the facility to record cancellations, enhancements and re-openings and to regenerate forecasts of flows, stocks and indicators accordingly.
8.	Liability Management Operations and Restructuring	- The system will support five main forms of reorganisation: ▪ Debt Write-off or Forgiveness ▪ Rescheduling - postponement of all or part of the debt-servicing payments. ▪ Refinancing ▪ Debt Conversion ▪ Debt Assumption - The system will support the following Embedded Options and Derivatives: ▪ Call and Put ▪ Interest Conversion and Swap ▪ Currency Conversion and Swap ▪ Interest Rate Cap ▪ Interest Rate Collar ▪ Specified Rate Fixing ▪ Prepayment ▪ Forward FX deals and Forward rate agreement ▪ Money market futures and bond futures - Securities specific debt reorganisation types: ▪ Split and Merge ▪ Strip and Reconstitute ▪ Switch ▪ Buy Back	The liability management operations shall provide for tools to allow debt managers undertake and assess the impact of risk management operations on their debt and lending portfolios. The operations will include undertaking debt restructuring, executing embedded options, swaps or forwards/futures. In general the system shall include the following functions: ▪ Debt Reorganisation ▪ Options ▪ Swaps ▪ Prepayments ▪ Forwards/Futures
9.	Instrument Closure	- Change instrument status to mature when there are no outstanding payments.	The system shall include features to close instruments automatically after maturity while still available

No	Function	Functional requirements	Objectives
		- Close instrument after a user defined period following maturity	for reporting. The closure and archiving period shall be user defined.
10.	Instrument Archiving	- Archiving instruments after the instrument closure period has expired - Historical reporting shall include archived instruments	The system shall include features to archive instruments that have matured and reached the end of their closure period.

11.	Reporting	- The system will have four ways of obtaining reports:
		  o Fixed and standard Reports
		  o Dynamic/Drill-down interactive reports or charts
		  o Dashboard
		  o End-User Reporting Tool
			The system should have comprehensive reporting facilities to meet the operational, analytical and statistical requirements of debt management.

12.	Debt Analysis	- The features to be provided will include:
		  o Portfolio Analysis
		  o Scenario Analysis
		  o Sensitivity Analysis (exchange rates, interest rates and macro-economic data)
		  o New Borrowing Analysis (borrowing cost and impact on the existing portfolio)
			The system will provide debt managers with features to undertake detailed portfolio analysis in terms of key debt and risk indicators. The system should also enable debt managers to conduct scenario analysis by incorporating future borrowing requirements and macro-economic movements. Sensitivity analysis on the future debt portfolio can be applied to such scenarios.

13.	System-Wide functions	- **Interfaces** – many interfaces are required to both import and export data and reports. Both automated and file based interfaces will be available because of the many different environments in which the system will operate. Refer to	The system-wide functions will include a series of processes and other features that will support the recording, management and analysis of the debt and lending portfolio.

No	Function	Functional requirements	Objectives
		section 4.2.3 in this document. - **Accounting** – the system will produce accounting entries for posting to a general ledger. There will be options to produce cash-only journals, amortised cost journals and fair value journals. - **Scheduled Tasks** – the system will have the capability to run scheduled tasks (e.g. batch reports, database back-ups). - **Data Entry Validation** –all data input to the system, either manually or electronically, will be subject to in-built validation. - **Document Storage and Retrieval** – it will be possible to store, search and retrieve any document associated with an instrument or any other entity within the system. - **User Help** – the system will provide context-sensitive help for all the features of the system. - **Master Data** – the system will allow the user to maintain all reference data needed for the functions of the system. E.g. creditor details, non-business days, bank account details, macro-economic variables and daily information such as FX	

No	Function	Functional requirements	Objectives
		rates, etc. - **Workflow management system** – user configurable workflows that include authorisation and verification activities based on the debt management office processes. The system will also generate messages and alerts.	
14.	Data Migration	- Seamless transfer of data from the existing CS-DRMS to the new system.	The system shall provide for a data migration tool to migrate data from the existing CS-DRMS database to the new system database.

4.2.2 Non-Functional Requirements

4.2.2.1   Language Independence

The system should be developed to support multiple languages (single-byte as well as multi-byte languages). Bidders will explain how this will be achieved.

For this project, the system will be delivered in English. Bidders are invited to optionally quote for translation to other languages in particular French, Spanish, Russian or Arabic. Cost for the translation should be provided separately. The Secretariat reserves the right to decide whether to enlist the translation services as part of this software development project.

4.2.2.2   Other non-functional Requirements

The table below shows a list of other non-functional requirements as a guide to the development of the system.

No.	Requirement Description
Technical Requirements	
1.	The system should be built on N-tier Service Oriented Architecture.
2.	Business logic should be implemented as discrete executable components or services.
3.	The system should support multilingual interface and labels.
4.	The system should ensure easy scalability and extensibility.
5.	The system should be designed in a manner that operational data is not lost in

No.	Requirement Description
	case of any failure of equipment or communication network.
6.	The system should run on latest versions of multiple browsers (Internet Explorer, Macintosh Safari, Firefox, Google Chrome).
7.	The system should be designed for access through browser-based systems and mobile phone/ handheld interfaces through SMS/ Text messaging.
8.	The system should be designed to have satisfactory performance even when connected on low-bandwidth (minimum 64 kbps).
9.	The system should be provided along with the product manuals, functional specifications (with the transaction, report and field level descriptions), technical specifications (description of source program, format of each fields, etc.), Database Manual (i.e., Data Dictionary) and context-sensitive help on the system usage, user interface and fields accessible in both online and offline modes.
10.	The system should implement audit data trail and user trail.
11.	The system should implement a Workflow-based model supported by messaging and alerts.
12.	All parameters and master data values, including configuration parameters, should be captured dynamically and no hard-coding of values should be done within the system. It should be possible to upload master data values electronically for example using csv files.
13.	The system should implement WS-Security standards for XML encryption and XML signature.
14.	The system should support usage of digital certificates and multi-tier bases authentication for performing critical transactions (e.g. payment processing).
15.	The system should support digital signing and encryption of attachments (digitised documents) compliant to PKCS standards.
16.	Upgrades of the new system (fixing of defects or adding new enhancements or releasing new versions) should not have any adverse impact.
17.	The system should support front-end modification for the following items: • Look and Feel (e.g. colour, font size, font style) • Logos • Display Language This should be user configurable.
18.	The system shall facilitate exporting and importing of data to other systems. It shall be provided both directly on the database and through the front end of the system.
19.	The system should ensure that data deletion is controlled centrally as per the defined policy.
20.	The system should restrict users from deleting key data directly unless authorised to do so.
21.	The system should support logical deletion first and physical deletion should be done only as per the business policy either at day end or month end to allow the reversal of deletion by user whenever necessary

No.	Requirement Description
22.	The system code should not contain invalid references to network resources (pathnames, URLs etc.).
23.	The system should not display the entire path of URL in the browser based system.
24.	The system should include an explicit error and exception handling capability. System error and exception handling messages displayed to users must not reveal information that could be utilised in a subsequent attack. Error messages should not include variable names, variable types, SQL strings, or source code. The system code should not rely on internal system generated error handling.
25.	System failure should not result in an insecure state of the system.
26.	A system process should remove temporary objects from memory or disk before it terminates.
27.	The system should support e-mail/SMS integration, upload and download of multiple types of documents into the system that include office documents, images.
28.	The system should provide all important transactions confirmation, e.g. information update, authorisation and deletion.
29.	The data model should be flexible to cater for addition of more data fields as per changing business needs.
30.	The data should have to be entered only once and data redundancy across modules must be minimised to eliminate real time synchronisation needs.
31.	All functionalities like data entry screens, various reports, integration etc. should use a common unified system platform suite to provide ease of management and to avoid compatibility issues.
32.	The system should provide data migration tools for migrating data from the existing CS-DRMS system to the new system.
33.	The system should be able to use end-user reporting tools (i.e. Report Builder or Crystal Reports) to enhance customised reporting facilities.
34.	The system should be developed using a pluggable architecture so that additional modules can be added without changing the core system.
35.	The system should provide for Straight Through Processing (STP) when interacting with other financial systems for data exchange.
36.	The system should be compliant with the following standards or equivalent: <table>

Application	Standard
Application Development	W3C Specification
Information access/transfer Protocols	SOAP, HTTP/HTTPS
Interoperability	Web Services, Open Standard
Photograph	JPEG (minimum resolution 640 X 480 Pixels)
Digital signature	RSA standards
Document encryption	PKCS specification

No.	Requirement Description	
	Information Security	ISO 27001 certified System (or later version)
	Operational Integrity & Security Management	ISO 17799 certified System
	Framework for IT Governance	Control Objectives for Information and related Technology (COBIT) framework
	Service Management	ISO 20000 specifications

System Availability, Performance, and Scalability (running on a 64 kbps network)

No.	Requirement Description
37.	The system must perform satisfactorily with a portfolio having an average of 20,000 instruments.
38.	The system should provide for both windows user authentication and database authentication to access the database.
39.	The system must be available to users with an uptime of at least 99%.
40.	The system must provide adequate response times (<=2 seconds) for commonly performed functions under both standard and peak conditions.
41.	The system must be able to perform a simple search within 1-2 seconds and an advanced search (multiple search criteria) within 4-5 seconds regardless of the storage capacity or number of cases in the system. In this context, performing a search means returning a result list. It does not include retrieving the records themselves.
42.	The system must be scalable to at least 100 concurrent and active users and meet the availability and performance requirements for data creation as well as search and reporting functionality. The system must not have any features which would preclude use in small or large DMOs, with varying numbers of cases handled.
43.	Unauthorised Access Benchmarks: • The system should provide policy-based control of who can access specific functions, what they can do within them, and when they are allowed access; • The system must be the first layer of security for the system; • The system should be Non-Intrusive – Must make no changes to the operating system kernel or binaries. The system must allow for quick uninstall if necessary; • The system should self-protect itself – must be able to prevent hackers with root access from circumventing or shutting down the security engine; • The system should provide Rights Delegation - must provide the ability to designate specific users as Administrators with appropriate rights to perform audit control, password management, user management etc. The system should be configurable to comply with the password policy of the debt management office; • The system should prevent tampering of audit files by anyone while it is running on the machine. Additionally, any change of rules should always be audited;

No.	Requirement Description
	• The system should restrict multiple concurrent logins from one user at any given time, reducing the multiple attacks spawned by some hacking techniques;
	• The system design and development process should adhere to the ISO 27001 Security Standards.
	• The system should be designed and developed in a robust manner to ensure that the system does not hang or crash during the usage of the system.
Interoperability	
44.	The system should be interoperable between platforms.
45.	The system should use open standards for inter operations and for data interchange. It should support open standards, such as SOAP, Web Services Description Language (WSDL), Universal Description Discovery and Integration (UDDI), and XML.
46.	The system must allow interoperability with third party software/ components like Reporting Tools, Dashboard/ Frontend components.
Maintenance	
47.	Standard IT management Framework such as ITSM (IT Services Management)/ COBIT should be followed
Extendibility	
48.	The system should be modular for better extendibility. It should support development of new modules as well as changes in existing modules.
49.	The system should allow extendibility to new components /database.
Ease of Use	
50.	All error messages produced by the system must be meaningful, so that they can be appropriately acted upon by the users who are likely to see them. Ideally, each error message will be accompanied by explanatory text and an indication of the action(s) which the user can take in response to the error. The error message and solution should also be configurable.
51.	The system must employ a single set of user interface rules, or a small number of sets to provide a familiar and common look and feel for the system.
52.	The system must be able to display several entities (Instruments, debt services, brief information/status, etc.) simultaneously – multiple windows.
53.	The interfaces must be made customizable or user-configurable to the extent possible. (e.g., the displayed columns in the table, move, resize, modify the appearance).
54.	The system must provide end user and administrator functions which are easy to use and intuitive throughout.
55.	The system must allow persistent defaults for data entry where desirable. These defaults should include: • user-definable values; • values same as previous item;

No.	Requirement Description
	• values derived from context, e.g. date, file reference, user identifier; and • Start-up screens based on user roles or functions. Frequently executed system transactions must be designed so that they can be completed with a small number of interactions (e.g. mouse clicks).

Microsoft Standards for Windows Applications

No.	Requirement Description
56.	The standards set for Windows applications should be adhered to when designing the user interface for consistency and ease of use.

User Help and Assistance Services

No.	Requirement Description
57.	The system should provide detailed context-sensitive help material for all the possible actions and scenarios on all user interfaces in the system.
58.	The system should provide context based help facilities and also on-line help at functions, screen and field level that can be customised by the Administrator.
59.	The system should have comprehensive help facility wherein the users can obtain system specific technical / functional help on line.
60.	The help should be accessible to the users both in the offline and online mode.
61.	The system should maintain and make available to user a database of frequently asked questions.

Document Management & Search Utility

No.	Requirement Description
62.	The system shall allow all users to upload documents through their respective web forms in text, RTF, Microsoft Word & Excel document (latest versions), PDF, Images (GIF, JPEG, etc…) formats.
63.	The system shall allow users to provide Title, Author, Date, and Brief Description while uploading the document.
64.	The system shall allow user to search document based on Title, Author, Date and Brief description.
65.	The System shall allow user to search all documents (except image file) by content.
66.	The system shall display the result of search criteria in a tabular format with columns like Title, Author, Brief Description, Creation date, Created By, Last Modified Date, Last Modified By , etc.
67.	The system shall allow user to sort or file a result, based on Author, Date and Document Type.

Workflow Management

No.	Requirement Description
68.	The system shall display list of activities which need to be authorised/ approved by users.
69.	The system shall allow the mapping of selected activities to approver level 0, 1, 2, 3… n.
70.	The system shall allow the mapping of users to approver level 0,1,2,3….n.

4.2.3 External Interfaces

The system shall interface with the following external systems:

- Public finance management systems (aka IFMIS) for information exchange with government ledger on disbursement/payment transactions;
- SWIFT for issuing payment instructions/receiving payment confirmation using SWIFT messaging protocols;
- Central Depository System (CDS) and government auctioning system;
- Analytical system (e.g. Horizon) for data exchange on debt portfolio;
- Bloomberg, Reuters to receive latest market information such as exchange rate, interest rate;
- Real Time Gross Settlement System (RTGS) for payment (banking) transactions; and
- Other public debt management systems.

In addition, the system shall have a standard export/import module/gateway to link up with other systems through the generic gateway.

4.2.4 Technical Requirements

The system will be web-based and developed using the Microsoft .Net technologies. C# and Silverlight will be used as development tools amongst others.

Bidders will specify in their proposal the different tools (including third party tools) that they will use for the design and development of the system. There must not be a requirement to buy additional third party licences to allow customer installation for any components in the system other than for Microsoft SQL and Oracle.

4.2.4.1   Database Consolidation Facility

The system shall have a database consolidation facility to allow for consolidating databases from different countries/sub-national governments into one database to provide a holistic view.

4.2.4.2   Operating System and Database

The system will run on Windows Server operating system. It will be compatible with different web browsers including Internet explorer, Firefox, Google Chrome and Safari.

The system will support both Oracle and Microsoft SQL Server databases.

The system will need to support previous versions of the Operating System and Database releases.

4.2.4.3   Security and User Management

The system should detail the bidders approach to providing a secure environment that enables:

- Controlling and monitoring access to all parts of the system from the Internet;

- Allowing or denying access to different parts of the system according to the user's profile; and

- A comprehensive and secure audit reporting facility showing user ID/name, the part of the system that was accessed and which elements were updated.

The system will need to be adaptable to enable integration with local site installation standards and also to conform with the appropriate international security standards (the bidder should define which ones are applicable). The Secretariat will undertake security penetration testing as part of its acceptance testing process.

The software should use User ID and Password for authentication and enforce password rules. Ideally the system should be capable of conforming to the local site environment (a single sign on and password management). Bidders should describe how they intend to approach this aspect.

The system should include a utility for creation and management of user accounts with appropriate credentials to manage user IDs and also to define different user groups and appropriate access rights for users into each group. The system should be configurable to comply with the password management policy of an individual client site.

To enhance security on data exchange and transfer, the system should support usage of digital certificates and multi-tier bases authentication for performing critical transactions. In addition it should support digital signing and encryption of attachments (digitised documents) compliant to PKCS standards.

4.2.4.4 Audit Trail and Internal Controls

The system should provide a clear audit trail so that transactions can be traced through the system from data entry to reporting. Comprehensive internal controls should be integrated within the system so that only approved (system administrator) access is allowed to access audit data.

4.2.4.5 Architecture

A component-based architecture should be used to promote scalability, reusability and ease of maintenance.

The underlying database structure may be either Oracle or SQL depending on the client site standard. Data structures should be optimised accordingly for Oracle and Microsoft SQL Server RDBMS. The database architecture should enhance security, performance and integrity.

The system should be optimised to ensure that best response times and performance are provided irrespective of the hardware operating environment.

The system should support multiple users with minimum performance reduction under a three-tier architecture.

Further details on the system requirements will be provided in the Business Requirement Specification (BRS) which will only be sent to those bidders who proceed to stage two of tender process (please refer to section 2 'Tender Process Timetable').

4.3 INDICATIVE PROJECT TIMELINE

The successful bidder will be expected to design, develop and deliver the system **within a period of two years** after a firm order is placed. The project implementation following assessment of proposals and award is expected to tentatively start around July 2015.

4.4 PROJECT DELIVERABLES

Milestone Number	Milestone
1	**Project Inception Report**
2	**System Requirements Documents**
2A	Business Requirements Specification (BRS)
2B	System Requirements Specification (SRS)
2C	Test Plans and Test Cases
2D	Prototype
3	**System and Database Design**
3A	System Design Documents (SDD)
3B	Database Design (DD)
3C	Technology and Architecture Recommendations
4	**Acceptance Testing and Delivery of System**
4A	Infrastructure Requirements
4B	Implementation Training
4C	System Delivery
4D	Data Migration Utility
4E	Final Acceptance Test plans, Test cases and Test reports
5	**Warranty Support and Pilot**
5A	System Delivery
5B	Pilot
6	**Handover**
6A	Developed Code
6B	Installation Pack
6C	System Technical Documentation and User Manuals
6D	Handover Report
6E	Handover Training

The list below summarizes the deliverables for each project Milestone:

Milestone 1: Project Inception Report

- **Inception Report:** [Deliverable 1] This report shall provide full information in respect of kick- off of the project, the project team composition, system development methodology, project management framework, project plan, quality assurance approach to be followed, review process, change request procedure, etc.

Milestone 2: System Requirements Documents

- **Business Requirements Specifications (BRS):** [Deliverable 2A]. The draft business requirements specifications will be reviewed and fine-tuned after discussion with the Secretariat and its representatives.

- **System Requirements Specifications (SRS):** [Deliverable 2B] System requirements specifications documents will give details of the identified requirements, processes/work flows, system elements, data elements, logical design and complete system architecture. This document will be the basis of the system design and development.

- **Test plans and Test cases:** [Deliverable 2C]. These would include system test plans for the entire system; system test cases for the different functions/features of the system; acceptance test cases will be developed jointly by the Secretariat and the successful bidder.

- **Prototype:** [Deliverable 2D]. As part of the requirements analysis and preparation of the SRS, the successful bidder will be expected to develop a prototype and demonstrate it to the Secretariat and its representatives. The prototype will include key screens/functionalities for the different major components of the system. The prototype will be designed and developed to give the Secretariat a good feel of how the final product will look like especially with respect to the key functionalities and user experience. This would be used as part of the review and finalisation of the SRS.

Milestone 3: System and Database Design

- **System Design Documents (SDD):** [Deliverable 3A] System design documents giving technical details on how the solution (system modules and database) will be designed and developed.

- **Database Design (DD):** [Deliverable 3B] Data models and supporting descriptions that will produce documentation describing the data perspective and the relationships between various data entities and data. The documentation will include the following:

  o Data Dictionary: Providing Entity-Attribute Lists and Data Definition lists;
  o Data Model: These could be data structure diagrams or entity relationship diagrams showing relationships and constraints between entities;
  o Logical Database Design: A database independent view of data illustrating data into logical entities and attributes; and
  o Physical Database Design: A database specific design of the database illustrating storage and retrieval of the various objects. The two databases are MS-SQL and Oracle.

- **Technology and Architecture Recommendations:** [Deliverable 3C] Recommendations on technology and development tools (including third party tools) to be used with adequate technical details and justifications.

Milestone 4: Acceptance Testing and Delivery of System

- **Infrastructure Requirements:** [Deliverable 4A]. This document will provide details on the hardware and system software requirements for setting up the right environment for operating the system. This information will be used as input to advise client countries on putting up the appropriate operating environment. *Bidders will however not quote for supply of such hardware and system software*.

- **Implementation Training:** [Deliverable 4B] Implementation training will be dispensed on system components, system administration, database, security, system architecture, system installation and data migration. A training plan will be submitted beforehand to give details of the training, duration and trainer experience. Comprehensive training manuals will be provided to participants for the training. Training will be delivered at the Secretariat in London and delivered to around 10 officers.

- **System Delivery:** [Deliverable 4C]. The fully developed and functional system will be delivered to the Secretariat for final acceptance testing. The acceptance testing will be jointly coordinated with the successful bidder.

- **Data Migration Utility**: [Deliverable 4D] A data migration utility will be developed for electronically migrating client data from existing CS-DRMS to the system for both MS SQL and Oracle databases.

- **Final Acceptance Test plans, Test cases and Test reports:** [Deliverable 4E] These will include system test plans for the entire system; system test cases for the different functions/features of the system; test reports will comprehensively document the results of the different rounds of testing undertaken by the firm. Acceptance test cases will be developed jointly by the Secretariat and the successful bidder.

Milestone 5: Warranty Support and Pilot

The warranty period will start after successful testing and acceptance of the system by the Secretariat. The successful bidder will during the warranty support include key personnel who worked on the development of the system. This milestone will have the following deliverables:

- **System Delivery:** [Deliverable 5A]. The fully developed and functional system taking into account the bug fixing from the final acceptance stage will be delivered to the Secretariat for piloting.

- **Pilot:** [Deliverable 5B]. Prior to full scale deployment, the Secretariat will pilot the completed system at up to 5 sites before the end of the warranty period as part of the acceptance test. The following will be tested during the pilot:
  - Data Migration Utility: Successful migration from legacy application to the new application;
  - System functions from end to end.

Milestone 6: Handover

The handover is expected to be completed towards the end of the warranty period. This will involve the following deliverables;

- **Developed Code:** [Deliverable 6A] An integrated and tested up to date and fully annotated set of source code listings will be delivered by the successful bidder;
    - After successful piloting and bug fixes arising from the pilot exercise; and
    - After successful acceptance testing by the Secretariat.

    The source code will come with proper documentation explaining the functions of each module/function.

- **Installation Pack:** [Deliverable 6B]. Installation packs will be delivered along with the source code and build for simple installation of the system.

- **System Technical Documentation and User Manuals:** [Deliverable 6C]. The selected bidder shall make available detailed system technical documentation and user manuals to the Secretariat. The technical documentation will cover the system and database architecture of the system to facilitate subsequent system maintenance. The user manuals will cover each and every module/function of the system.

- **Hand-Over Report:** [Deliverable 6D].This report will contain detailed handover procedures to facilitate smooth transition and subsequent maintenance of the system by the Secretariat. This could include, for example, the 'shadowing' by Secretariat personnel of Supplier personnel.

- **Handover Training** [Deliverable 6E]. Bidders will need to include technical training on the finalised system as well as the Data Migration Tool so that there is appropriate and adequate technology transfer that will make the DMS team of the Secretariat fully conversant with the system so that they can subsequently handle maintenance and support of the system. Training should cover all parts and functions included in the system, user management, database (stored procedures, structure, purging/archival, backup/restore), security and system architectures. Training will be delivered at the Secretariat in London and delivered to around 10 officers.

All the above reports, plans and deliverables will be finalised after discussion with and on acceptance by the Secretariat. All deliverables (including comments in code) will be in English.

4.5 KNOWLEDGE TRANSFER

One key aspect of this project is the need for a robust and successful knowledge transfer from the successful bidder to the Secretariat technical team. This is a critical aspect of the project as the Secretariat technical team will be expected to maintain and support the system after it has been delivered to the Secretariat. The knowledge transfer should involve the transfer of knowledge and expertise throughout the system development and warranty stage.

5   COMMERCIAL REQUIREMENTS

5.1 OVERVIEW

This section sets out the Secretariat's commercial vision and objectives under this project, to inform bidders as to the current view of the Secretariat as to the 'commercial deal' it is seeking to achieve with the successful bidder. The successful bidder is expected to accept and adopt the principles detailed in this Section 5 which will form part of the procurement process.

5.2 BASIC PRINCIPLES FOR PAYMENT LINKED TO PROVISION OF SERVICES

Core Services refer to those services described in the successful bidder's proposal and agreed with the Secretariat for the development of the system as defined in the Business Requirements Specification. This includes testing, pilot and support through warranty. Other services may be required from time to time as the project progresses (e.g. as a result of agreed changes). These will be treated as Additional Services which may be subject to additional costs to be borne by the Secretariat.

For the Core Services, the Secretariat will use a consumption based model to "pay for what it uses" over the term of the Agreement. Accordingly, Fees for Core Services will be broken down by specific milestones linked to supply, task or activity.

5.3 PILOTING

Prior to full scale deployment, the Secretariat will pilot the completed system at up to five sites before the end of the warranty period. Each pilot will be for a period of approximately two to three weeks.

During each pilot, the successful bidder may be required by the Secretariat (as an Additional Service) to provide the services of two developers (who would have been closely involved in the system and database development) to work with the Secretariat team at the respective pilot site. The resource persons will assist with system installation, data migration, system debugging, onsite bug fixing and co-ordination with the offsite development team amongst others as may be required for the success of the pilot. The Secretariat will pay for economy return airfare to the respective pilot site and hotel accommodation[1] for the resource persons assigned by the successful bidder. No other expenses will be incurred by the Secretariat in respect of the participation of the successful bidder's resource persons at each pilot site.

5.4 WARRANTY

The successful bidder will warrant in its agreement with the Secretariat that during a warranty period of twelve months following project completion that the system conforms to the finalised Software Requirements Specification including any agreed additional services. The warranty period will start after successful testing and acceptance of the system by the Secretariat and the team the successful bidder uses for the warranty support will include key personnel who worked on the development of the system.

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[1] This would be up to a maximum of 50% of the prevailing daily subsistence allowance as per UN rates.

During the warranty period the successful bidder shall provide, at no charge to the Secretariat corrections, modifications or additions to the system to address errors, omissions, deficiencies or inconsistencies in the system and which are within the scope of the finalised Software Requirements Specifications including any agreed additional services. The Secretariat will assist the successful bidder in identifying the circumstances in which such errors, omissions, deficiencies or inconsistencies are discovered.

All services of the successful bidder under warranty shall be at the bidder's sole expense, including labour, travel, accommodation and any other associated costs.

5.5 PROJECT IMPLEMENTATION PLAN

During the initial phases of the project covering at least the business requirements finalisation and analysis, development of System Requirements Specifications, test cases, prototyping and system design, the Secretariat requires a team from the successful bidder to be stationed at the Secretariat's premises. This will involve comprehensive discussions and validation with the Secretariat team and undertaking the respective activities covered under the different phases accordingly with support as may be required from development centre.

The coding and testing work can be carried out remotely but a consistent project liaison contact should be available for discussions and project management activities at the Secretariat's offices throughout the project.

Bidders should provide a detailed project implementation plan and should accordingly indicate in their plan the composition and location of the various members of their staff during each of the phases. Bidders should also indicate how they intend to handle staff continuity to maintain a consistent development approach.

5.6 PROPOSED CONTRACT TERMS

Bidders will be asked in due course to agree to the Secretariat's proposed contract terms in relation to their supply of the Deliverables and related services as anticipated by this Information Memorandum. These terms will be made available to bidders who proceed to stage two of the tender process.

5.7 PAYMENT TERMS

Following award of contract, the following payment terms will apply:

Percentage of the contract value	Terms of payment
15%	After signature of contract and submission of bank guarantee (from a bank based in UK) of same amount valid up to estimated date for completion of acceptance testing. In case of delay, the validity of the bank guarantee will have to be accordingly extended by the bidder at no additional cost to the Secretariat.
25%	After acceptance of the deliverables of Milestone 2 which includes completion and acceptance of the system requirements specifications and system prototype.
15%	After acceptance of the deliverables of Milestone 3 which involves system and database design.
30%	After acceptance of the deliverables of Milestone 4 which involves delivery of the system and successful completion of the acceptance testing.
15%	After acceptance of all the outstanding deliverables and successful completion of the warranty period.

6   PROJECT MANAGEMENT REQUIREMENTS

In response to the Pre-Qualification Questionnaire (PQQ), bidders will be required to describe their Project Management Framework in terms of project and risk management as well as quality assurance, using practical examples based on past projects, where possible.

If the bidder proceeds to stage two of the tender process (please refer to section 2 'Tender Process Timetable') and is invited to submit an outline proposal, then the bidder will be required to elaborate upon their Project Management Framework and additionally include the software development methodology to be employed. The proposed framework of the successful bidder will be reviewed and agreed upon during the inception phase of the project.

The bidder should, however, be aware of the following expectations of the Secretariat:

I.   Project Governance

The Secretariat and the successful bidder will appoint a member of their staff as the main liaison point for control and management of the project.

A Project Steering Committee will be set up to monitor the planning, risk management and the delivery of the project. Senior management personnel from the Secretariat and the successful bidder will form part of the committee. The committee will meet periodically and members will be mutually responsible for resolving any issues arising during the project.

A technical team of the successful development firm will be stationed at the Commonwealth Secretariat's premises in London for working on the initial phases of the project for a period of at least 6 months. The Secretariat's team will be working closely with the firm's technical team during the different project phases for close monitoring, advice, review and validation of deliverables.

II.   Quality Assurance

Bidders should describe their quality assurance approach proposed for this project which should encompass the entire development process from requirements gathering/analysis to warranty.

Deliverables including requirements, design, test cases and documentation should be quality controlled to meet acceptable standards (comprehensiveness, language, clarity, consistent structure/style, coherence, versioning/change tracking etc.) before being passed on to the Secretariat for review and validation.

Interim builds will be generated and provided to the Secretariat for preliminary testing/validation of specific functions that will be mutually agreed between the Secretariat and the successful bidder. No delivery should be made without proper testing by the successful bidder and related test results should be made available to the Secretariat.

As part of quality assurance, a team from the Secretariat may visit the development centre of the successful bidder to have face-to-face discussions with the management and particularly with the development team. These meetings will aim to discuss/validate requirements with developers and systems analysts, address gaps in analysis/interpretation of specifications, hands-on review of code and module testing amongst others. The expenses of any visits by the Secretariat staff will be borne by the Secretariat.

III.   Change Requests

The successful bidder should accommodate any additional requirements expressed by the Secretariat during the project which are agreed to be outside the original scope of work. The additional effort will be discussed and mutually agreed and the associated cost will reflect unit rates to be specified in the financial proposal. Such additional work will also be covered under the warranty.

Bidders will be expected to describe their change request management process.

IV.   Reporting requirement

The successful bidder will be required to provide regular reports (and revised implementation schedule as may be necessary) highlighting the progress of the project.

7   COMMONWEALTH SECRETARIAT CONTACT POINT

The Commonwealth Secretariat named contact point for this tender process is:

Cristian Martin
Procurement and Contracts Officer
Commonwealth Secretariat
Pall Mall
London SW1Y 5HX

E-mail: pdmstender@commonwealth.int

Any actual or attempted communication with Commonwealth Secretariat outside of the above contact point (unless specifically requested by Commonwealth Secretariat) will not be considered or responded to.

ANNEX I
Public Debt Management Operational Environment

1 OPERATIONAL ENVIRONMENT

1.1 PUBLIC DEBT MANAGEMENT INSTITUTIONAL ARRANGEMENTS

A country's central government debt is managed by the Debt Management Office (DMO) of the country or any other institution(s) responsible for carrying out government debt management functions.

Institutional arrangements for public debt management can as such range from a structure that is highly centralised in a debt management office (DMO) or equivalent to a decentralised structure with a number of entities across government responsible for public debt management operations. For example, a separate division of the Ministry of Finance could be responsible for external loan negotiations, the Accountant-General's Office responsible for debt service payment authorities, and the Central Bank may provide banking services, act as registrar for government securities, and undertake Treasury bill and bond auctions in the domestic market for government securities. Also, there could be a separate agency that is responsible for managing retail debt instruments such as savings bonds or equivalent and separate divisions of the Ministry of Finance responsible for project monitoring including administration of government onlending, and issuance/monitoring of government loan guarantees.

Debt management functions are normally organised around a front office, middle office and back office structure as given in the table below.

Front Office	**Middle Office**	**Back Office**
Loan Negotiation	Debt Strategy	Payment Validation
Transaction Pricing	Public Debt Policies	Confirmations
Debt Issuance	Risk/Scenario Analysis	Payment Instructions
Project Financing	Debt Sustainability	G/L Debt Entries
Lending/On-lending	Performance Measures	G/L Reconciliation
Government Guarantees	Strategic Benchmarks	Project Administration
Liquidity Management	Publications/Prospectus	Disbursements
Investment Management	Rating Agencies	Debt Reports
Investor Relations	Legal Agreements	Debt Service Forecasts
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Transaction Input	Setting Limits for Debt	Loan Agreements
Position Keeping	Management Activities	Debt Files
Portfolio Valuations	Legal Compliance	Maintain Debt Data
Portfolio Analysis	Compliance with Limits	Maintenance/Security
Risk Analytics	Link to Internal	of Debt Systems
Benchmarks	and External Audit	and Interfaces

1.2 ROLES AND RESPONSIBILITIES OF A DEBT MANAGEMENT OFFICE

The general and specific responsibilities of the DMO include the following:

General Responsibilities

- Seek to establish structure, staffing and systems framework for debt management
- Seek to minimize costs and risks associated with public borrowing, lending, on lending and guarantees
- Take responsibility for debt service of the loans borrowed and the securities issued by the central government
- Provide information to the Accountant General for public accounting purposes and to produce consolidated financial reports of the public sector
- Undertake Debt and Cash flow management
- Undertake risk based evaluation for guarantees and lending/on-lending that may imply charging risk guarantee primes to the beneficiaries for the guarantees and lending/on-lending
- Monitor the loans borrowed and bonds issued by entities and enterprises belonging to the central government
- Monitor private sector non-guaranteed debt

Front Office:

- Implementing the borrowing plan based on the strategy approved by the government
- Mobilize resources from external and domestic sources based on the country's borrowing strategy;
- Process applications for government guarantees, issue guarantees and conclude agreements with borrowers and creditors
- Function as a clearing house for requests for information from/to donors/creditors, international financial institutions, commercial banks etc.
- Implement strategies that minimize costs and risks of debt management including hedging and derivative

Middle Office:

- Determining borrowing ceilings for government consistent with fiscal and monetary policy requirements

- Formulation of debt strategy
- Providing reliable medium and long-term forecasts of debt servicing and interest income that feed into fiscal forecasts
- Monitoring unplanned debt requirements
- Performing adjustments to borrowing plans in the course of fiscal year based on budget monitoring outcomes and fiscal policy adjustments
- Estimating effects of changes in interest rates and exchange rate on debt service
- Undertaking frequent portfolio analysis to asses future debt service obligations and problems and propose action that should be taken to overcome them
- Preparing debt sustainability analysis to assess the long-term sustainability of projected borrowing levels
- Assessing external vulnerability using debt and reserves adequacy indicators
- Recommending policy changes in debt management
- Providing inputs on public debt to periodic economic and financial reports and data for presentation to Cabinet as well as Parliament.
- Coordinating with Ministry of Finance and Central Bank for effective debt management
- Designing benchmarks or reference debt portfolios that reflect the countries debt strategy in order to guide the Front Office in its funding and hedging operations. Such benchmarks include the currency composition of debt, interest rate structure, duration etc.
- Identifying and quantifying exposures related to contingent liabilities including designing strategies that will allow effective management of these exposures or risks
- Making recommendations for debt restructuring as and when necessary
- Monitoring and supervising performance against set benchmarks

Back Office:
- Manage debt information systems and maintain an accurate and up-to-date debt database
- Prepare debt service forecasts for external and domestic borrowing of the public sector as an input to the balance of payments forecasts and for total government borrowing as an input to the expenditure estimates of the fiscal budget

- Ensure timely and accurate debt service for public and publicly guaranteed debt
- Monitor and record the implementation of loan agreements, including disbursements, utilisation of loan funds and other obligations of government
- Monitor and record disbursements and repayments of loan guarantees
- Monitor and record disbursements of on-lending agreements
- Monitor and record all contingent liabilities and ensure that adequate loan loss provisions are made in the budget to meet likely defaults
- Prepare forecasts of government cash requirements to provide guidance on the volume and timing of issuance of debt by government
- Validate debt data regularly and reconcile with Creditors
- Prepare statistical and management reports
- Coordinate with the Front Office so that the recording and monitoring of new financing is done in a timely manner

1.3   DEBT MANAGEMENT STAKEHOLDERS

The table below gives the list of stakeholders and their functions relating to debt management:

	Stakeholder	High Level Functions
1	Debt Management Office (DMO)	• Resource Mobilisation and Management • Debt and Risk Management • Maintaining data on debt portfolio in debt management system
2	Project Implementation Unit (PIU)	• Responsible for project implementation
3	Central Bank/ Commercial Bank	• Facilitates the flow of the fund between Creditor and Implementing Agencies • Recording of private sector external debt
4	Creditor	• Provide fund to execute projects
5	Ministry of Finance	• Policy Formulation for debt management • Provide oversight to ensure that the DMO is running efficiently and is adhering to international sound practices for public debt management
6	Auditor General	• Debt Audit
7	Accountant General	• Maintains the general ledger for debt transactions
8	Parliament/ Cabinet	• Provides approval for borrowing plan, negotiations and loan agreement
9	Public/ Media	• Creates awareness on Debt Position
10	Sub-Nationals/ State Owned Enterprises (SOE)	• Sub-national Debt Management • Maintaining data on debt portfolio at sub-national level in debt management system

1.4   BUSINESS PROCESS AND WORKFLOW

Often DMOs in developing countries and emerging market economies have institutional structures and debt management operations that follow a product approach rather than an activity approach. This means that loans are often managed and processed by a unit that is separate from a unit responsible for securities, which are also managed and processed separately from other debt management operations such as government onlending and guarantees.

Business processes/workflows may therefore differ based on how the debt management activities are organised within a country. The table below groups the various debt management operations around management of products.

Planning (Debt strategy, borrowing plan, debt service forecast)						A N A L Y S I S	R E P O R T I N G
Debt Portfolio				SWAP	Lending		
Domestic		External		Currency & Interest Rate SWAP	Onlending		
Loans	Securities	Loans	Securities				
• Contracting • Mobilisation • Servicing	• Issuance • Settlement • Servicing	• Contracting • Mobilisation • Servicing	• Issuance • Settlement • Servicing		• Contracting • Mobilisation • Servicing		
Guarantees (contracting, servicing)							
Reorganisation (loans, Securities, …)							

1.4.1 PLANNING

Prior to contracting loans and issuance of securities, the DMO undertakes several debt planning activities. These include the preparation or update of a Medium Term Debt Strategy (MTDS), an annual borrowing plan including a domestic bond issuance program or calendar, and debt service forecast for incorporation in the Budget, Medium Term Fiscal and Expenditure Framework (MTFF/MTEF) and/or annual appropriation from Parliament or National Assembly.

1.4.1.1 DEBT STRATEGY

As part of the government's fiscal policy and budget framework, the DMO is required to prepare or update a Medium Term Debt Strategy (MTDS) at the start of each fiscal year. This is normally a requirement of Public Debt or Public Finance legislation and requires that the MTDS is approved at the political level (Cabinet/ Council of Ministers) and submitted to Parliament/National Assembly. The MTDS will be submitted as a stand-alone document or included in the Budget and/or Medium Term Fiscal Strategy published annually by the government. The MTDS is prepared by the DMO in consultation with the Ministry of Finance, Central Bank, Ministry of Planning, Treasury and Accountant-General's Office (if these agencies exist) and made available to the public.

1.4.1.2 BORROWING PLAN

The DMO will meet the government's financing requirements through external financing (multilateral, bilateral, commercial, and market) and domestic financing (Treasury bills, Treasury bonds, retail instruments and

commercial borrowing from banks and/or Central Bank). The MTDS will set out an indicative financing strategy that will be subject to market conditions and project activities. The front office is responsible for monitoring market conditions and financing alternatives which are used to make decisions including the timing and structure of the domestic Treasury bill and bond tender programs. The DMO will submit the borrowing plan and auction calendar to the Public Debt Committee or Cabinet/ Council of Ministers for approval. The front office will make available to all market participants the borrowing plan and auction calendar.

1.4.1.3 DEBT SERVICE FORECAST

As part of the government's budget, the DMO is required to prepare debt service forecasts and a schedule of debt service payments at the start of each fiscal year. These will be based on the economic and fiscal parameters as set out in the budget and in accordance with the MTDS. The DMO will liaise closely with each project implementing office to obtain information on project utilisation, expected disbursements, and the pipeline for new project loans. An update will be prepared during the fiscal year for the supplementary budget and on request throughout the year by Treasury or Ministry of Finance.

1.4.2 EXTERNAL LOANS

External debt is primarily made up of loans raised from multilateral and bilateral lending agencies and commercial loans such as bank loans, supplier's credits and officially supported export credits. Most of the loans are used for project financing according to the government's infrastructure and development program.

The loans result from initial discussions with the line ministry responsible for the project. These loans are normally contracted by the government, although some loans may be contracted directly by the government agency. In the case of loans contracted with the government, the loan proceeds can be disbursed to the project or on lent to a government agency responsible for the project that will be contracted and documented in an onlending agreement. A project monitoring or implementation unit will be established to manage the project including administration of loan disbursements and repayments. The implementing partners, funding agencies, line ministries, government agencies and Ministry of Finance will participate in an extensive process of pre-consultations to agree the structure and specifications of the project, funding sources, grant and loan components, and project financing terms, and conditions that will apply to ensure effectiveness of the loan to be submitted to the government for consideration.

1.4.2.1 LOAN CONTRACTING

The government will approve an infrastructure and development program including a list of projects that the government plans over the 3-5 year

planning period. This program will list new projects that have been formulated by implementing partners, funding agencies, line ministries, government agencies and Ministry of Finance through an extensive process of consultation to agree on project specifications and conditions. The DMO will participate in negotiations with the funding agency to agree the loan terms and conditions and where necessary prepare an onlending agreement for the government agency.

1.4.2.2 LOAN MOBILISATION

Following the signing of the loan agreement, the DMO back office will be responsible for inputting the loan details into the debt recording system. The loan details will be set out in the loan agreement and the term sheet prepared by the front office. The loan will be entered by a desk officer and checked by a supervisor.

The DMO will record disbursements when the lender:

(i) advances funds to the borrowing entity. The back office gathers this information through receipt of disbursement notices from the Project Implementing Agency and/or the funding agency, or by accessing creditor websites (World Bank, African Development Bank, Asian Development Bank etc.), contacting creditors directly, and/or contacting line Ministries.

(ii) pays the supplier of goods and services. The back office gathers this information through receipt of disbursement notices from the Project Implementing Agency and/or the funding agency, or by accessing creditor websites (World Bank, African Development Bank, Asian Development Bank etc.), contacting creditors directly, and/or contacting line Ministries.

(iii) makes reimbursements to the borrower for payments already made to suppliers. The DMO may be required to prepare withdrawal or replenishment applications to send to the funding agency. The back office will check and process the application and gather the disbursement information through receipt of disbursement notices from the Project Implementing Agency and/or the funding agency, or by accessing creditor websites (World Bank, African Development Bank, Asian Development Bank etc.), contacting creditors directly, and/or contacting line Ministries.

1.4.2.3 LOAN SERVICING

The DMO will be responsible for receiving the payment notice from the funding agency or fiscal agent and checking this against the debt recording system. Payment advices will be prepared by the back office for submission to the Accountant-General who is responsible for preparing a payment order or authority to be issued to the Central Bank for making payment.

The Accountant-General is responsible for preparing a payment authority or instruction to be issued to the Central Bank for making payment.

The Central Bank makes the payment to the funding agency or fiscal agent. There may be a standing order whereby the Central Bank can debit the designated government bank account and make payment in the settlement currency out of the foreign exchange reserves to the designated bank account. In some cases, there may be a foreign exchange transaction to cover the sale of local currency and purchase of the foreign currency.

1.4.3   DOMESTIC LOANS

The government may borrow from domestic sources using loans or credit facilities arranged with a commercial bank and/or with the Central Bank under a ways and means advance and/or overdraft. The initial role of DMO will be to participate in negotiations normally led by the Ministry of Finance on the terms and conditions for each loan or credit facility and conclude the necessary legal documentation. The Central Bank ways and means advances and/or overdraft will be used by the Accountant-General to meet shortfalls in revenue or for short-term financing of expenditure commitments. Similar credit facilities may be arranged with a commercial bank.

Loans or credit agreements contracted with commercial banks will be drawn and repaid according to the loan terms and conditions. Once the documentation is in place, the DMO will record all debt transactions and initiate payments of principal and interest required under the loan or credit agreement. The front office will prepare a terms sheet for each loan and credit facility. The back office will be responsible for input of the loans and credit facilities into the debt recording system and for settlement and payment processing.

1.4.3.1 DOMESTIC LOAN CONTRACTING

The government arranges a loan or credit facility with a commercial bank and/or from the Central Bank (ways and means advance and/or overdraft). The DMO will participate in negotiations with the commercial bank or Central Bank to agree the loan or credit facility terms and conditions.

1.4.3.2 DOMESTIC LOAN MOBILISATION

Following the signing of the loan or credit facility agreement, the DMO back office will be responsible for inputting the loan details into the debt recording system. The loan or credit facility details will be set out in the loan or credit facility agreement and the term sheet prepared by the front office. The loan or credit facility will be entered by a desk officer and checked by a supervisor.

The DMO will record a drawdown or advance from the loan or credit facility. The back office gathers this information through receipt of drawdown or advance notices from the commercial bank and/or Central Bank, or from the Accountant-General.

1.4.3.3 DOMESTIC LOAN SERVICING

The DMO will be responsible for receiving the payment notice from the Central Bank of commercial bank and checking this against the debt recording system. Payment advices will be prepared by the back office for submission to the Accountant-General who is responsible for preparing a payment order or authority to be issued to the Central Bank for making payment.

The Accountant-General is responsible for preparing a payment authority or instruction to be issued to the Central Bank for making payment.

The Central Bank is responsible for making the payment. There may be a standing order whereby the Central Bank can debit the designated government bank account and credit the bank account of the creditor.

1.4.4 EXTERNAL SECURITIES

The government may from time-to-time when market conditions are attractive issue securities in the international markets (i.e., global, euro or domestic bonds such as Yankee, Samurai or Bulldog bonds). These securities could be used to on-lend for infrastructure or other projects or used for budgetary support and/or target foreign investors to purchase government securities. A key objective for the DMO could be to broaden the investor base by encouraging foreign investors to purchase government securities.

1.4.4.1 ISSUANCE OF EXTERNAL SECURITIES

The DMO issues securities in the international markets. These securities will be either global, euro or bonds issued in domestic markets such as Yankee bonds in the US or Samurai bonds in Japan. The DMO may issue these bonds directly or under a Euro-Medium Term Note (EMTN) program. These bonds could be used for infrastructure or other development projects, budgetary support, or to increase the level of foreign exchange reserves.

After the DMO has completed the issuance of securities in international markets, the back office will be responsible for ensuring that the net proceeds are paid into the designated government account. The back office will also be responsible for ensuring that the debt recording system captures these transactions and the Accountant-General is notified of the issuance. Settlement will be through the government accounts at the Central Bank.

The middle office will be responsible for concluding all legal and security documentation.

1.4.4.2 EXTERNAL SECURITIES SERVICING

The DMO will be responsible for receiving the payment notice from the funding agency or fiscal agent and checking this against the debt recording system. Payment advices will be prepared by the back office for submission to the Accountant-General who is responsible for preparing a payment order or authority to be issued to the Central Bank for making payment.

The Central Bank makes the payment to the Fiscal and Paying Agent. There may be a standing order whereby the Central Bank can debit the designated government bank account and make payment in the settlement currency out of the foreign exchange reserves to the designated bank account. In some cases, there may be a foreign exchange transaction to cover the sale of local currency and purchase of the foreign currency.

1.4.5 DOMESTIC SECURITIES

Development of the domestic market for government securities is a key government debt management objective. In order to minimise cost and risk over the medium term, the DMO will ensure that their policies and operations are consistent with the development of an efficient government securities market. This will provide the government with a mechanism to finance its expenditures in a way that alleviates the need to rely fully on external debt to finance budget deficits. Moreover, by promoting the development of a deep and liquid market for domestic government securities, DMO in conjunction with the Central Bank, supervisors and regulators of financial institutions, and market participants, can achieve lower debt service costs over the medium to long term as the liquidity premium embedded in the yields on government debt wane.

The terms and conditions of new issues will be publicly disclosed and clearly understood by investors. Also DMO will maintain an ongoing dialogue with market participants and monitor market developments so that it is in a position to react quickly when circumstances require.

Debt issuance will use market-based mechanisms, such as competitive tenders, tap issues, or syndications. This involves auctions of government securities, although tap issues and syndications can be used if the DMO does not need to raise funds on a regular basis. The DMO may use primary dealers for distributing and fostering deep and liquid markets – in this case the incentives and obligations, as well as eligibility criteria to become a primary dealer, are well defined and disclosed.

The Budget and Annual Appropriation from Parliament/National Assembly will set out the authority for the DMO to issue securities in the domestic market. The Central Bank may act as the agent for the DMO in running the tender of Treasury bills and bonds. Each tender will be overseen by an auction committee that will decide the cut-off and allocation of successful bids.

1.4.5.1 ISSUANCE OF DOMESTIC SECURITIES

The DMO will obtain information on the aggregate cash position held across government bank accounts and cashflow forecasts for the next week/month/ quarter. The DMO will use tenders as the primary method for domestic debt issuance, through the issuance of Treasury bills and fixed rate, floating rate, and indexed-linked Treasury bonds following a pre-released auction calendar. Detailed terms and conditions of the Treasury bills and bonds will be set out in an Information Memorandum and the process to be followed by all market participants will be documented in the Operating Procedures published by the DMO and/or the agent (i.e., Central Bank). The DMO will use the Central Bank as the agent for issuance of domestic securities such as Treasury bills and bonds. The Central Bank will also be the clearing house and registry for these securities.

1.4.5.2 DOMESTIC SECURITIES SETTLEMENT

Once a tender or issue activity has been completed, the Central Bank will be responsible for ensuring that the net proceeds are paid into the designated government account and the registry system updated to capture these debt activities. The DMO back office will be responsible for ensuring that the debt recording system also captures these transactions and the Accountant-General is notified of these activities.

1.4.5.3 DOMESTIC SECURITIES SERVICING

The DMO will be responsible for receiving the payment notice from the registry and checking this against the debt recording system. Payment advices will be prepared by the back office for submission to the Accountant-General who is responsible for preparing a payment order or authority to be issued to the Central Bank for making payment.

The Central Bank makes the payment to the Registry. There may be a standing order whereby the Central Bank can debit the designated government bank account and credit the bank account of the registry.

1.4.5.4 RETAIL SECURITIES

The DMO operates a retail program to issue a range of instruments using agents such as the Central Bank, commercial banks, post offices, regional treasury offices, and other retail outlets with or without the payment of a commission. Interest rates for these securities will be constantly reviewed

by the front office and updated regularly, depending on market movements, the yields on government securities in the primary and secondary market, and using a calculation methodology. The DMO back office will be responsible for ensuring that the debt recording system captures all retail debt transactions and details of these transactions are forwarded to the Accountant-General for recording in the government financial reporting system.

1.4.6 REORGANISATION

The DMO may undertake reorganisation of loans that could be creditor or borrower driven. Creditor driven will include Paris and London Club restructuring. Borrower driven will include prepayment of high cost loans or restructuring of existing loans using different instruments such as the Asian Development Bank and World Bank hedging products.

The DMO may carry out operations involving restructured public debt securities, involving buybacks or exchanges for other debt (domestic and external). The major objective of these debt management operations is to reduce the outstanding debt and debt burden, by lengthening maturities, adjusting the public debt profile and encouraging specific operations.

The DMO may also perform currency and/or interest rate conversions to reduce debt servicing cost.

1.4.6.1 DEBT RESTRUCTURING

The DMO will participate in negotiations with Ministry of Finance to agree the reorganisation of loan terms and conditions with the creditor. After the DMO has completed negotiations and the reorganised loan agreement has been signed, the back office will be responsible for ensuring that any financial transactions that are required are settled through the designated government account or to the nominated settlement account. The back office will also be responsible for ensuring that the debt recording system captures these transactions (including prepayments) and the Accountant-General is notified of the debt reorganisation.

1.4.6.2 BUYBACK OF SECURITIES

The DMO will use buyback or exchange to manage the aggregate cash position held across government bank accounts or to consolidate debt issues in selected maturities. The DMO will use tenders as the primary method for debt buyback, which may include a pre-released buyback calendar for domestic debt. The process to be followed by all market participants will be documented in the Operating Procedures published by the DMO and/or the agent (i.e., Central Bank). The DMO will use primary dealers and/or market makers to undertake the buybacks. After the DMO has completed the transaction to buyback existing debt, the back office will be responsible for ensuring that the settlement amount is paid into the nominated settlement account. The back office will also be responsible for ensuring that the debt recording system captures these transactions and the

Accountant-General is notified of the payment. Settlement will be through the government accounts at the Central Bank.

1.4.7 SWAPS

The DMO may enter into currency and/or interest rate swaps, normally at the time of issuance, to obtain lower cost of funds in the preferred currency.

The DMO seeks bids from a selection of counterparties for the nominated currency and/or interest rate swap and selects the most cost effective swap. The front office will negotiate the final terms and condition. The middle office will ensure that the swap documentation is completed. The back office will ensure that settlement instructions are issued to all the relevant parties in order that all initial payments are processed on the settlement date of the securities that have been issued. The back office will also be responsible for ensuring that the debt recording system captures these swaps and the Accountant-General is notified of all payments and receipts. Settlement will be through the government accounts at the Central Bank.

1.4.8 ANALYSIS

The MTDS sets the government's debt management objective and policy guidelines for debt management. The DMO will be responsible for the preparation of debt service forecasts for input to the annual Budget and appropriation by Parliament/National Assembly and for updates of debt service forecasts and comparisons of actual versus forecast. Debt sustainability analyses are undertaken to assist in maintaining the current sustainable debt portfolio consistent with economic growth and development and in line with the development agenda of the present government administration. The DMO undertakes a cost-risk assessment as part of the MTDS. Where the DMO is responsible for government cash management, it collates government cash flows and prepares forecasts of the aggregate cash balances across government bank accounts.

1.4.9 REPORTING

The DMO produces and publishes a number of debt reports including the MTDS, an Annual Review that provides a review of debt management operations, the debt statistical bulletin (published quarterly or semi-annually), and periodic (monthly and/or quarterly) domestic market reports. In addition, the DMO is required to report on the external debt portfolio to the World Bank.

1.4.10 GUARANTEES

The DMO may participate in a process for assessing and approving loan guarantees. This will include reviewing a request for provision of a loan

guarantee submitted by the guaranteed agency, undertaking a risk assessment, calculating the guarantee fee to be applied, submitting a proposal to the Minister of Finance or government seeking approval of the guarantee, completing the guarantee agreement and having it signed by the Minister of Finance or an appointed loan agent under a warrant or power of attorney, and recording the details of the loan guarantee in the debt recording system.

1.4.10.1 CONTRACTING GUARANTEES

The DMO front office will lead the process for assessing and approving the loan guarantee, including a risk assessment. The middle office will ensure that all legal requirements are met and the loan guarantee agreement is signed by the Minister of Finance. The back office will notify the Accountant-General and Central Bank of all loan guarantee fee payments.

1.4.10.2 SERVICING GUARANTEES

The DMO will be responsible for preparing the guarantee fee payment advice either manually or from the debt recording system. Payment advices will be prepared by the back office for submission to the guaranteed agency.

The guaranteed agency is responsible for making payment in accordance with the guarantee fee payment advice sent by the DMO. The DMO will check that payment has been made accordingly and input the payment to the debt recording system.

1.4.11 (ON)LENDING

Multilateral, bilateral and commercial loans such as bank loans, supplier's credits and officially supported export credits are contracted with the government, which will put in place an on-lending agreement if necessary to a government agency responsible for the project. A project implementing agency will be established to manage the project including administration of on-lending disbursements and loan repayments.

1.4.11.1 (ON)LENDING - CONTRACTING

The terms and conditions of the onlending agreement will be negotiated with the government agency or SOE in consultation with the Ministry of Finance and relevant line ministry. The structure of the onlending may match the primary loan or have a completely different structure in terms of currency, maturity and interest rate.

1.4.11.2 (ON)LENDING - MOBILISATION

Following the signing of the onlending agreement, the DMO back office will be responsible for inputting the onlending details into the debt recording system. The onlending details will be set out in the onlending agreement

and the term sheet prepared by the front office. The onlending will be entered by a desk officer and checked by a supervisor.

The DMO will record disbursements when the lender remits funds to the onlending agency. The back office gathers this information through receipt of disbursement notices from the project implementing agency and/or the onlending agency, or by accessing creditor websites (World Bank, African Development Bank, Asian Development Bank etc.), contacting creditors directly, and/or contacting line Ministries.

1.4.11.3   (ON)LENDING SERVICING

The DMO will be responsible for preparing the payment advice either manually or from the debt recording system. Payment advices will be prepared by the back office for submission to the project implementing unit or onlending agency.

The project implementing unit and/or onlending agency is responsible for making payment in accordance with the payment advice sent by the DMO. The DMO will check that payment has been made accordingly and input the payment to the debt recording system.