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Treasury Reference Model



Ali Hashim
Bill Allan

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Ali Hashim
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FOREWORD

The World Bank and the International Monetary Fund are placing an increasing emphasis on implementing projects aimed at improving the management of public finances in member countries. Treasury systems form the backbone for recording and processing all financial transactions related to the budget for any level of government. An integrated treasury system offers several significant benefits in managing public monies more effectively, including, greater financial control, improved monitoring of the government's cash position and better planning for future requirements, better fiscal reporting, and availability of better data for budget formulation. The establishment of an effective treasury system will also contribute directly to improving transparency and accountability of government.

This paper is based on the authors' experience in designing and implementing Treasury systems as part of Bank/ IMF projects in several countries in the ECA region and elsewhere. The authors intend the Treasury Reference Model (TRM) described in this document to be used as a development tool for fiscal managers and system developers.

It is aimed, in the first instance, at facilitating the process of designing treasury systems projects. By incorporating design features and best practices drawn from a range of international experience the model aims to improve the quality of technical specifications and to provide key inputs to the institutional reform process. More broadly, it is expected that the TRM will help to implement good practices in fiscal accounting and expenditure control and give guidance on meeting standards prescribed under various international standards and codes such as those set out in the *IMF Code of Good Practice on Fiscal Transparency—Declaration on Principles* (fiscal transparency code) and the detailed fiduciary standards being developed by the World Bank.

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ABSTRACT

The Treasury Reference Model (TRM) described in this document gives guidelines for the design of automated treasury systems for government aimed at two groups of people: (a) authorities within government and their advisors who are engaged in planning and implementing such systems; and (b) software designers and suppliers from the private sector—or even in-house developers of treasury software. For the former group, the aim is to provide tools to help with the design and definition of the systems' functional and technical specifications in relation to government institutions and processes—as well as facilitate reforms of these processes. For the second group, the main aim is to provide a clear definition of typical government needs for treasury systems. These needs differ significantly from private sector needs—even though accrual accounting capability is increasingly being required by government.

To assist in the process of designing Treasury systems, the paper starts in Part I with a discussion of the key features of such systems, including the core functional processes, the various policy options associated with their design and the associated institutional arrangements.

The establishment of an effective treasury system will contribute directly to improving transparency and accountability of government and to meet the requirements set out in the *IMF Code of Good Practice on Fiscal Transparency—Declaration on Principles* (fiscal transparency code) and other standards, such as detailed fiduciary standards being developed by the World Bank. It is important that these aspects be taken explicitly into account in the design and implementation of treasury systems. Relevant elements of the fiscal transparency code are, therefore, included in the TRM.

Part II of the model gives detailed flow charts of the functional processes associated with Treasury systems, a diagnostic questionnaire that could be used to assess country specific requirements, a set of sample functional specifications that could be used for the procurement and / or development of the application software that would be required to implement these systems, and a listing of the main data entities associated with Treasury systems.

The TRM also provides a means for implementing improved analytical standards for fiscal reporting. Increasingly governments are moving toward accrual basis reports and the IMF Government Finance Statistics (GFS) system is being revised accordingly. While these can be observed by adjusting reports from a variety of sources and using cash or various levels of accrual basis accounting, it is far preferable that the accounts be structured to facilitate accrual recording and reporting. The structure of a generic chart of accounts that can be developed for either cash or accrual basis accounting, but is consistent with the principles of the revised GFS, is therefore included in the TRM.

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An initial version of the Treasury Reference Model was developed under a grant provided by the World Bank's INFODEV fund and under contract with IBM corporation. The present version has been extensively modified to make it more useful to Government officials and Bank / IMF staff in their work. The World Bank's Public Expenditure Management Thematic Group operating under the PREM Network has funded some of the later work.

The authors are grateful to a number of colleagues from the World Bank, the IMF and elsewhere for helpful comments on earlier drafts of this paper. In particular we would like to thank Vijay Ramachandran and Eivind Tandberg of the IMF for providing detailed comments. Very useful comments have also been received from Peter Dean, Malcolm Holmes, Allister Moon and Jack Diamond. The authors have drawn on World Bank/IMF work in several countries, including Kazakhstan, Ukraine, Pakistan, and Mongolia, while developing the functional specifications for Treasury systems presented in this paper.

PART I

OUTLINE OF THE TREASURY REFERENCE MODEL

INTRODUCTION

The World Bank and the International Monetary Fund are placing considerable emphasis on implementing projects aimed at improving the management of public finances in member countries. Treasury systems form the backbone for recording and processing all financial transactions related to the budget for any level of government. An integrated treasury system offers several significant benefits in managing public monies more effectively:

- Full integration of budget and budget execution data,¹ thereby allowing greater financial control;
- Improved planning for cash as well as close and timely monitoring of the government's cash position;
- Provision of adequate management reporting at various levels of budget execution;
- Improvement of data quality for the preparation and execution of the budget; and
- Facilitation of the preparation of financial statements and other financial reports for budgeting, analysis and financial control.

The Treasury Reference Model (TRM) described in this document gives guidelines for the design of computerized treasury systems² for government, aimed at two groups of people: (a) Bank task managers and authorities within government, and their advisors, who are engaged in planning and implementing such systems; and (b) software designers and suppliers from the private sector—or even in-house developers of treasury software. For the former group, the aim is to provide tools to help with the design and definition of functional and technical specifications for systems in relation to government institutions and processes—as well as facilitate reforms of these processes. For the second group, the main aim is to provide a clear definition of typical government needs for treasury systems. These needs differ significantly from private sector needs—even though accrual accounting capability is increasingly being required by government.

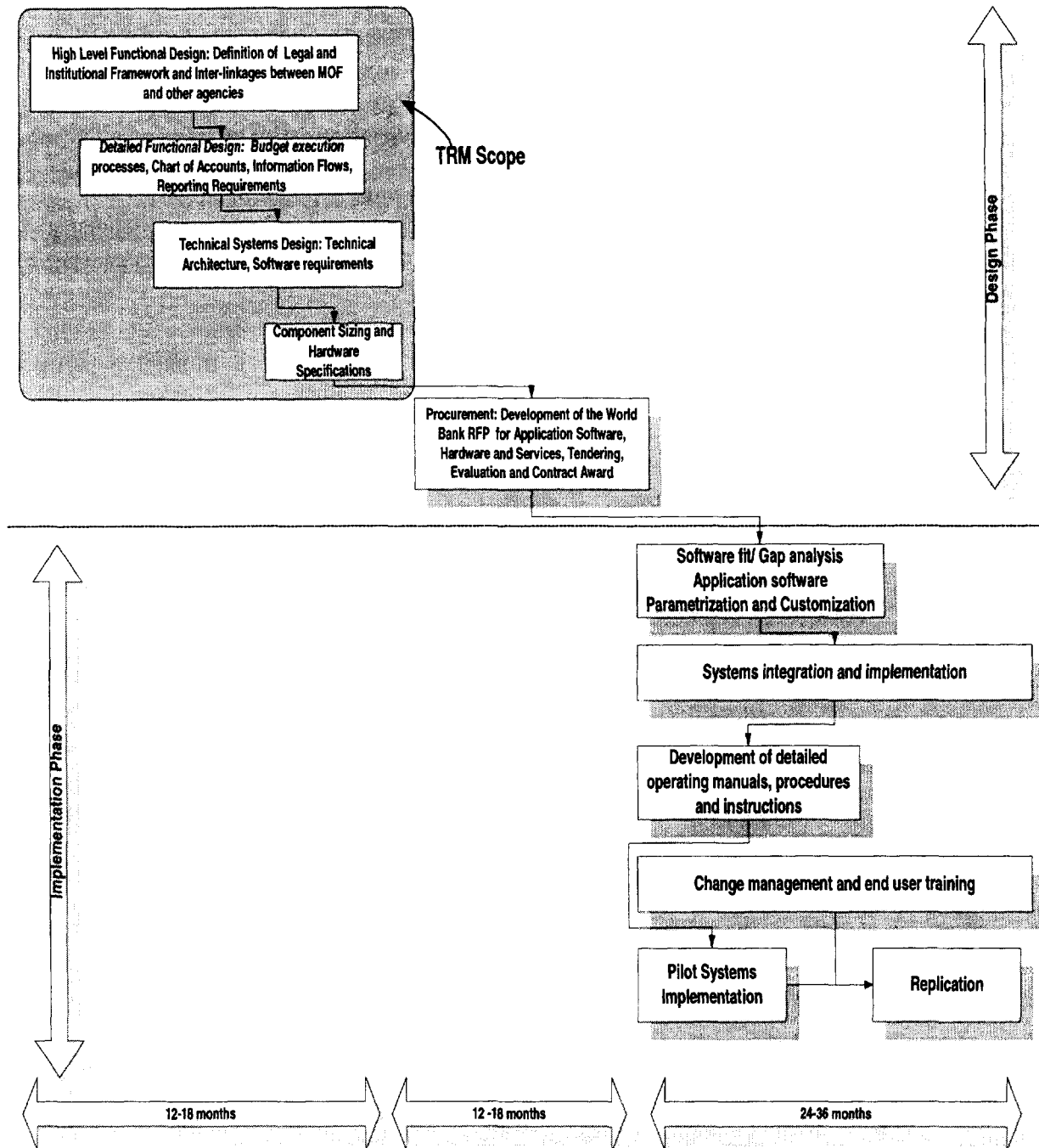
¹ The term “full integration” does not imply that a single integrated system is needed for both budget preparation and budget execution, but that data is defined in the same terms and flows seamlessly from one set of functions to the other.

² The term “treasury system” is used throughout this report to describe integrated computerized systems for managing government transactions covering budget execution and authorization processes; commitments and payments; managing cash and other assets and liabilities; maintaining accounts; and fiscal reporting.

Three main outcomes are sought: First, the model should significantly reduce the time taken for the initial stages of treasury system design (see Figure 1 and discussion below). Second, by incorporating standard design features and best practices drawn from a range of international experience, the model also aims to improve the quality of specifications and provide key inputs into institutional reform processes. Third, private suppliers of software should be able to provide software that meets client requirements with less need for extensive parameterization. The TRM could also assist in evaluating goodness of fit of different treasury software applications and thus facilitate system procurement and implementation.

Design and implementation of treasury systems are complex processes. **Figure 1** shows a typical project life cycle, broken down into distinct design and implementation phases. The scope of this study is focused principally on the first three steps of Phase 1 (in the shaded area) and intends to suggest some standards for this phase and reduce the time taken to complete these tasks.

FIGURE 1. SCOPE OF THE TREASURY REFERENCE MODEL



The *Design Phase*³ covers the following:

- **High Level Functional Design** addresses the major functional components necessary to meet the functional requirements of the Treasury. High level functional design would address issues related to the legal and institutional framework for budget preparation and execution, and the necessary inter-linkages between various agencies and the Ministry of Finance.
- **Detailed Functional Design** includes the definition of the key functional processes and information flows associated with budget execution, a definition of budget classification structures and chart of accounts, and reporting requirements.
- **Technical Systems Design** defines the overall technical architecture in terms of the characteristics of the application software, hardware and communications infrastructure required to implement the treasury systems.
- **Component Sizing and Preparation of Procurement Specifications.** This task develops the key performance criteria for information system components, such as volume of data to be processed or required response time, and incorporates these into the procurement specifications.
- **Component Procurement** wherein all hardware, software, and implementation services necessary for the Treasury System implementation are procured. This step involves development of the World Bank RFP for application software, hardware, and services, (if World Bank financing is involved), tendering, evaluation, and contract award.

Systems Integration and Implementation covers the following:

- **Software fit/gap analysis.** Typically Treasury Systems are procured as integrated off the shelf application packages that provide an array of functions. The fit/gap analysis maps the standard functionality provided by the package to those required and identifies areas of significant convergence and gaps.
- **Software parameterization and customization**⁴ to tailor the package to the specific requirements of the implementation.

³ These stages focus on the process of computer system design, which are a subset of overall project management. Project steps including project approval, development of specifications, acquisition strategies (including risk analysis and mitigation), tendering and letting of contracts, project review and training and support are all important elements of the overall process. See Chapter VI "Critical Success Factors" in Hashim and Allan (1999) and section 1.5 of this paper for a discussion of the importance of a number of these elements in successful implementation of a treasury project. A thesis of the Treasury Reference Model is that a clearer focus on the basis of computer system design will facilitate coordination of other aspects of project management.

⁴ Customization involves changes in the source code, which is likely to cause problems when new versions of the commercial application software package are released. Parameterization requires only specific settings of standard application variables by users (often however, requiring considerable initial design effort) which as a rule will be carried through to successive versions of the application software.

- **Operating manuals and procedures.** This involves development of detailed operating manuals and procedures associated with the functional processes and details of reporting requirements.
- **Change management and end-user training** occurs throughout the implementation phase to address organizational change and training aspects of the implementation.
- **Application implementation** (pilot and replication). Usually, a pilot project which is a subset of the larger project in terms of either functionality or agency coverage is implemented first, to identify and resolve design and implementation issues. The replication is the implementation of the full scope of the project after the pilot has been successfully implemented (or modified as required).

BOX 1. COMPUTER-BASED SYSTEMS FOR TREASURY MANAGEMENT

The two key characteristics of Treasury Systems are:

(a) They require consolidation and rapid compilation of large amounts of data across a set of Treasury offices and spending units dispersed across the country; and (b) Their functional processes are repetitive in nature and follow a prescribed set of rules.

In such an environment, computer-based information systems provide Government finance managers:

(a) a set of tools to consolidate, compile, and access reliable and timely information for decision-making. Data in the system databases can be presented in a variety of formats in accordance with management requirements; and,

(b) unique opportunities to process business transactions efficiently, apply necessary controls, and simultaneously gather timely and accurate information required for decision-making. Two aspects of this enhanced efficiency are particularly important. First, these systems make it possible to integrate transaction classification and posting with transaction processing. This means that as a transaction is processed, e.g. as a payment is made, it can be simultaneously classified and posted to the appropriate account. This ensures that all transaction data are promptly and correctly included in system databases. Second, use of computer-based systems facilitates automation of many controls and procedures. As a transaction is processed, the system can apply the necessary controls, e.g. ensure that a proper budget allocation exists prior to making a commitment or approving a payment. Manual intervention is required only in cases which require an exception to the procedures. In these cases the system would keep an appropriate audit trail that would include details regarding the authorization for the exception.

Implementation of such systems however, generally requires substantial reform in existing institutional arrangements. Multiple information flows among different elements of the system have to be closely integrated to achieve the full advantages of computerization. For the design and implementation of effective government fiscal management information systems, it is essential therefore, that (a) required reforms of the underlying financial management processes be clearly agreed upon and understood as the basis for systems design; (b) functional and technical specifications for system design be based on these processes, and (c) clear guidelines be provided for integrating all of the subsystems needed to support Government Fiscal Management (GFM).

These systems are integrated in the sense that their various component modules can exchange data and there is a single secure point of entry for commonly used data. This approach supports the creation of systems and databases in which the primary responsibility for the timely provision of a particular subset of data resides with the organization responsible for that function. However, data in the system data bases is accessible by all other relevant organizations (subject to appropriate security controls). Adherence to this design principle eliminates duplicative data gathering and, more importantly, enables all agencies responsible for specific GFM functions to work with the same set of data, thereby eliminating risks of data inconsistencies, which are inevitable in separately gathered data.

TREASURY REFERENCE MODEL: CONTEXT

Introductory Remarks

The following sections describe a generalized Treasury model. In practice real life systems, as implemented in a particular country, may contain several variations compared to the model. These range from the most basic structures operating in a low income developing country to the most advanced systems in OECD countries. This document focuses on the middle ground of this spectrum. The Treasury model that is presented here is based on the systems that are being introduced in some transition economies and developing countries where the IMF and the World Bank are engaged in Treasury development projects. The basic model itself and the management approach it embodies, with a strong compliance focus and multiple control layers, is perhaps more appropriate for these countries. However, some of the more advanced countries, where adherence to fiscal discipline is not a problem, may benefit from a model with a stronger emphasis on devolution and accountability. Some alternative configurations for treasury systems are discussed in this paper. **Box 1** lists key characteristics of Treasury Systems.

Treasury Systems in the Context of an Overall Framework for Government Fiscal Management

The treasury concept needs to be set, first, in the context of an overall framework for government fiscal management, covering macroeconomic forecasting and management, budget preparation, and tax administration. Treasury functions must clearly be designed in a way that facilitates interaction among these systems. Secondly, certain important but ancillary or linked functions, such as payroll and pensions, a full debt management system, and personnel management, are generally developed as separate but linked modules of a full treasury management operation. The specific issues in developing such systems are not considered as part of the core treasury system.

It is therefore useful to first outline the functional processes for government fiscal management and the regulatory framework that underpins these processes before discussing Treasury systems in detail.

Regulatory Framework

The overall regulatory framework for operating the various component modules of the system network consists of the following elements:

- the control structure
- the accounts classification
- the reporting requirements

The information systems will need to incorporate features to ensure that they abide by the requirements of this framework. Therefore, *the regulatory framework needs to be in place -- possibly reviewed and modified -- before productive work can commence on the design of computer systems to support fiscal management.* A full discussion of the overall regulatory framework is outside the scope of this paper. However, this paper does describe the basic elements of this framework to highlight control factors that should be incorporated into the design of component system modules. Box 2 lists the policy reforms that need to accompany systems development.

Control structure

Many of the basic controls that are to be applied to the use of government funds are derived from a legislative framework, very often with basic principles laid down in financial provisions in the constitution and laws related to the management of public finances. Controls are defined at several levels:

- Formal legislation and regulation that control the structure of funds and appropriations, and administrative practices.
- Financial legislation and administrative regulations that specify the detailed requirements for control, to ensure that transactions are properly authorized and documented and that appropriation authority is not exceeded.

Within most legislative frameworks, receipts of governments are paid into a fund (which will herein be referred to as the consolidated fund (CF) ⁵), and any expenditure from the fund must be formally appropriated by the legislature.

Regulations, administrative instructions, and administrative practices specify the standards and procedures to be followed for transaction processing. These include:

- document and transaction level controls to ensure correct processing, full and correct recording, and audit trails
- access controls to ensure that only authorized personnel can record, change, or report information
- overall system controls to ensure that the system embodies established processing standards

Formal regulatory frameworks in western industrialized economies have generally evolved at a time when the predominant interest was to ensure that the executive arm of government used public funds properly and within the limits authorized by the legislature. Legislative developments have not always kept pace with the needs of modern economies, however, where the concerns of fiscal management are much broader. In particular, the roles of the budget in macroeconomic management and the

⁵ The fund becomes the basis for accounting and reporting in government. It is common to divide the overall CF into several funds--for example, a fund for current receipts and expenditures, a fund for loan and capital receipts and expenditures, and a fund for receipts and expenditures on behalf of other parties (trust funds). Any fund may have a number of sub-funds.

efficient allocation of resources to meet social and economic objectives are as important as the traditional compliance role. Defining such needs and designing control systems to meet them is now an essential element of the design of GFM systems.

From a systems design point of view, the macroeconomic management objective has a direct bearing on the definition of the control structure. It is necessary, however, to look beyond controls specified at a legislative level and the traditional compliance role of the accounting system. For fiscal management, the overall deficit of the general government and the way in which this deficit is financed are crucial variables. It is vital that all elements of the budget and accounting information system be designed to produce this information in a timely way to facilitate the formulation and execution of macroeconomic policy.

The resource allocation aspects of fiscal management are reflected in systems design primarily through appropriate budget and accounts classification and reporting specifications, which are discussed in the following sections.

Accounts Classification

The accounts classification code structure is a methodology for consistently recording each financial transaction for purposes of expenditure control, costing, and economic and statistical analysis. A standard, government-wide classification code structure needs to be set up to provide a consistent basis for:

- Integrating planning, budgeting and accounting
- Compiling budget allocations and program and project costs within and across various government agencies
- Capturing data at the point of entry throughout the government
- Consolidating government-wide financial information

The design of the accounts classification structure should, therefore, be determined by the information requirements of each of the above objectives. In principle, this structure should accommodate the following elements: fund, program, organization and spending unit, project, and object of expenditure classifications. Program codes should identify program elements and supplements down to the basic program decision units. Similarly, organization codes should identify budget and cost centers. Projects can be related either to organizations or programs, but should be further sub-classified independently of these structures in terms of sub-projects, jobs, and functions. The object of expenditure classification should serve both administrative and economic classifications and be divided into sub-categories for control purposes. It should also be consistent with economic classification codes used for generating national accounts or government finance statistics (GFS). These issues are discussed in detail in section 1.4.

Reporting Specifications

Governments must specify reporting requirements and objectives in two areas:

- external reporting—to provide information to the legislature and the public, as well as other countries, international organizations, overseas investors, and financial markets
- internal management reporting—for government policy makers and managers.

In general, the broad requirements for external reporting are specified in the budget legislation and detailed requirements are given in regulations, instructions, and administrative practice (e.g., report formats actually in use).

From the point of view of resource allocation, increasing emphasis has been given in recent years to improving reporting standards by linking financial and performance information and giving a clearer perspective on resource use by using accrual-based reports in addition to the usual cash-based government accounts. Development of such report formats is, in general, occurring mainly in industrialized market economies. Nonetheless, it is suggested that the design of GFM systems in any country should take into account, to the extent possible, the likely development of such report formats in the future.

Functional Processes for Budgeting and Accounting

The functional processes of budgeting and accounting can be categorized as those carried out by the central agencies and those carried out by the spending ministries and agencies. Those of the former group are most directly linked to the control framework -- indeed, one of the main functions of the central agencies (particularly the ministry of finance) is to ensure that the control framework is properly applied throughout government. The functional processes cover two interrelated areas: macro fiscal forecasting, budget preparation and approval; and budget execution, cash management; and accounting. The first set of processes supports the objectives of setting fiscal policy and strategic priorities. *The second set of processes supports the objective of optimizing the use of budgeted resources and ensuring accountability and fall under the purview of the Treasury system.*

Macroeconomic Forecasting, Budget Preparation, and Approval

At the start of the budget cycle, the central agencies (generally the Ministry of Finance) send the sector agencies a budget circular indicating economic prospects and broad policy objectives (in some cases, based on a formal macroeconomic framework paper), and giving the parameters within which the budget for each ministry is to be prepared. The circular may give specific ceilings for expenditure by each agency and program. The sector agencies respond with their budget proposals.

Since budget requests generally exceed resources, negotiations at the technical level between central and sector agency staff are required to review costings for existing programs and new project proposals. Cabinet level (or cabinet committee level) discussions are often required to set intersectoral priorities and priorities among the program and project proposals to ensure that the selected proposals can be funded within the macroeconomic framework. The framework should be updated frequently, particularly during budget initiation and finalization, as well as for subsequent reviews during the year. As a result of these discussions, a draft budget document is prepared.

After preparation by the executive branch, the legislature reviews the estimates and approves the budget. The duration of legislative consideration and the degree of change that can be introduced at this stage vary considerably among countries.

This approved budget becomes the legal basis of the Public Sector Work program (PSWP) to be executed by the sectoral ministries. It gives estimates of expected revenue and borrowing and the amount of expenditure -- by budget and accounts classification -- authorized to be spent on approved programs and projects.

Cash Management, Budget Execution, and Accounting

At the start of the year, sector agencies prepare forecasts of cash requirements for the year based on known and anticipated commitments for both recurrent and capital expenditures. These forecasts are based on information on firm commitments and the foreign exchange component (if any) of anticipated expenditures. The cash requirements and revenue projections obtained from the agencies responsible for revenue collection are developed into a consolidated cash flow forecast by the Ministry of Finance.

Once the budget is approved, the MOF has the task of controlling the release of funds, monitoring progress on budget implementation, and managing the cash resources of the government. From the start of the financial year, the MOF releases funds (warrants/cash allocations) periodically to sector agencies, keeping in view the approved budget, the sector agency cash requirements, and overall resource availability. As the fiscal year progresses, the sector agencies prepare monthly/quarterly requests for funds and submit actual expenditure (and revenue) statements for the previous month/quarter. Capital expenditure warrants are allocated to specific projects.

Warrants authorized by the MOF are sent to the Treasury that is the custodian of the CF. The warrant either authorizes the treasury to make payments out of the CF or authorizes the treasury to make money available for payment by the responsible accounting officers of the sector agencies.

Upon receipt of the warrant authority from the MOF and access to funds from the treasury, sector agencies begin implementing the approved programs and projects. The line agencies start using the appropriated funds by requisitioning, procuring, and paying for goods and services.

To ensure proper expenditure control, sector agencies are required to institute a system of commitment planning and control to ensure that expenditure does not exceed the sum approved by parliament for specific purposes and expenditure is within the warrant amounts. The latter element of expenditure control is often used by the MOF/treasury to ensure that expenditures do not exceed actual resources (which may be less than estimated in the budget). When a receipt shortfall occurs, it is essential that the treasury be aware of the commitments (e.g., statutory payments such as public debt, staff salaries and allowances, unpaid bills and existing contractual obligations) for which cash is needed during the year.

Tax revenue from customs duties, income, excise, and land taxes is managed by the revenue collection agencies. These revenues are deposited in local commercial banks and remitted to the government's central account in the Central Bank (CB). The CB then sends a daily report to the treasury on inflows to this central account.

Non-tax revenue from fees, administrative charges, and product sales (e.g., products made in prisons) are also managed by the collection agencies and transferred to the Consolidated Fund (CF).

The accounting function entails:

- maintaining records of spending authorizations at the appropriation and funds-release (warrant) levels
- processing expenditure and receipt transactions—recording the transactions as they occur, applying the requisite controls, posting to the appropriate account, and listing transactions and associated data for control and audit
- maintaining ledger accounts to monitor and control actual spending and receipts against budget and warrant controls
- reporting

BOX 2. POLICY FRAMEWORK AND INSTITUTIONAL REFORMS

The IMF and the World Bank have been involved extensively in advising Governments in developing policy and institutional reforms to enable the systems for budgeting and accounting to be set up and function in accordance with international best practices. These reforms are especially important in transition economies where the legal and institutional infrastructures need to be set up ab-initio. Some of the key actions and policy reforms needed prior to the implementation of new computer systems for budgeting and accounting are detailed below:

- Development of a comprehensive Budget Management Law which will provide a framework for the proper management of public funds and property, with specific emphasis on: (a) the receipt and custody of public funds (including banking arrangements); (b) public expenditure management (including control processes and linkages with appropriations); (c) the accounting system; (d) the role and responsibilities of the Treasury, MOF and other departments; (e) asset management and control; (f) borrowing and investment (specifically management of the public debt); and (g) reporting and audit. This is often incorporated in an organic budget law that also deals with budget preparation.
- Adoption of a budget classification system consistent with the IMF's Government Finance Statistics (GFS) methodology, and final design of a treasury chart of accounts embodying this classification system.
- Consolidation of Government bank accounts to a Treasury Single Account (TSA) at the Central Bank and setting up appropriate institutional arrangements for processing payment and receipt transactions against this account.
- Implementation of systems for and development of detailed regulations and operating manuals covering TSA-based budget execution processes (spending limits, cash allocations, commitment and payment control, payment processing, accounting and reporting).
- Establishment of a cash management unit in the Treasury and formulation of procedures for its operations, which will cover cash flow forecasting and monitoring, and day to day management of funds distribution among spending units and field treasuries. The cash flow forecasting and monitoring function is of central importance to the system of monthly spending limits and commitment control. The cash management unit will be responsible for making realistic forecasts of likely cash inflows and spending requirements based on actual trends. This unit should work very closely with the budget department of the MOF to advise on the appropriate levels for spending ceilings.

The Treasury Ledger System

In the context of the processes described above, the term Treasury Ledger System (TLS) is used to refer collectively to the systems modules that provide support for:

- budget and warrant control
- accounts payable
- accounts receivable
- the general ledger
- fiscal reporting

The first of these is concerned with maintaining data on spending authority. These systems maintain data on approved budgeted appropriations (both capital and recurrent), sources of financing for programs and projects. This information is transferred to these systems from the budget preparation systems after the budget has been finalized. During the course of the year as budget transfers, supplementary allocations, fund releases (warrants) take place, this information is also recorded in the system. The second and third group of systems are used to process commitment, expenditure and receipt transactions as they occur during the course of the year. These systems therefore maintain a record of commitments and actual expenditures against budgeted allocations and details of receipts. The GL is used for compilation of summary records for control and analysis. Together these modules provide the Government the capability to monitor the budget execution process and generate fiscal reports. The Treasury Ledger System would normally be used by:

- the Treasury and its regional offices to perform the basic accounting functions and to undertake budget implementation
- the budget department of the MOF to obtain the status of actual expenditures and perform the processes associated with budget monitoring and fiscal reporting (The TLS provides the base data required for compiling Governments' fiscal reports. External reports combine this data with budget data, market data and analysis and commentary. This function is often carried out by the Budget department or a macro-fiscal unit in the MOF.)
- the Treasury cash management department to provide the information it requires for cash management and implementation of cash limits
- line agencies to cater to their accounting and financial information needs (The spending agencies also use this information to reconcile their internal records with the information provided by the Treasury system)
- the Government auditing organization to access financial transaction data for auditing purposes

Besides these systems modules, a number of other systems are required to support Government fiscal management processes. Figure 2⁶ shows the main elements of overall systems network required to support Government Fiscal Management and the main information flows between elements. The scope of a treasury system, which defines the scope of the TRM is indicated by the shaded area in the diagram. A brief description of these systems is given in **Box 4**.

As indicated in **Figure 2**, the TRM is concerned with core accounting, payment and cash management functions. The treasury system is core in the sense that it represents the minimum set of functions needed to maintain a comprehensive, integrated accounting and financial management database for government. In many senses it sets the data standards for all of the other systems in a fully integrated financial management system. The Treasury Ledger System (see **Boxes 3 and 4**) is the central database element of the core treasury system. All other components of the government fiscal management system (e.g. debt management etc.) either provide data or make use of data from the treasury ledger.

It is important to note, however, that the TRM makes specific reference to other linked systems at appropriate points. Linkages between a Budget Management System (which generates spending authority) and the treasury system (which manages execution within the given authority) are particularly important.

⁶ Based on Hashim and Allan (op cit)

BOX 3. CAPABILITIES OF THE TREASURY LEDGER SYSTEM

The Treasury Ledger System includes a set of summary control accounts maintaining budget authority and actual spending against authority and handles all posting and report generation from this database. It would have the ability to *create* transactions, *distribute* authority (appropriations, apportionments and allocations), *record* all transaction details as appropriate and *consolidate and disseminate* information as necessary. Some examples include:

Create authority and create transactions

- Distribute appropriation and commitment authorizations to spending ministries
- Distribute funds allocations to spending ministries
- Print checks against payment instructions and/or make arrangements for the electronic transfer of payment information to an external paying entity (e.g. a bank) if required

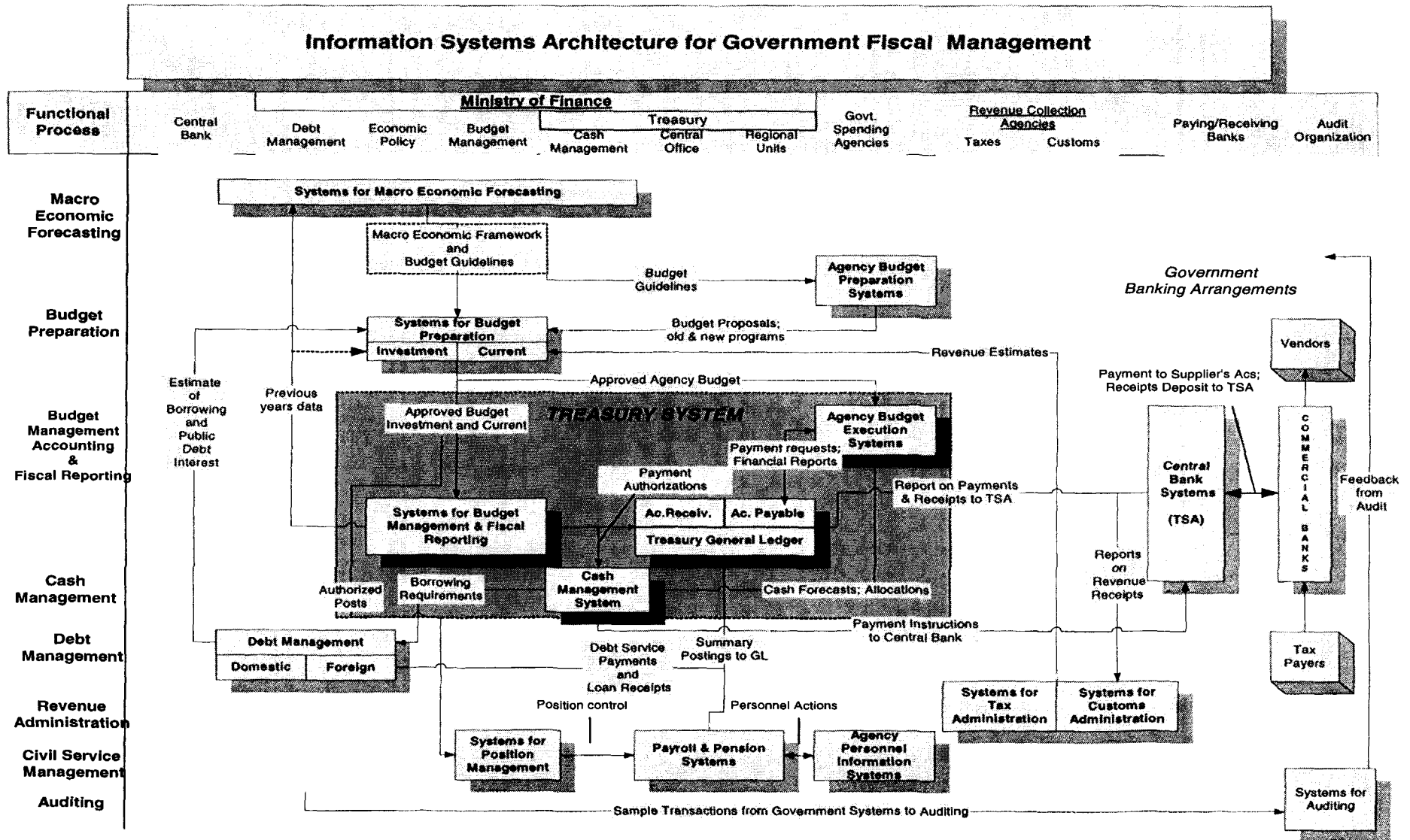
Record transactions

- Record initial budgets, as approved by the legislature
- Record expenditures against commitments and funds allocations (e.g. due to purchase orders or other payments)
- Record revenue and other receipts against appropriate account heads
- Capture and maintain records throughout the year such as: initial and revised budgets; budget transfers for a typical spending unit; commitments incurred by spending units against approved limits and appropriations; funds allocations against appropriations and any subsequent changes

Consolidate and disseminate transaction information and reports

- Print consolidated payment instructions for action by the banking system
- Consolidate data from all ministries and regional offices as necessary
- The system would facilitate/support easy retrieval of data in system databases in a variety of formats
- The system would also have good reporting capabilities and be able to produce commonly required accounting and management reports

Figure 2. Overall Information Systems Framework for Government Fiscal Management



BOX 4. INFORMATION SYSTEMS ARCHITECTURE FOR GOVERNMENT FISCAL MANAGEMENT

The information systems architecture for Government fiscal management is a framework that shows: the different information systems modules that are required to support GFM functional processes, the scope, scale, and type of a particular systems component, and the major information flows between the various modules. This framework is developed by analyzing the basic functional processes associated with GFM, their information requirements, functional responsibilities of agencies commonly responsible for the processes, information flows between the processes, the nature, volume, and frequency of these flows, and the data characteristics of the information used and created by the processes. Developing an overall architecture for GFM enables integration of the various component modules.

The main elements of the Systems Architecture required to support GFM and the information flows between these elements are shown in figure 2 and are summarized below:

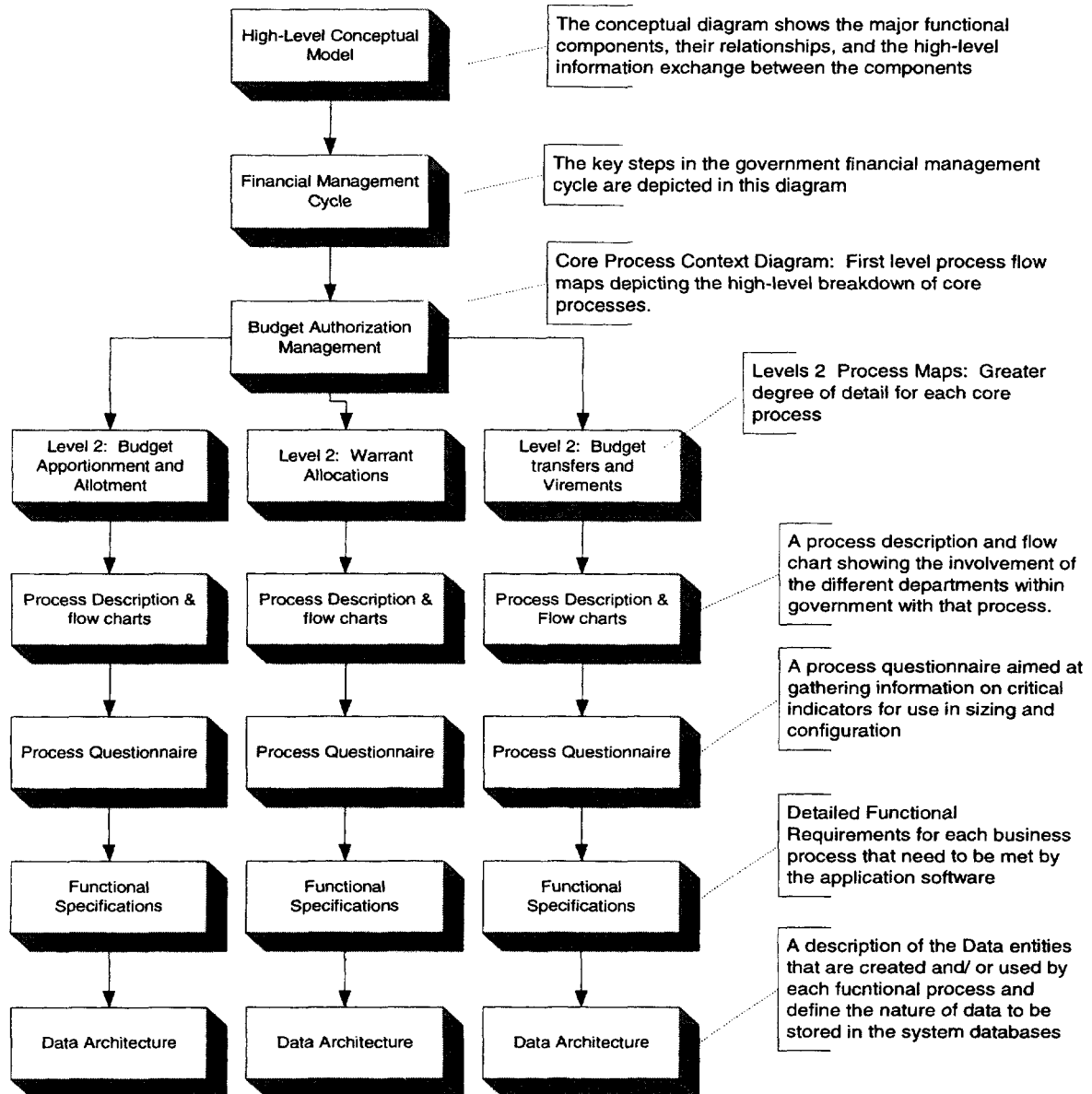
- **Information Systems to support Macro Economic Forecasting:** These systems assist the MOF with macro fiscal forecasting and development of the macroeconomic framework which is used by the MOF to advise the cabinet on aggregate budget parameters and guidelines for budget agencies to submit budget estimates.
- **Information Systems to assist in Budget Preparation and Approval:** The Budget preparation systems receive details of ongoing and planned programs and projects from line agencies, consolidate them, and produce from them the documents that form the basis of the negotiations between the line agencies and central agencies. After finalization of the budget by the cabinet, the system produces the approved budget estimates. The finalized budget figures are then loaded into the systems for budget execution, accounting and fiscal reporting.
- **Information Systems for Budget Execution, Accounting and Fiscal Reporting.** These systems maintain data on approved budget appropriations spending authority, sources of financing of programs and projects, budget transfers, supplementary allocations, and funds releases (warrants). They also record commitments and actual expenditures against budget allocations and tax and non tax revenues as they are deposited in the Government banks. They receive the initial budget data from the budget preparation system after the budget is finalized. They maintain and record the data on budget transfers, supplementary allocations and warrants. They receive commitment and payment transactions from the spending unit systems, or in hard copy format, as they occur during the course of the year. They receive information on receipts from the banks responsible for government receipts. These systems are the centerpiece of the GFM systems network, the primary repository of financial data, and serve as the basis of the government's Financial Management Information System (FMIS). They assist the Government in the budget monitoring, accounting and fiscal reporting processes.
- **The Cash Management Systems:** These systems assist Government to maintain an up-to-date picture of the government's liquidity position and cash requirements. They receive the information on cash requirements from the ministries/ spending units and the data on cash balances from the Banks where government accounts are held.
- **Debt Management Systems.** These systems maintain information on public domestic and external borrowings. Payments related to government borrowings are carried out by the central accounting system based on the data in the debt management system. Loan receipts recorded in government accounts are processed by the central accounting system and then used to update the debt database maintained by the debt management system.
- **Revenue Administration Systems:** This group of systems assist the government in the processes associated with formulating tax and tariff policies and the subsequent collection of tax and non tax revenue. A number of separate systems are involved in this group: for example, those supporting the administration and collection of income taxes, customs duties or VAT, and those supporting the collection of various types of non- tax revenues, such as stamp duties.
- **Systems to Assist in Fiscal Aspects of Personnel Management::** These are the systems modules that assist in functional processes associated with post management and complement control and with payroll and pension payments. The payroll and pensions systems periodically post summaries to the central accounting system.
- **Systems to Support Auditing:** These systems assist the internal and external audit agencies in their functions. To perform the audit function, they need access to the data bases maintained by the other systems modules.

BROAD STRUCTURE OF THE TREASURY REFERENCE MODEL

The TRM describes the overall concept and core processes of government treasury management in generic terms, and develops detailed models of each of the component processes. On the basis of these, strategic parameters can be defined for specific treasury designs and the model can be compiled for individual country needs. As illustrated in **Figure 3**, using the process of “Management of Budget Authority” as an example, the TRM is structured in the following manner:

- A conceptual diagram showing the major functional components, their relationships and high level information exchange between the components
- High level process flow maps depicting the financial management cycle and each of the key processes (level 1, in the terminology adopted in the remainder of the model description) in the government financial management cycle;
- Level 2 process flow charts giving a description of the process, the breakdown of the core processes into key sub-processes, and flow charts that show the involvement of the different government departments/ agencies in the process;
- A questionnaire to help gather country specific information about the functional processes that would need to be factored into the design and to assist in sizing the application;
- Detailed functional requirements for each business process that define the characteristics of the application software to be procured/developed;
- A description of the data entities that are created and/or used by each functional process and which define the nature of the data that will be stored in the system data bases.

Figure 3. Outline of Treasury Reference Model



High Level Conceptual Model

Figure 4 represents the first level of the reference model: the conceptual view of treasury processes and information flows. This diagram shows one configuration of a Treasury System, in which the treasury is directly responsible for making payments and the Central Bank is responsible for government banking operations. Alternative institutional arrangements are discussed later in this paper. The diagram indicates the various steps in

the execution of the budget as well as illustrates the information systems flow for budget execution, cash management, accounting and fiscal reporting.

The core functional processes and information flows associated with the Treasury System (TS) are also shown schematically. The TS is normally implemented at the Treasury head offices and at each of the regional and district branches of the Treasury to process and control central government payments in their respective areas.

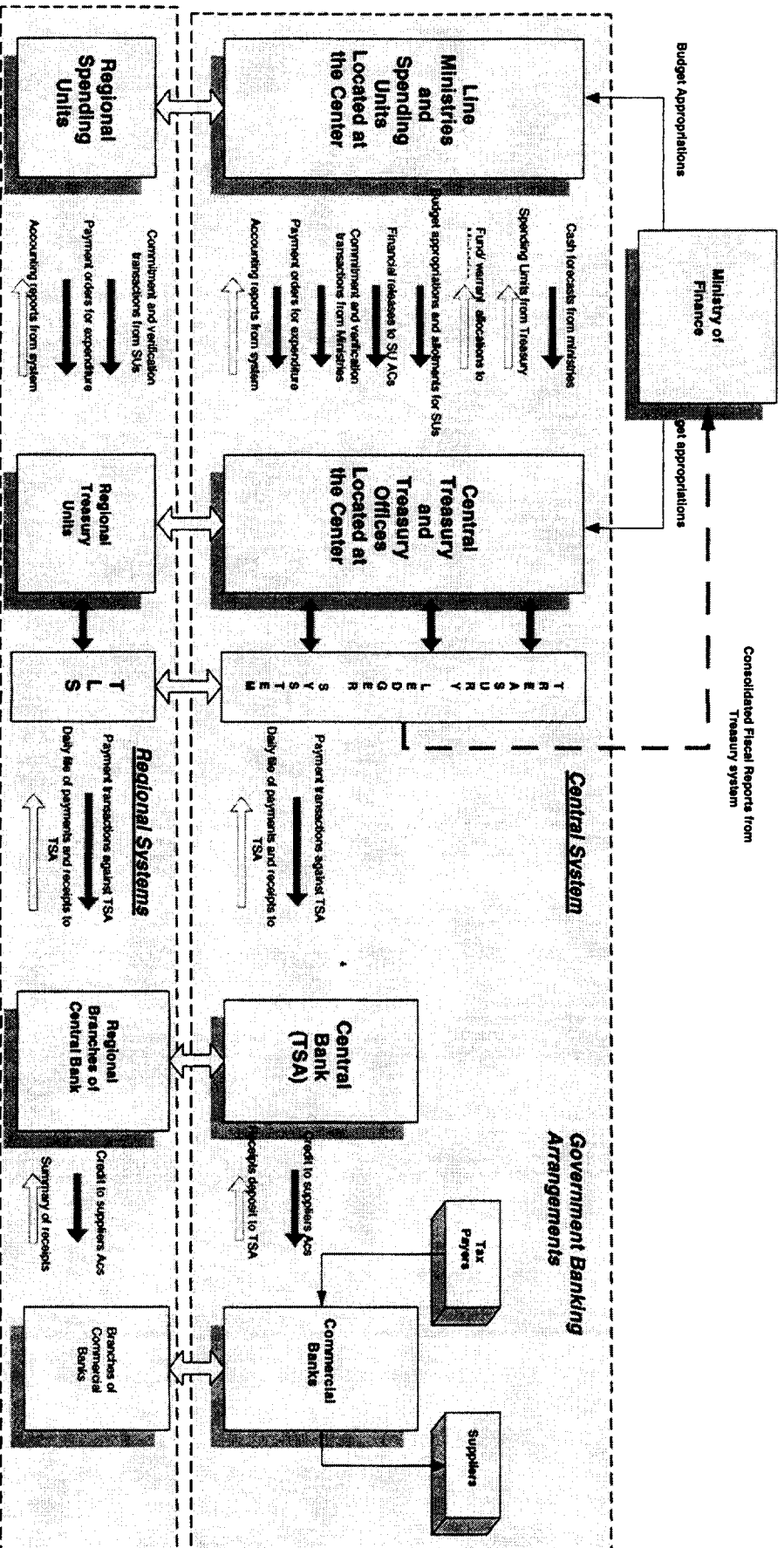
The following is a brief description of the functional processes and information flows associated with the treasury system:

- **Record budget appropriations, apportionments and allotments:** After approval of the annual budget by Parliament, it is loaded into the system by the Budget Department of the MOF. The approved budget for spending ministries is then broken down to the detailed level of economic classifications and is apportioned over time (quarters and months) and registered in the system by the MOF and communicated to the spending ministries. The spending ministries, in turn, register the detailed budget for their subordinate spending units and communicate the allotments to the spending units. These are the spending limits for the spending ministries and spending units by quarter/ month for the fiscal year.
- **Determine cash requirements and warrant amounts:** Each year, financial plans detailing projected outlays and receipts are developed by spending units and ministries. As the year progresses, sector agencies prepare periodic requests for funds by economic category, which are also captured. The MOF then issues warrants to ministries for each category of spending. From these amounts the ministries issue sub-warrants for their spending units and advise the appropriate spending units. These processes take place periodically throughout the year. The warrant and sub warrant amounts need to be within the amounts specified in the spending limits for these organizational units. The level of detail in budget releases need to be broken down is related to the authority delegated to the spending units to shift funds between items.
- **Record Commitment Transactions:** Throughout the year, sectoral ministries process requests for expenditure. After verifying the appropriateness of the expenditure and availability of budget appropriation and funds, Treasury registers the actual commitments in the system. If spending agencies have access to the system, they record the transactions themselves. In the case of spending units (SUs) located outside the center, the transactions are recorded through a Regional Treasury Unit (RTU).
- **Verify Goods Receipt and Record Payment Orders:** Following verification of a given expenditure, ministries directly linked to the system record the corresponding payment orders. The system then checks against the funds allocation limit. Outlying spending agencies process payment orders through the RTU which also records all transactions on their behalf. Once all requirements for an obligation have been met, spending agencies should confirm that the commitment is ready for payment.

- **Process Payment:** The banking system must be advised at the time that payment orders are registered in the TLS to effect payment. This can be done automatically in a fully developed system. Daily batches of the TLS transactions – which capture complete information on all payments – are sent to the Central Bank or by RTUs to regional Central Bank units. The applicable bank then transmits the relevant funds and information to each commercial bank to credit the appropriate account and debit the government account. The receiving bank confirms debits to the Government account to the TLS. Alternatively, the applicable accounting office could forward to the appropriate bank a consolidated listing of the registered payment orders requiring payment; many times the confirmation to the accounting office are manual.
- **Record Receipts:** Government receipts such as taxes and customs duties are paid into a set of sub-accounts set up by the Treasury in the Central Bank. Taxpayers can direct their own Banks to make transfers from their accounts into these special sub accounts of the TSA set up for tax receipt purposes, or can make direct payments into these accounts. Periodic reports showing all details are sent by the Central Bank to Treasury and the state tax authorities for recording and reconciliation.

FIGURE 4. HIGH LEVEL CONCEPTUAL MODEL OF THE TREASURY SYSTEM

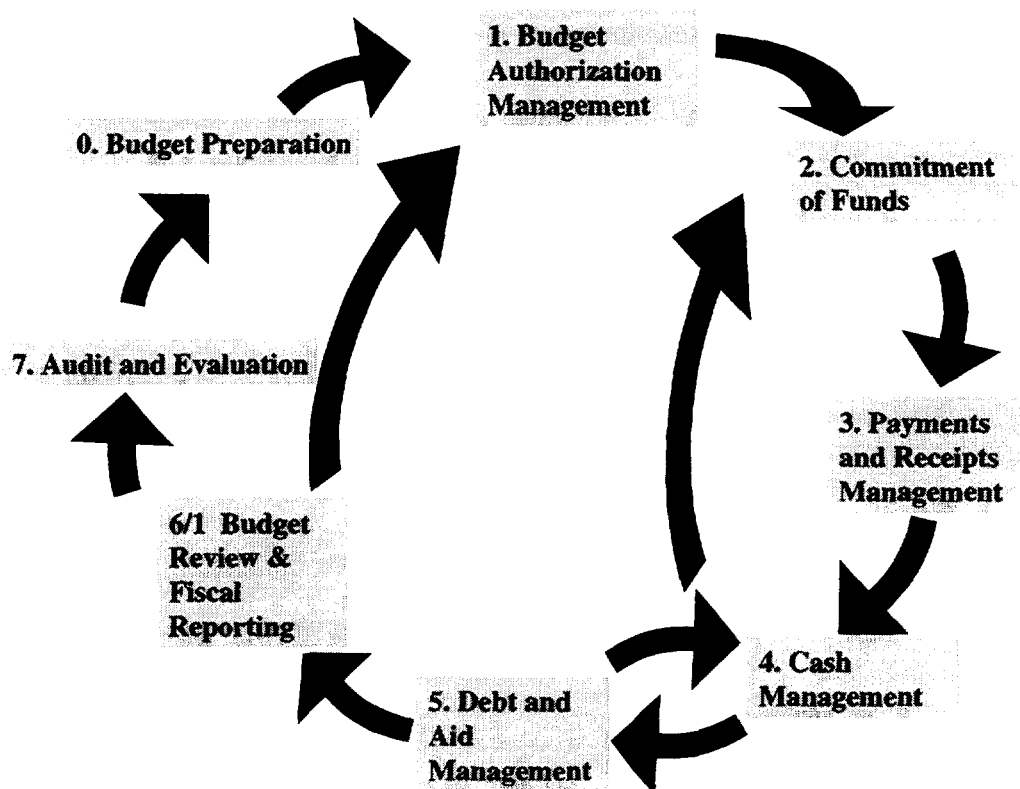
Treasury System: Core Functional Processes and Information Flows
Case 1: Treasury is directly responsible for making payments;
Central Bank responsible for banking operations



Financial Management Cycle

Financial management processes involve a series of cycles as portrayed in **Figure 5**. Over the year, as indicated in steps 1 to 7 the budget is executed through the processes indicated and the cycle is terminated by review and audit of accounts. In principle, the completed cycle in one year provides a basis for the cycle of authorization, execution and audit to be initiated in the following year.⁷

FIGURE 5. GOVERNMENT FINANCIAL MANAGEMENT CYCLE



Within the year, other cyclical control processes are important for exercising overall control over authorization and spending. Key within-year cycles are also illustrated in the diagram. The relative importance of these varies from country to country and according to fiscal circumstances, but all are integrally important to system design. The major cycle within the year is that governing authorization processes, and this cycle is closed by step 6/1 in the diagram, signifying that information from monthly or quarterly accounts are reviewed during the year and used as the basis for re-examination of budget authorization. This review process may give rise to supplementary budget authorization

⁷ Audit is technically the closure of one annual cycle of financial management, although, in practice, audit processes are generally not completed before the initiation of the next year's budget.

requests or budget cuts being referred to parliament.⁸ A second control process is linked to cash management, shown by the reverse arrow from step 4 to step 2, whereby liquidity constraints may lead the treasury/MOF to restrict commitments over a certain period (if this is prolonged, then this should lead to a reduction in budget authorization). A less desirable control cycle that is not shown, but which is frequently invoked in malfunctioning expenditure management systems, is nonpayment of bills due for payment. This could be shown as a reverse arrow from step 4 to step 3.

The other important cycle shown in Figure 5 is that shown as a reverse arrow from step 5 to 4, denoting coordination between cash and debt management. Through this cycle, monitoring of government current and forecast liquidity requirements interacts with the program of borrowing and particularly with the issuance of short-term government securities.

Financial Management Processes and Organization

As discussed in the following sections and in Part II of the TRM, each of the elements of the financial management cycle can be broken down to a set of sub-processes for detailed system design. A crucial step in implementing a treasury system, however, is to ensure that organizational responsibilities for each element of the system are clearly defined. It is to be stressed that this aspect of system implementation does not fundamentally change broad system specifications; in principle a system can meet the requirements of a variety of organizational configurations. Organizational responsibilities should be defined as clearly as possible at an early stage, particularly when major process changes are involved. Clarification of these responsibilities is essential to ensure that institutional and organizational reform proceed in parallel and are consistent with system design and it identifies those users that should participate in detailed reviews of each element of system specification. **Figure 6** below provides one illustrative configuration of an organization (shown along the horizontal access) with the level 1 processes described in Figure 5 shown on the vertical axis.

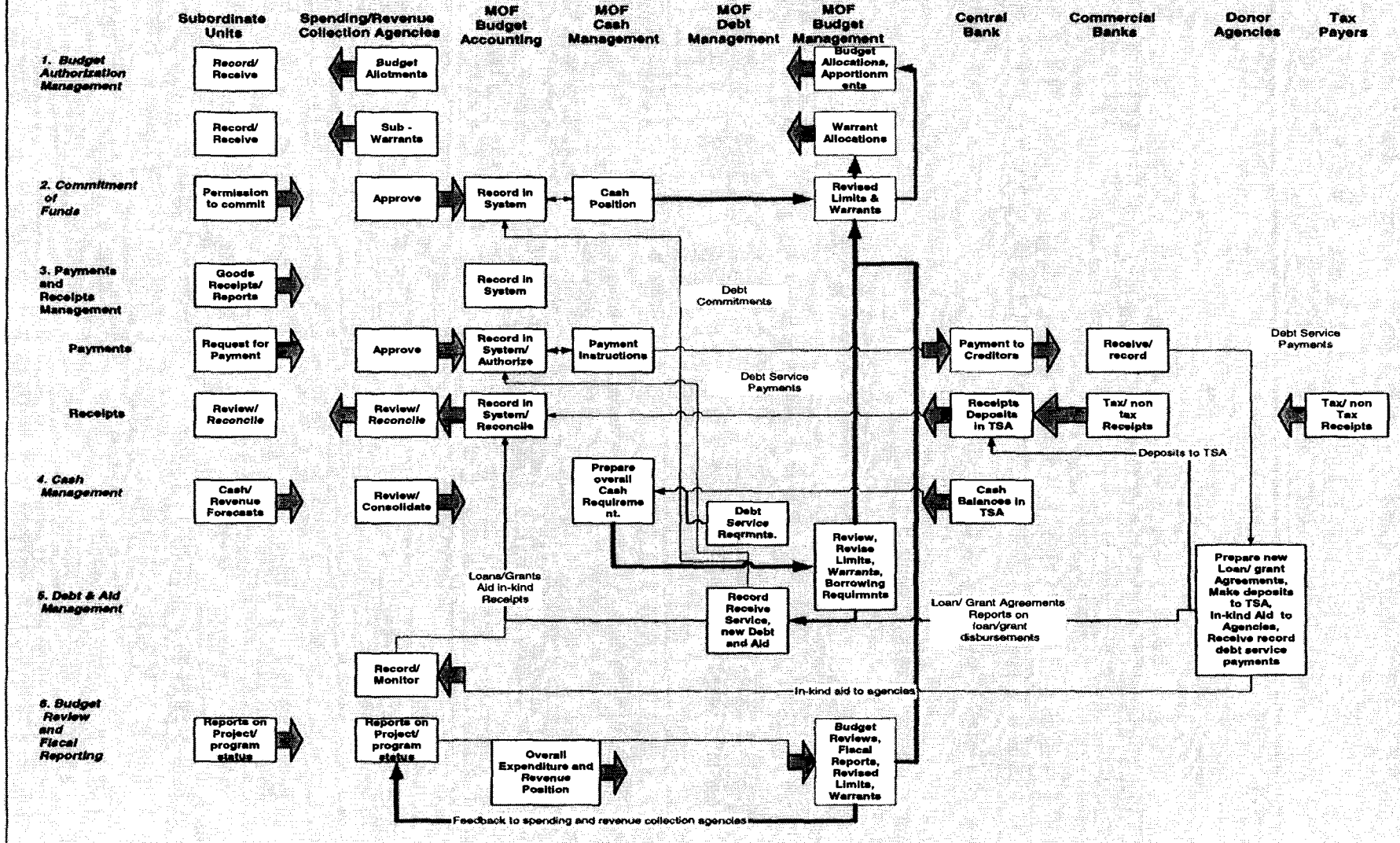
A point of particular importance for both systems design and institutional arrangements illustrated in Figure 6 is that the Budget Division/Department is normally given primary authority over the budget authorization management and review processes (that is, element 1 of the financial management cycle). A Treasury (or Budget Execution Department) generally operates under the general policy guidance of the Budget Department in this respect. In this sense, both data management and organizational responsibilities must be clearly defined as between budget management systems and the treasury system.

In most other respects, there are a variety of organizational arrangements that can work with the system. Debt management, for instance, may be organized as an integrated sub-unit of the Treasury, but in many countries, a separate unit (or units) is responsible for many aspects of debt management—often the central bank plays a key role. The treasury

⁸ In some countries, the government is authorized to restrict spending within year in the event of changed fiscal circumstances without referring to parliament.

system should provide relevant information for each stage of the financial management cycle, independently of the precise organizational configuration. In applying the TRM for a particular country, a flow diagram along the lines of Figure 6 would be developed at an early stage of system design to reflect the specific organizational requirements and to promote participation of the concerned units in detailed system design.

Figure 6: Overview of Treasury Processes and Organizational Arrangements



Processes at Levels 1 and 2

Each of the level 1 processes shown in **Figures 5 and 6** can be described in terms of their component level 2 processes. **Table 1** below shows a summary structure for the level 1 processes in these terms. Detailed flow diagrams, for each process, together with process descriptions, are given in Part II

Part II also includes a questionnaire designed to gather additional information about the process, in the context of a specific country where the TRM is being applied. This information is required for the actual design of the information systems to support these processes and would include items such as the frequency and volume of transactions associated with the process, the specific input and output documents used, control points (for example, financial thresholds above which a different level of authorization is required; etc.).

TABLE 1. SUMMARY STRUCTURE OF LEVEL 1 AND 2 PROCESSES

Level 1	Level 2
1/6 Management of budget authority	1. Budget apportionment & allotment 2. Warrant allocations 3. Budget transfers and virements 4. Supplementary authorizations 5. Budget review
2. Commitment of funds	1. Procurement of goods and services (within-year contract) 2. Procurement of goods and services (extended contract) 3. Creation of a new staff position and recruitment to this position 4. Payroll commitments
3. Payments and receipts management	1. Verification of goods and services receipt and payments 2. Payroll payments 3. Receipts
4. Debt and aid management	1. Debt recording and servicing 2. Grant receipts 3. Loan receipts 4. Issuance of securities 5. Guarantees
5. Cash management	1. Expenditure forecasts 2. Revenue forecasts 3. Cash monitoring 4. Borrowing strategy

Application Software Specifications for Treasury Systems Modules

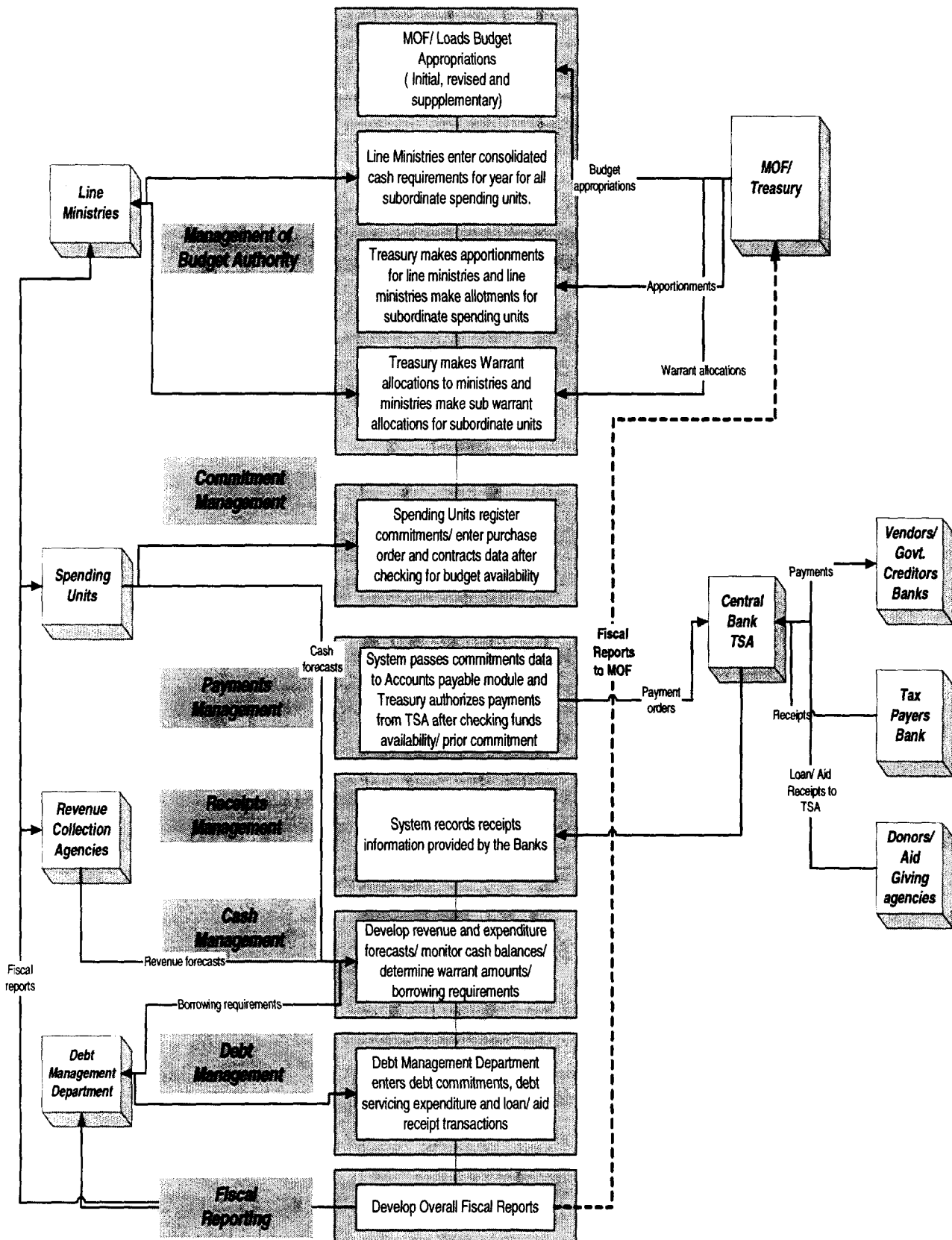
The application software for the Treasury system will need to have a set of modules which perform specific functions to support the functional processes listed above. The main modules of the Treasury system are shown schematically in **figure 7**. This figure also details the main functions of these modules.

A number of off the shelf application software packages are now available that provide many of the features required by treasury systems. Some of these packages have been modified in recent years to accommodate some of the specific requirements of the public sector, as opposed to the corporate sector, for which these packages had originally been designed. However, a detailed set of characteristics would still need to be specified for each of the Treasury systems modules to be able to assess whether one or more of the commercially available off the shelf application software packages would meet the requirements of the Treasury system.

To assist in this process, a set of functional specifications have been compiled for the treasury systems modules on the basis of requirements for similar systems in several World Bank financed projects in Kazakhstan, Pakistan, Ukraine, and Mongolia. These specifications are listed in detail in part II. These requirements will need to be customized for a specific country to take into account country specific requirements. In particular, the input and output formats of the various transaction documents, the specific data formats of the various data entities used by the system and the formats of the reports required from the system will need to be specified. However, these requirements do give a sense of the overall functional requirements for a treasury system and could form the starting point for development of a more country specific version that could be used for the acquisition of the application software.

In case it is found that none of the commercially available off the shelf application software packages has a good fit with the requirements, then the application software may need to be custom developed based on these functional specifications.

Figure 7. Treasury System Modules



Treasury Organizational Structure

The institutional arrangements for expenditure processing presented in previous sections and figures 2 and 4 describe the commonly occurring institutional setting in which (a) all payments from line agencies are channeled through the Treasury; (b) the Treasury is responsible for making payments from the Treasury single account (TSA) which is held at the Central Bank; and (c) the Central bank is responsible for retail banking operations associated with government payments and receipts.

These institutional arrangements have been recommended by the IMF for many developing countries and transitional economies. Centralizing all government funds in the Treasury Single Account (TSA) and channeling all expenditure through the Treasury enable efficient cash management and adherence to budget appropriations for environments whose governance structures are very weak and unstable.

The centralization of all government payments throughout the Treasury and consolidation of bank accounts to a single account at the Central Bank, avoids a situation in which there is a buildup of large idle balances in spending unit bank accounts, even though the Ministry of Finance experiences a cash deficit in overall terms. The buildup of idle balances is also indicative of the difficulty experienced by the Ministry of Finance to receive timely information from spending agencies on the use of public funds and subsequently to exercise control.

The organizational structure for the treasury required to implement this business model typically consists of a main treasury office at the center, second tier treasury offices at provincial/ regional headquarters and possibly third tier offices at the district. In some cases this structure is compressed to only two levels, namely the center and the provincial level. Line ministry head offices communicate with the central level treasury office and their subordinate spending units communicate with the nearest regional/ district office to process payment transactions. Spending units send their expenditure transactions to the nearest treasury office for payment. These offices send the approved expenditure transactions to the nearest branch of the Central Bank where the TSA is held, for payment to the vendor.

In the second case, the treasury has offices only in the center. In these cases the spending units route their transactions to the treasury through their respective parent ministries which then pass them on to the treasury. It may be noted that in this case also all expenditure transactions need to be authorized by the treasury before a payment can be made and in this sense these arrangements fall in the category of centralized arrangements as far as payment processing is concerned.

It may be noted that the main reason for having a network of treasury offices around the country is to provide line ministry spending units easy access to a treasury office where they can process their payment requests and from which they can receive up to date and accurate accounting information, including detailed information on payments and receipts. If the telecommunication infrastructure in a country is well developed and spending units can communicate with their designated treasury office electronically, and a computer based system is being used for payment processing, with the necessary

controls incorporated in the application software, then, in principle, it is possible to reduce the number of outlying treasury offices in the network quite significantly. Payment processing can be centralized at a few treasury offices located strategically across the country which service spending units in their jurisdictions.

Technology Architecture

The technology architecture required to implement the information systems follows from the functional process and the organizational models adopted by the Treasury. Two types of technology architecture can be implemented to support the functional and organizational models described above.

Distributed Transaction Processing and Technology Architecture

This model requires a multi-tiered network with system modules operating at the central treasury/ MOF, each of the regional and district treasuries and at the line agency and spending unit levels. Facilities for transaction processing, generating, storing and processing data are located at each of these levels. These facilities could be stand alone computers, servers, and / or LANs, located at the nodes of the network. These facilities are connected by a Wide Area Network (WAN). Under this model, transaction processing (application software) and data base management facilities are required at each node of the network and are carried out by computers systems located at that level. Summary or detailed data (as may be required for the application) are transmitted to the computer at the next higher level or to the agency responsible for that system. This configuration has the following advantages. It distributes computing power commensurate with node requirements, making the system less vulnerable to malfunctions at a central site, and end users have more control over their technological and data resources. This model is also less dependent on a good telecommunication infrastructure. Since transaction processing takes place on local computers, the architecture only requires that facilities exist to transfer summary or detailed transaction data between network nodes and the center, and this can occur in an off-line / batch mode.

It needs to be noted that under this model the application software needs to be implemented at all levels of the multi- tiered network. The functionality of the software could vary for the different levels in accordance with the functional requirements at that level. This is achieved by implementing specific functional modules of the software at the different levels. Furthermore, since the transaction load at the different sites at a given level, e.g. at the regional or the district levels could vary widely, a key requirement for this model, therefore, is that the application software has similar functionality at the different sites at a given level and that it be scalable—that is, be able to run on small or large computers without major changes. To provide additional flexibility in the choice of vendors, the application software chosen should be able to operate on multi-sized computers offered by multiple vendors. This feature is called software portability.

Centralized Transaction Processing and Technology Architecture

With the advent of the internet, improvements in the telecommunications infrastructure and other advances in technology, centralized technology platforms are increasingly becoming more popular. Under this model the main application software and associated databases reside at a central site, usually the Central Treasury. The line ministries, regional, and district treasury offices, who are responsible for processing transactions on the system, can be connected to the central site via a variety of telecommunication facilities. These could be direct telephone connections (dial up or dedicated) over either land-based or satellite-based telecommunication links. Users at remote locations can connect to the central site via a web browser-based interface, either through a INTRANET that has been set up by the Treasury itself or through the INTERNET using the services of an Internet services provider (ISP). The primary advantage of this model is that it reduces the cost and effort associated with deployment and maintenance of application software. Since the application software is only located at a central site, application software deployment and maintenance is also centralized at this site, is easier to perform, and it is easier to ensure a uniform application software environment across the network. Since the primary hardware requirement, at remote locations, is a work station that can operate a web browser and operate in thin client mode, the size and complexity of the computing facilities required at remote sites is also reduced, thereby reducing the initial investment costs considerably.

These two technical architecture implementations are illustrated in **figures 8 and 9**. It may be noted that the choice of the technology platform does not change the basic treasury functions. It can however, impact the total costs and roll-out plans for the system.

FIGURE 8. TREASURY SYSTEM - DISTRIBUTED ARCHITECTURE - TRANSACTION PROCESSING CARRIED OUT AT REGIONAL AND DISTRICT OFFICES

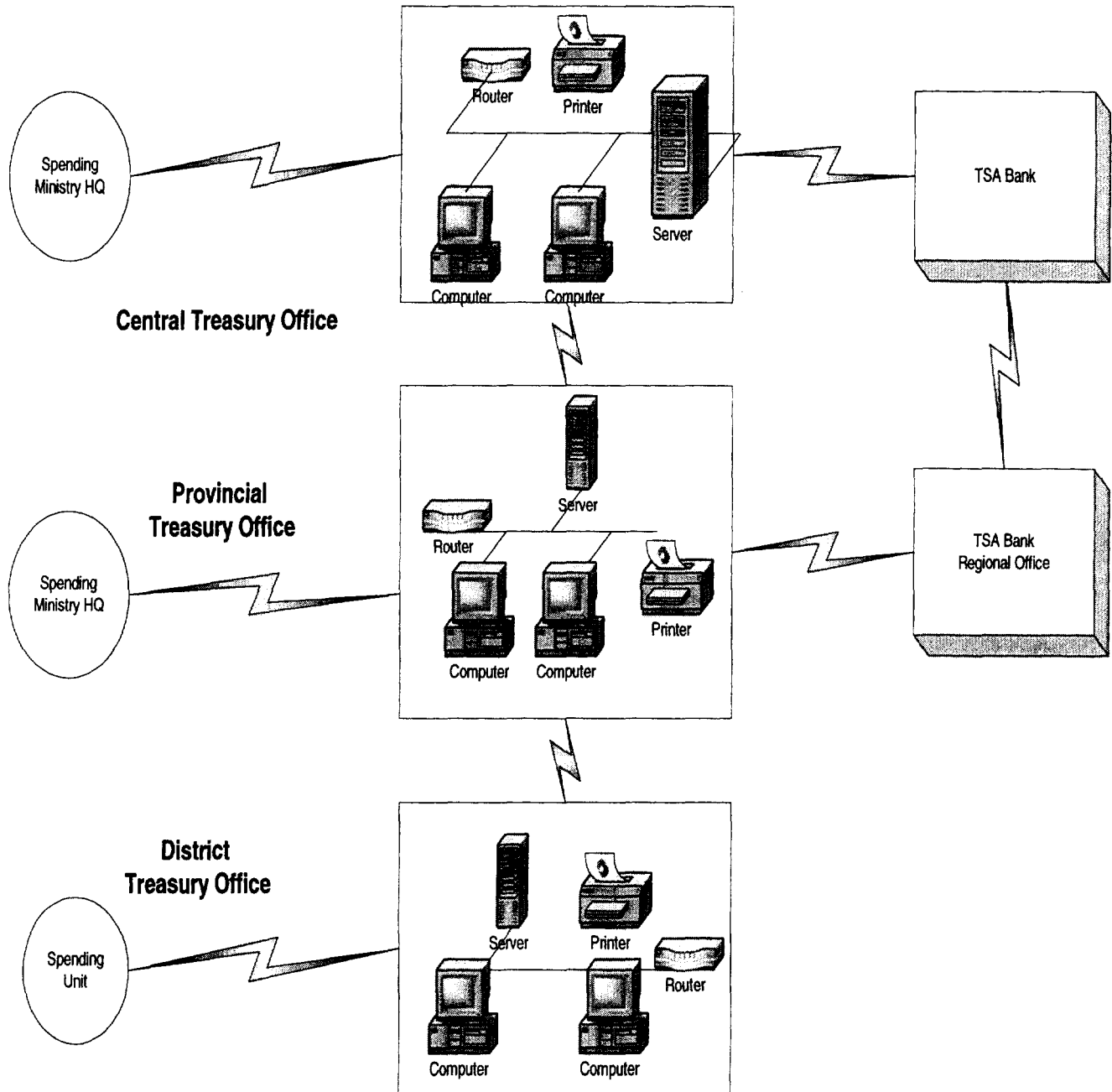
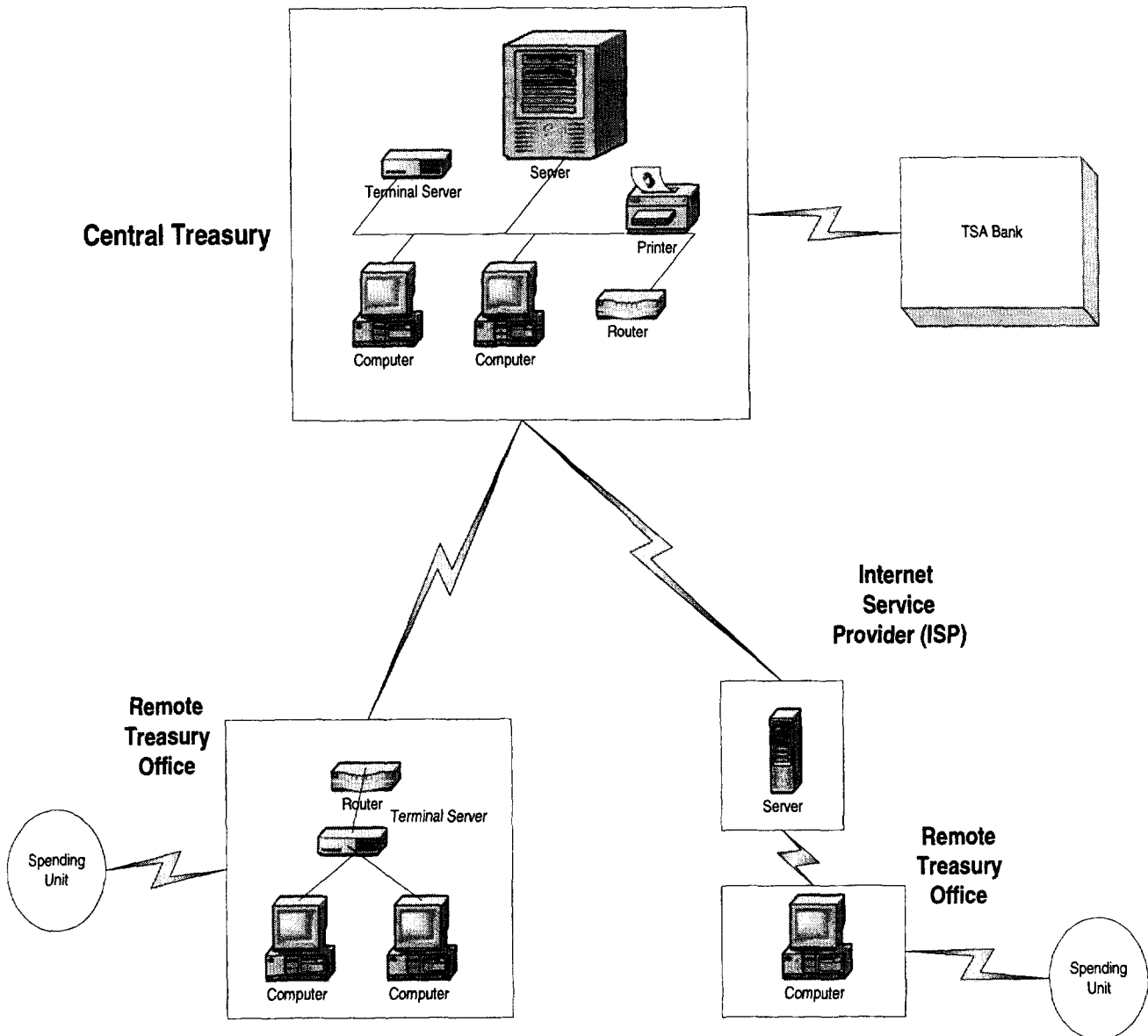


FIGURE 9. TREASURY SYSTEM - CENTRALIZED ARCHITECTURE - ALL TRANSACTION PROCESSING CARRIED OUT AT THE CENTER

(Remote offices are linked to center via direct communication link or via a Web-based interface).



Alternative Institutional Models for Expenditure Processing

Spending Unit and Line Ministry Based Expenditure Processing.

In those countries where the Treasury and the necessary legal framework for budget preparation and execution are in place and functioning efficiently, alternative institutional arrangements for expenditure processing may be used. In some countries, ministries and spending units are directly responsible for making payments from the TSA instead of payments being channeled through the Treasury (see **Figure 10**). The TSA is nevertheless still held at the Central Bank, which continues to be responsible for retail banking operations related to government payments and receipts. The MOF must ensure that necessary controls are adhered to by the agency prior to making a payment. Budgetary control can be exercised by officers from the central treasury who are out-posted to the line agency or line agency finance and accounting staff. The TSA Bank may also be advised of overall limits for expenditures by spending units. However, since the TSA bank cannot be expected to ensure adherence to spending limits by each economic category, the responsibility for detailed expenditure control rests with the spending unit and parent ministry. In these arrangements, the spending units and their parent ministries also have greater responsibility for maintaining their accounts and government-wide accounts are based on periodic reports received from the spending units and their parent ministries.

Figure 11 shows how the location and the degree of centralization of the responsibilities for expenditure control and for accounting varies in the different organizational arrangements adopted for the Treasury and for payment processing.

Banking Arrangements

Alternative banking arrangements are sometimes put in place – usually where the Central Bank does not have an adequate network of branches or capacity to handle large volumes of payment and receipt transactions. In such cases, the Central Bank then delegates the responsibility of retail banking operations to one or more fiscal agents such as authorized commercial bank(s) who make payments on behalf of the Treasury, receives government revenues and makes daily deposits to the TSA in the Central Bank. The use of fiscal agents is possible in both centralized and decentralized payment arrangements (where payments are channeled through Treasury or where spending agencies are directly responsible for authorizing payments). **Figure 12** shows models of alternative banking arrangements.

These arrangements have the advantage of providing more expeditious payments to government creditors and a reduction of float⁹ in view of the greater capacity of commercial banks to process these transactions. Three processes are important for the efficient functioning of the system.

⁹ That is the value of issued but unprocessed checks or payment orders, which may lead to a discrepancy between bank records and TLS accounts.

- The float of all payments transferred to the TSA should be as small as possible;
- The Bank accounts should continue to be under the control of the Treasury even though they may be operated by the agencies; and
- Account balances should be cleared to the TSA periodically to ensure that the government's cash position is known accurately in a timely manner and borrowing strategies can be optimized.

A common misconception is that if an electronic inter bank payment and settlement system exists in a country then it could perform some or all the functions of a Treasury system, and it may not be necessary to put in place a network of treasury offices to process government payments. The existence of an electronic inter-bank payment and clearing system facilitates an efficient payment and settlement mechanism and ensures that Treasury has accurate and timely information on balances and transactions in its bank accounts. However, it cannot replace a treasury system, since an inter bank payment and clearing system does not embody the essential controls that are implicit in a Treasury system. Thus, it does not check whether there is a budget appropriation, prior commitment, and spending authorization prior to releasing a payment. The distribution and location of treasury offices in a country would depend on the ease of access of spending units to a Treasury office which will process their transactions. As mentioned above, if the telecommunications infrastructure in a country is well developed, then fewer treasury offices, strategically located across the country could be sufficient to service all spending units. This again is independent of the existence of an inter bank clearing/ payment system.

Process Charts for Decentralized Arrangements

The process charts given in Part II mainly show the information flows associated with the centralized institutional arrangements. However, additional process diagrams are added for each major process to show how the information flow would vary in the decentralized case.

FIGURE 10. ALTERNATIVE ARRANGEMENTS FOR PAYMENT PROCESSING

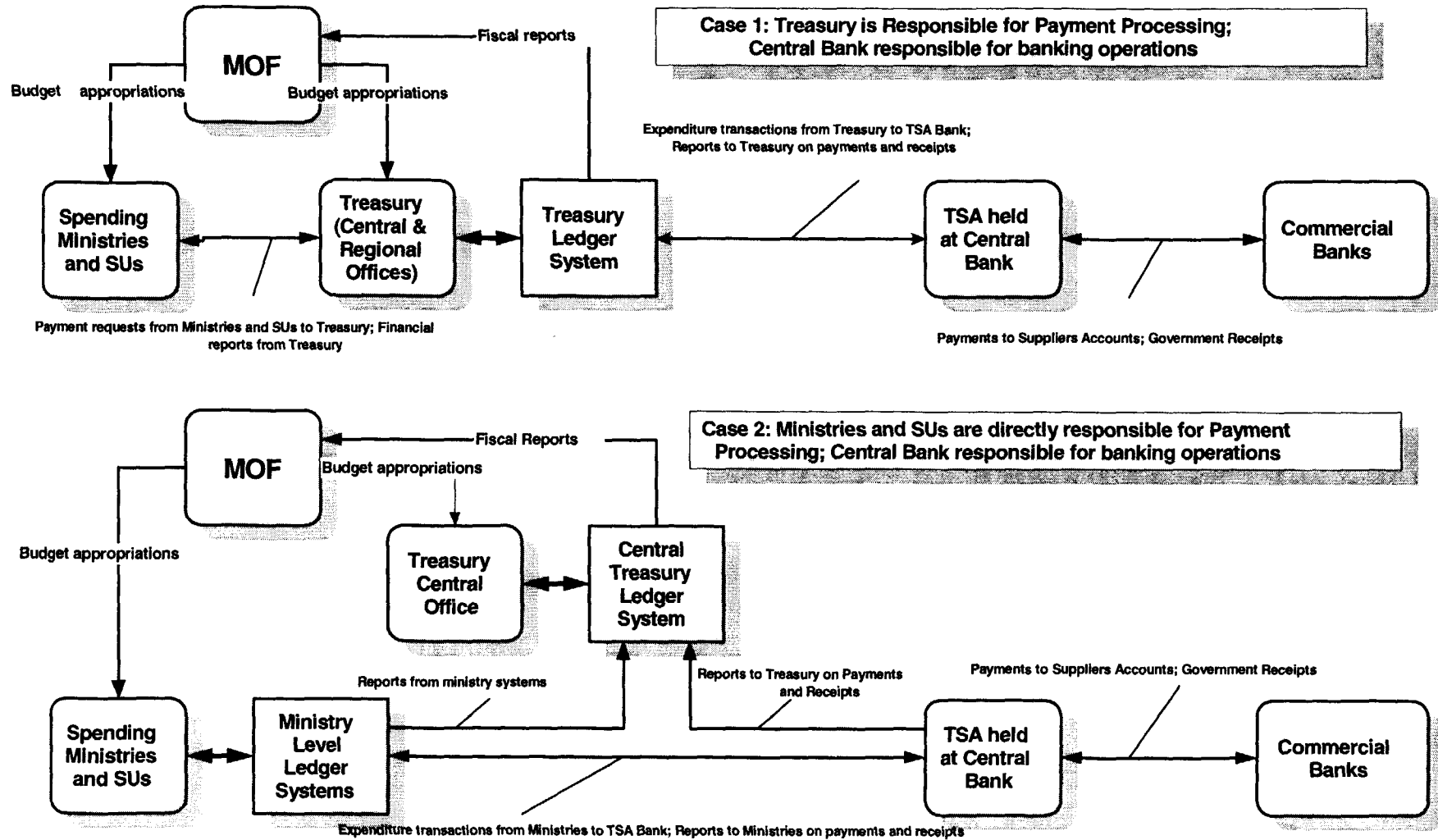


FIGURE 11. DEGREE OF CENTRALIZATION OF RESPONSIBILITIES FOR EXPENDITURE CONTROL AND ACCOUNTING FOR DIFFERENT ORGANIZATION MODELS FOR THE TREASURY

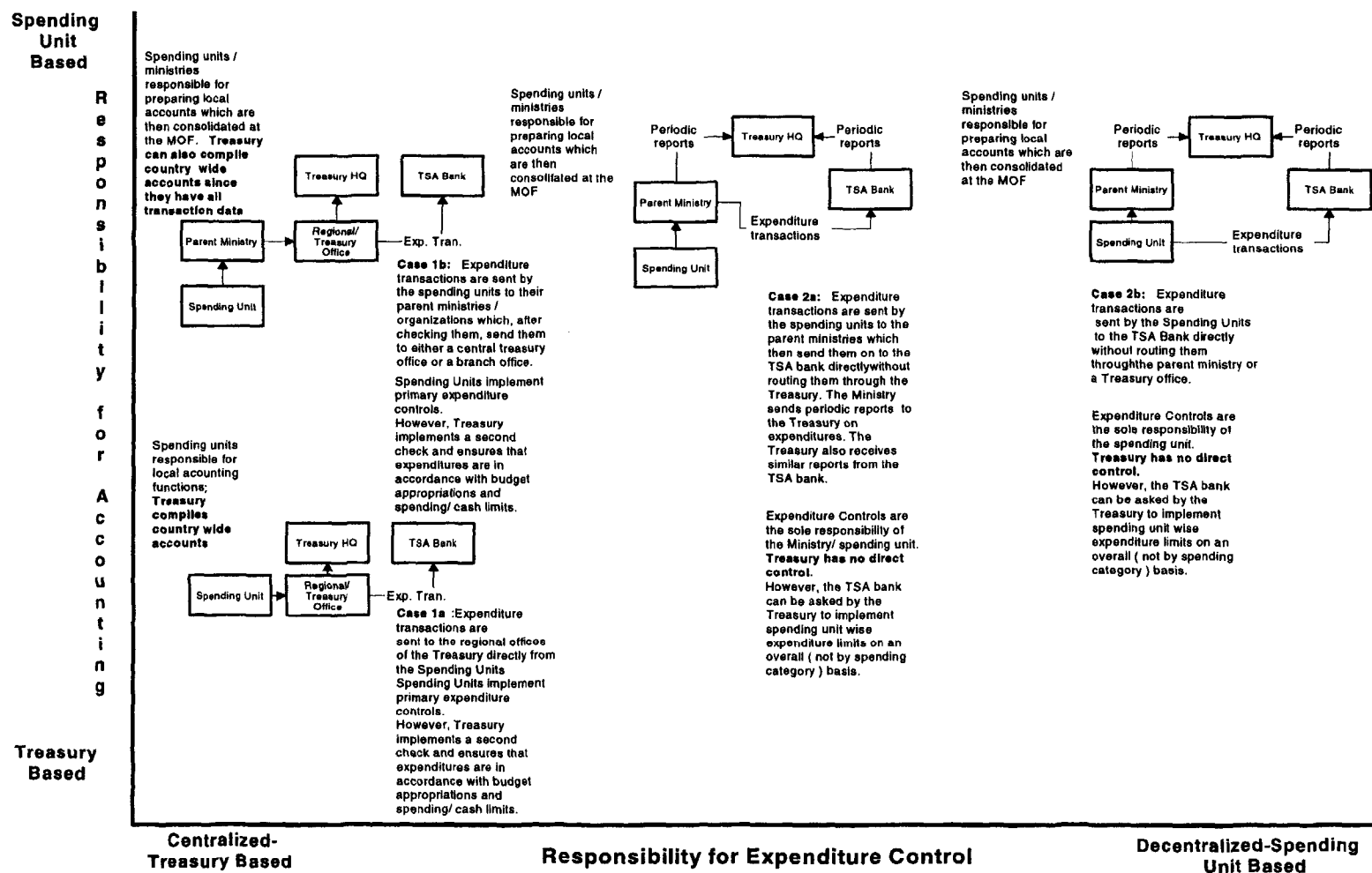
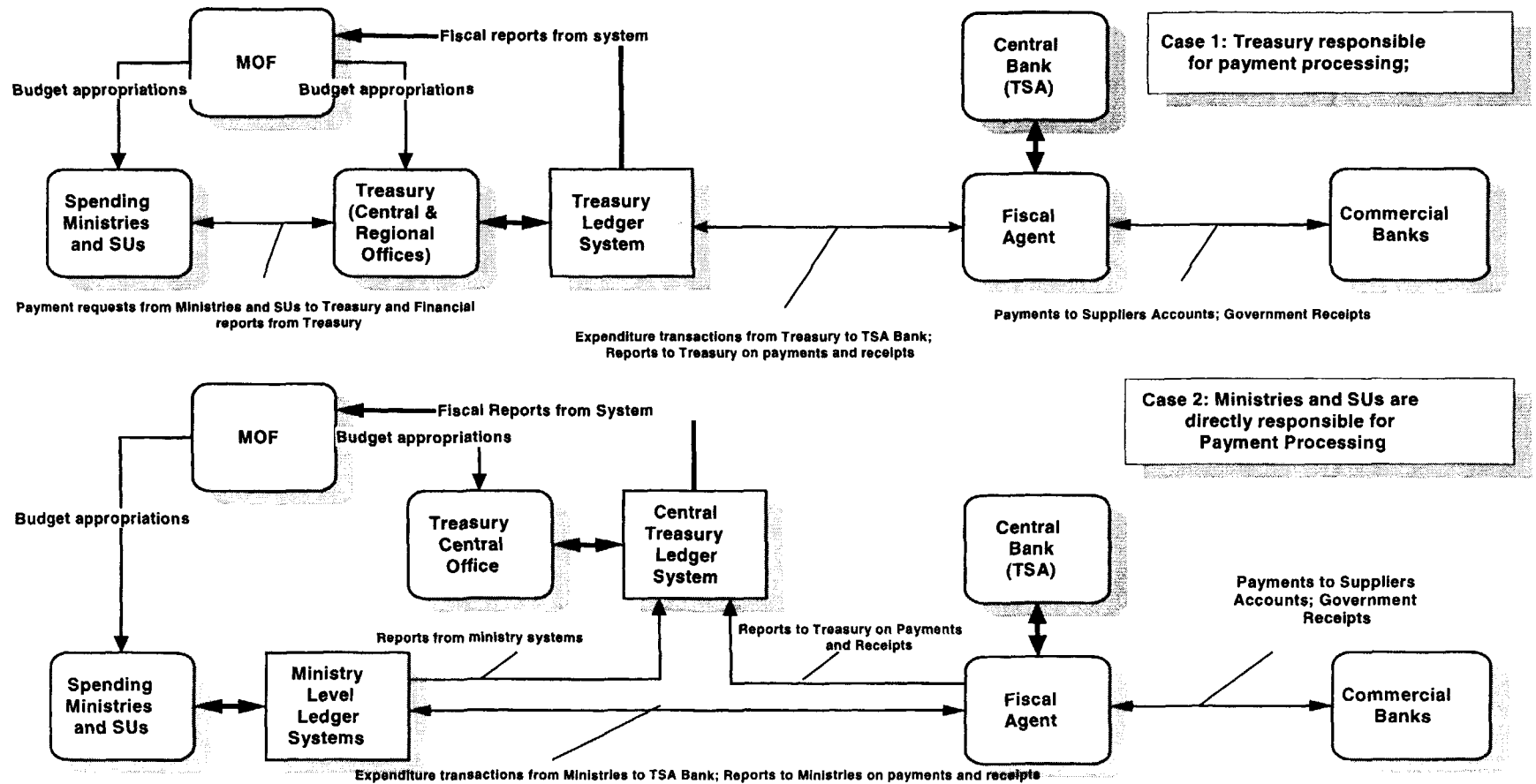


FIGURE 12. ALTERNATIVE BANKING ARRANGEMENTS
 (Banking operations carried out by a commercial bank acting as a fiscal agent of the central bank)



OBSERVANCE OF INTERNATIONAL STANDARDS AND PRACTICES

The TRM provides a basis for ensuring that treasury system design is in line with international standards for various aspects of financial management. Two particular elements that should be taken into account are the adoption of a chart of accounts structure that meets international standards for accounting and fiscal reporting, and relevant elements of the IMF *Code of Good Practices on Fiscal Transparency—Declaration on Principles*.

Charts of Accounts and Classification

The Chart of Accounts (COA) is a key component for ensuring that budget data is captured in the required degree of detail, that the source and reason for every transaction may be identified in the system, and that budget information may be viewed in the appropriate context. The COA also correlates the budget with actuals by providing mapping to the budget classification structure.

Transaction processing systems, such as Treasury Systems, capture a host of data from the processing of individual transactions in the course of normal business operations. The transaction details captured by application systems, such as material movement or process completion details, pertain to the accounting entries generated by each transaction.

The COA is a term commonly used to describe the *classification framework* for recording and reporting transactions and other flows affecting an entity's financial position. Accounting impacts of transactions are categorized by the COA which establishes the account framework and hierarchy for storing accounting details; and the level of detail in the COA depends on the operational and managerial (control) requirements of the Ministry or agency

In principle, the COA embodies all classifications of relationships between accounting records. The term is most commonly applied to commercial enterprises and is linked fundamentally to accrual definitions of transactions and balance sheets concepts. It is also often applied to government accounts and used interchangeably with the term “budget (or accounts) classification”, though the underlying basis for classification in government may not use an accrual structure.

A complete COA would include the following sub-classifications (discussed in further detail below):

- Fund Classification
- Organizational Classification
- Economic Classification
- Functional Classification
- Program Classification
- Project Classification

Accrual Basis Structure

Increasingly, accrual concepts are being applied to government accounting and – to a somewhat lesser extent – budgeting. Without any implication that governments should universally adopt accrual basis accounting, it is recommended that government COAs be based on accrual principles. Such a structure will permit cash basis accounting and greatly facilitate the adoption of accrual basis recording and reporting for improved financial management, economic forecasting and recording, and analysis. Overall, the COA should be (1) structured on accrual principles; and (2) embody a budget and account system of classification that facilitates management, accountability and audit.

All transactions and other flows should be clearly linked to their impact on entity net worth. This means that, at the object (see *economic classification* below) level, net worth increasing or decreasing transactions and other flows are separated from those involving exchange of assets and liabilities (which do not affect net worth). The fundamental distinctions that should be embodied in the highest level of the object classification of accounts therefore are as follows:

The related COA classifies individual accounts into five categories:

- **Revenue Accounts** hold transaction details for all income and receipts (inflow) transactions. Revenue adds to the net worth of the government and is derived from many sources. As a result, each revenue source has its own classification system. For example, taxes are classified on the basis on which tax is levied and grants are classified by source. In fiscal analysis, revenue transactions are classified into tax and non-tax revenue. Some examples of non-tax revenues include social contributions, grants and property income.
- **Expenditure Accounts** for all expenditures and transfer (outflow) transactions. Expenses reduce the net worth of the government. The classification of expenses is concerned with identifying aspects of a transaction by which the government performs a function whose effect is beyond the government's realm. There are seven major economic groupings of expenses: compensation of employees; use of goods and services; consumption of fixed capital; property expenses; subsidies; grants; and social benefits.
- **Asset Accounts** that include details such as cash, investments, receivables and amounts due from other funds;
 - **Non-financial Asset Accounts** record balances, acquisitions and sales of non-financial assets such as buildings, equipment, roads, and other infrastructure.
 - **Financial Asset Accounts** record balances, acquisitions and sales of non-financial assets including cash, equity holdings, and loans to other entities or sectors.
- **Liability Accounts** that include details of debts incurred in operating each fund and the amounts owed to other funds.
- **Other Economic Flow Accounts** record changes in value of asset or liability accounts as a result of changes in stock valuation or the creation or destruction of assets or liabilities (including write-offs).

The COA is designed to permit a complete reconciliation between opening balance, transactions and other economic flows, and closing balance. Such a reconciliation is not possible in a cash basis system, because the recording of stocks and flows (particularly valuations) in systems that rely only on cash information is inherently incomplete. While many systems will remain predominately cash basis for some time to come, an important element of treasury system design is that it should include scope for progressive improvement in the accounting information available to decision-makers. Therefore, an accrual-based structure is recommended even though some elements will not be used immediately. Adopting an accrual-based COA will allow for the continuation of cash basis reporting – a necessary element of accrual systems – while serve as the logical first step in improving the data basis of the treasury system (see **Box 5**).

Box 5. MOVING FROM A CASH TO AN ACCRUAL BASIS

The four main stages in the accounting process are:

STAGE	EVENT	CATEGORY (examples)
Commitments	Record of contract (explicit or implicit) to supply goods/services	Goods/services contracted for
Accruals*	Record of goods/services supplied creating an asset and liability	Equipment (upon receipt)
Due for payment	Record payment due	Account due for payment
Cash Payments	Record cash payment	Payment for goods and services

** Also referred to as “verification” Recognition at the accrual stage occurs usually when receipt of goods or services is verified and a liability/asset is recorded.*

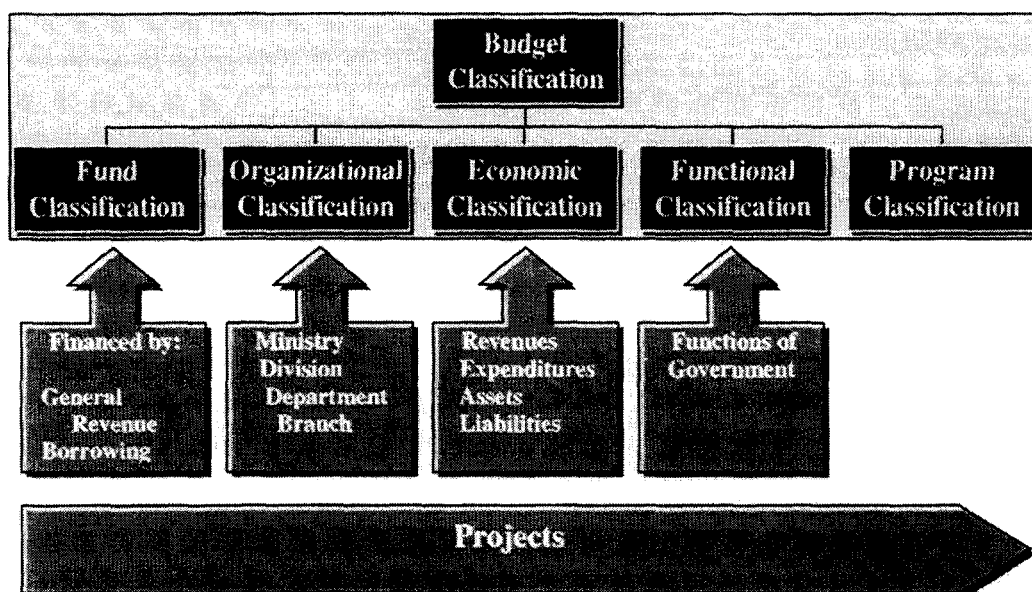
These stages of accounting apply irrespective of whether the formal basis of accounting is on a cash or accrual basis—and, as a general rule, the stages are recorded in some form in all systems, although cash basis financial management reports do not require consolidated reporting of accrual records. The first stage of implementing an accrual accounting reform in government would be to structure the COA on accrual principles, as outlined in the text. Formal consolidated reports, however, could continue to be on a cash basis. Noncash accrual entries, such as depreciation, which do not have corresponding payment categories would simply not be applied when the COA is used only for cash basis accounts.

An accrual structure of accounts thus provides the basis for even a predominantly cash basis system. In a program of fiscal management reform, progressive stages of improvement in the information system should be clearly identified. Partial accrual basis recording can be introduced relatively easily for most expense accounts, and – on a conservative basis – for revenue accounts. Partial balance sheets – covering financial assets and liabilities and most fixed assets – can also be introduced at a relatively early stage. Then, the introduction of rigorous valuation processes and economic measures of depreciation would lead to full accrual recording and reporting. The rate, of course, varies from country to country; moreover, the benefits from introducing these processes will only be realized if there are substantial reforms in other areas of the institutional framework.

Budget Accounts and Classification System

Consistent with the broad COA structure, transactions and other flows are classified to permit a variety of views of the budget or accounts. A Budget Classification System may be described as shown in **Figure 13**.

FIGURE 13. BUDGET ACCOUNTS / CLASSIFICATION SYSTEM



A Budget Classification System consists of five sub-classification structures and permits multiple views of the Budget:

- Fund Classification denotes the funds under which public funds are authorized (e.g., general, or revenue, fund, development fund, road fund).
- Organization Classification depicts the organizations receiving budgetary resources;
- Economic Classification shows the detailed breakdown of budget revenues, borrowing, and expenditures;
- Functional Classification indicates the revenues and expenditures by functions of government such as Public Order and Safety Matters, Educational Affairs and Services, Health Affairs and Services, etc.;
- Program Classification shows the planned budgetary allocations to specific programs (such as poverty reduction) that may be implemented by a variety of organizational units and may involve several functional categories; and
- Project Classification identifies activities aimed at achieving specific objectives within a certain timeframe. Projects are elements of a broader program classification, and many may be associated with external aid (identified with a particular government/donor fund).

Fund Classification

A series of accounting entities may be defined within government apart from the *general fund*, that cover all transactions financed by general revenue or borrowing. Generally, having numerous funds is not recommended because of the limitations these impose on flexibility of fiscal management and control. Different funds are usually required for pensions, social security payments, health funds, and unemployment benefits. All other sub-classifications should apply to each fund of government—though the range of items subject to classification may be very limited in certain specialized funds (that is, probably most would relate to a single organization, function, and a limited range of objects of expense or receipt).

Organizational Classification

Organizational Classification shows the budgetary institutions and the budgetary allocations. The Organizational Classification System maintains the institutional hierarchy and thereby permits both planning for and tracking of budgetary resource usage:

- Ministry
 - Division
 - ♦ Department
 - ♦ Branch

Economic Classification

The Economic Classification corresponds to the COA structure of accounts described above and, from the point of view of budgetary control, has three main components: revenue; expenses; and non-financial asset transactions. The expenditure classification system has several sub-components that allow expenditure analysis by function, institution, program and economic classification levels. The **classification of expenditures by economic category** – wages and salary, goods and services, investment spending, etc. – is essential for detailed analysis of the budget.

Revenue

Revenue is defined as the collective value of all transactions that adds to the net worth of the government. In fiscal analysis, revenue transactions are classified into tax and non-tax revenue. The following are examples of non-tax revenues:

- **Social Contributions:** Receipts received by individuals insured by a social insurance scheme or from their employers levied through payroll.
- **Grants:** Voluntary contributions from foreign governments and donor agencies.
- **Property Income:** Receipts derived from government agencies/departments when financial or capital assets are placed at the disposal of another and interest, dividends or rent are received.

Revenue is derived from many sources. As a result, developing a uniform classification system is impractical. Hence, each revenue source has its own classification system. For example, taxes are classified on the basis on which tax is levied and grants are classified by source.

Expenses

Expenses are the aggregate value of a set of transactions that reduce the net worth of the government sector. The economic classification of expenses is concerned with identifying aspects of a transaction by which the government performs a function whose effect is beyond the government's realm. There are seven major economic groupings of expenses:

- Compensation of employees
- Use of goods and services
- Consumption of fixed capital
- Property expenses
- Subsidies
- Grants
- Social benefits

Illustrative Economic Classification

An illustrative economic classification is given below.

First Level	Second Level	Third Level
1 Recurrent expenditures	1.1 Remuneration	1.1.1 Salaries 1.1.2 Wages 1.1.3 Allowances 1.1.4 Gratuities 1.1.5 Overtime
	1.2 Purchase of goods and services	1.2.1 Travel 1.2.2 Supplies 1.2.3 Maintenance
	1.3 Transfers and subsidies	1.3.1 To enterprises 1.3.2 To households 1.3.3 To other levels of government

Functional Classification

The Functional Classification shows the budgetary resources being allocated to the various functions. Often, it becomes necessary to expand the functional classifications in use to cover the budget execution and financial management needs of the Ministry of Finance. Functional classifications permit trends in government outlay on particular functions to be examined over time and thus aid in forecasting future expenditures or in evaluating the success of programs within a function. The following table gives an

example of the functional breakdown recommended by United Nations' COFOG system and accepted by the IMF's GFS classification.

Representative GFS Classification of Functions of Government	
Function Type	
1.	General public services
2.	Defense
3.	Public order and safety
4.	Economic affairs
5.	Environment protection
6.	Housing and community amenities
7.	Health
8.	Recreation, culture, and religion
9.	Education
10.	Social protection

The functional classification of revenues and expenditures provides information on the purpose for which revenues were collected and expenses incurred. In addition, economic and functional categories can be cross-classified to show the types of transactions engaged in to carry out a particular function. Appendix G also shows the recommended COA for the classification of functions of government in more detail.

Program Structure

Programs may be undertaken by more than one institution and typically consume resources which represent multiple elements from the economic classification structure (e.g. payroll, capital procurements, etc.). Programs and sub-programs cut across the Organizational and Economic Classifications and, at times, also the Functional Classification Structure and hence it becomes difficult, in the absence of a formal Program structure to plan for and track program expenditures.

Programs are typically tracked by:

- Program
 - Sub-program

Fiscal Transparency and Linkages with Treasury System Reforms

The development of a treasury system must be set in the context of the development of the overall fiscal management system. An effective treasury system will help to establish control over spending – but will not provide a complete solution on its own. The improvement of fiscal transparency provides a set of objectives that are relevant to all elements of fiscal management reform and can help to guide treasury reforms as part of an integrated program of reforms. The transparency objective is important in itself, but it also provides a guide to the overall health of the fiscal management system—improvement of fiscal transparency should be expected to lead to improved fiscal

management decisions and sound fiscal policies. In April 1998, the Interim Committee of the Board of Governors of the IMF adopted the *Code of Good Practices on Fiscal Transparency – Declaration on Principles* and encouraged all countries to take steps to implement the Code. Code standards can be used as benchmarks to set priorities for fiscal management reform, coordinate efforts of different agencies, and assess progress over time. With respect to the treasury system, the elements of the Code listed in **Table 2** below are of particular relevance.

TABLE 2. FISCAL TRANSPARENCY CODE ELEMENTS RELEVANT TO TREASURY

Element of Code	Comment
Clarity of roles and responsibilities 1.1.4 Clear mechanisms for the coordination and management of budgetary and extra-budgetary activities should be established, and well-defined, and well-defined arrangements vis-à-vis other government entities (e.g., the central bank, and state-controlled financial and non-financial enterprises) should be specified.	<i>As far as possible all extra-budgetary funds should be handled by treasury or, at a minimum, reports by extra-budgetary funds should be consolidated within the treasury system, applying at least equivalent standards of accounting policy, timeliness and periodicity.</i>
1.2.1 Fiscal management should be governed by comprehensive laws and administrative rules applying to budgetary and extra-budgetary activities. Any commitment or expenditure of government funds should have a legal authority.	<i>The legal framework may have to be reviewed and modified to ensure effective treasury operations.</i>
Public availability of information 2.1.4 The central government should regularly publish information on the level and composition of its debt and financial assets.	<i>A benchmark to be achieved by the treasury system.</i>
2.2.1 Specific commitments should be made to the publication of fiscal information (e.g., in a budget law).	<i>A desirable element of institutional reform that will enhance the effectiveness of the treasury system</i>
2.2.2 Advance release date schedules for fiscal reporting to the public should be announced	<i>A benchmark to be achieved by the treasury system.</i>

<p>Open budget preparation, execution, and reporting</p> <p>3.2.4 The annual budget and final accounts should include a statement of the accounting basis (i.e., cash or accrual) and standards used in the preparation and presentation of budget data.</p>	<p><i>A benchmark to be achieved by the treasury system.</i></p>
<p>3.3.1 A comprehensive, integrated accounting system should be established. It should provide a reliable basis for assessing payments arrears.</p>	<p><i>A benchmark to be achieved by the treasury system.</i></p>
<p>3.3.2 Procedures for procurement and employment should be standardized and accessible to all interested parties.</p>	<p><i>An institutional reform that will enhance the effectiveness of the treasury system.</i></p>
<p>3.3.3 Budget execution should be internally audited, and audit procedures should be open to review.</p>	<p><i>An institutional reform that will enhance the effectiveness of the treasury system.</i></p>
<p>3.4.1 During the year, there should be regular, timely reporting of budget and extra-budgetary outturns, which should be compared with original estimates. In the absence of detailed information on lower levels of government, available indicators of their financial position (e.g., bank borrowing and bond issues) should be provided.</p>	<p><i>A benchmark to be achieved by the treasury system.</i></p>
<p>3.4.2 Timely, comprehensive, audited final accounts of budget operations, together with full information on extra-budgetary accounts, should be presented to the legislature.</p>	<p><i>A benchmark to be achieved by the treasury system.</i></p>

CRITICAL SUCCESS FACTORS FOR PROJECT IMPLEMENTATION

This section lists some factors to which special attention will need to be paid to ensure successful project implementation.

Government Commitment and Management Support

Improving the quality of fiscal management systems would increase the transparency of fiscal and resource allocation processes. This would affect those who benefit from existing systemic weaknesses. These interests may act to delay project actions or divert the project from its objectives. Continued government commitment to the reform of the public sector and to strengthening the basic financial management institutions is therefore a primary critical success factor for satisfactory project implementation.

Introduction of a new institutional structure for budget execution requires reorganization and re-alignment of the roles and responsibilities of related government agencies, such as the MOF, the Central Bank and the Treasury and their relationships to the line ministries. It also requires fundamental reforms of the functional processes that these agencies perform. Computer-based information systems should be viewed as a means to assist in the implementation of re-engineered business processes and procedures.

Implementation of such wide spread changes would need government support at the highest levels to ensure that the change process is completed smoothly. This becomes more difficult to achieve in practice, since the full implementation of the Treasury system and the accompanying reform program would normally require several years for completion. Over this period there may be several changes in management. To mitigate against these risks it is therefore necessary that: (a) the reform measures are part of a wider reform program for public expenditure management and are agreed with Government at the highest levels; (b) a wide ranging orientation program be implemented for public sector managers emphasizing the advantages offered by the new systems and processes to foster a wider appreciation of benefits and enhance ownership. This program may need to be repeated several times during the life of the project; and (c) the project be designed in such a way that some quick wins and clearly marked bench marks are achieved relatively early in the project to hold the attention and interest of management. This could be the development and implementation of an interim automated or even manual system for the implementation of the core part of the program.

Inter-agency Coordination and User Involvement in Systems Design

Successful implementation of an integrated network of information systems, such as defined here, is crucially dependent on cooperation between a diverse set of users. Project preparation and implementation is complex when done in a multi-agency environment. Forming a steering committee and working groups with representatives from all major stake holders would ensure that all participant agencies' needs are taken into account during systems design. The steering committee would provide policy input and guidance and the working groups would be responsible for handling day-to-day operational matters

and would be the vehicle to provide user input to the technical team responsible for implementing the project. It will also establish systematic data sharing arrangements, protocols, and schedules between the various systems so that all agencies have access to financial data as required.

In the case of a Treasury system these groups would include representatives from the Treasury, other departments of the Ministry of Finance, the Central Bank, the line ministries and spending units, and the revenue collection agencies.

It may be noted that senior functional management input is particularly important during the early planning and design phases of the project. The main skill requirements for the design phase are an in-depth knowledge of the functional area and a managerial capacity to ensure that the project is accepted by users within the functional area. The technical aspects become important only during the later implementation phases. The steering committee and working groups would ensure sponsorship from the highest levels of the functional areas involved in the project and participation from the widest possible range of users. They will also ensure that the project is owned and adopted by the users once it is completed.

Organizational Capacity and Technical Skills

Treasury systems reform projects will need to cope with the organizational capacities of the agencies responsible for reform implementation and the management of project implementation. The numbers of finance and technical staff and multiple skill levels required to set up such systems are considerable. To ensure sustainability the project may need to supplement existing skills and provide for financing and hiring of project implementation specialists, fiscal management specialists, and other technical skills as required.

Government may need to review salary scales of staff in key areas to retain them within the civil service and to explore other modes of employment and avenues for hiring staff. For example, hiring staff from the private sector for specific assignments and outsourcing the technical maintenance and operation of some systems should be considered. In any case, an ongoing policy of training would need to be adopted in light of the significant attrition rates that can be expected.

Training requirements for the project can be divided into several areas:

- (i) Training in principles, concepts and methodologies of the subject areas covered by the project, namely, budget execution, cash management and treasury operations.
- (ii) Senior level management training / orientation in the use of computer based financial management information systems.

(iii) End user training in the use of the computerized information systems to be set up under the project. This would include training for line agency finance staff and for Government auditors.

(iv) Technical training in the use of the specific tools to be employed for developing and implementing the information systems under the project. e.g. the chosen RDBMS, the operating system-UNIX, application development and CASE tools, etc.

(v) More general training related to the management planning, design and development of information systems.

(vi) Training in EDP project management and the provision of end user support to staff who will use the systems.

A Treasury system implementation project would need to typically need to provide financing for:

(i) Technical assistance for a training needs analysis, development of an overall training strategy, and a schedule for training users; the design and specification of in-house training facilities or identification of suitable training courses within the country and abroad; the development or acquisition of training materials, technical documentation and end user manuals.

(ii) Training courses to be arranged at site, or in local or foreign institutes to cover these areas. Staff to be trained under the project would include the MOF/Line Agency/Government Auditors/Treasury staff and technical staff of the MOF/Treasury who will be involved in the development and implementation of the systems.

(iii) Study assignments for government officials in the budget execution and treasury operations areas to enable them to benefit from the experiences of other Governments in these areas. This would include financing of courses and discussion trips on specific topics by experts from these governments or agencies to the country where the project is being implemented.

Management of Change

Implementation of a country-wide network of computer-based systems to support treasury processes requires an understanding not only of the business processes and information requirements, but also of the social, cultural, and political environment of the organization and the country within which they are being implemented (Walsham, Symons, and Waema, 1988). It has been argued that computer-based systems are social systems in which technology is only one element. The organizational arrangements required to ensure a "social fit" therefore take on increasing importance.

Implementation of information systems is intimately connected with and normally has a direct impact on the way people do their day-to-day work. It is imperative that appropriate change management procedures are instituted in addition to formal training programs to ensure that staff feel comfortable in their new work environment, and in particular do not feel insecure because of misplaced fears of job redundancy, etc.

At a more complex level, information systems may lead to a re-definition of the relative authority and power relationships of individuals and groups within organizations. The change management exercise also would need to address these aspects. Thus, after the implementation of the Treasury system, spending units may not have direct access to their Bank accounts and will need to route their expenditure transactions through the Treasury. This would cause a shift in the power balance in favor of the central MOF. Managers and staff in the spending units will need to be convinced of the necessity of implementing this change and the Treasury, on its part, will need to ensure that no unnecessary delays occur in transaction processing, to ensure a smooth transition to the new system.

In view of the efficiencies in transaction processing made possible by automated systems, the numbers of staff required to process routine business transactions may decrease, generating fears of redundancy. A parallel program of retraining and re-deployment of excess staff may be required.

Automated Treasury systems will incorporate built in controls and will apply these controls uniformly across all transactions. This would add transparency and thus accountability to government operations. In fact, installation of these systems can provide the systemic underpinnings for and give a major boost to anti-corruption efforts. However, for these very reasons such projects could encounter resistance during project implementation. This is another reason why such projects need a sponsor at the highest levels who can overcome the social and political constraints and steer the project through its initial stages.

Formal Project Planning

The implementation of country wide computer systems to support the Treasury functional processes is a substantial undertaking. It is very important that agencies involved in the exercise be aware of its magnitude. Formal project planning methodologies should be used to design, implement, and monitor the systems. It is advisable to implement such projects in a phased manner so that they can be put in place and adequately monitored in a controlled environment. A phased implementation also ensures that they do not exceed the absorptive capacities of the organizations where they are implemented.

Systems and Data Administration

Information systems support would normally be distributed among several agencies throughout government. Therefore, coordinating mechanisms should be created to ensure that a common set of policies, procedures, and standards is in place for managing data and systems government-wide. The standards should, inter alia, cover the protocols for communications,

data entry, editing, and updating screen input and output formats, back-up and recovery, security, contingency, and disaster recovery planning, and technical and user documentation.

Local Technical Support

It is imperative that the hardware and software chosen be supported locally. The vendors must have a presence in the country in order to provide training, technical support and maintenance, including fulfillment of warranty obligations, throughout the life of the system.

SOME TREASURY DEVELOPMENT PROJECTS IN TRANSITION ECONOMIES

The World Bank and the IMF have been actively involved over the last several years in supporting the governments of countries which were formerly part of the Soviet Union and other countries in Eastern Europe to set up/modernize institutional structures to manage public finances as they move from centrally planned to market economies. As part of this work the Bank and the Fund have assisted several of these governments in setting up the institutional legal framework and the information systems required to support the Treasury function. This section describes the progress achieved in some of these projects.

Kazakhstan Treasury Modernization Project

The World Bank and the IMF have been involved in providing assistance to the Government of Kazakhstan in its efforts at setting up a Treasury since the early nineties. The IMF appointed a resident treasury advisor in 1995 to assist the government in the design and implementation of a Treasury system and the associated legal and institutional framework. Work on the Treasury has been supported by the World Bank, first through an Institutional Building Technical Assistance Loan and subsequently through a Treasury Modernization project to finance the institutional and legal reforms and the computer hardware and software required to implement a modern treasury. The project is making good progress. The institutional and legal framework is in place. The Treasury has been set up as a separate organization under the Ministry of Finance. A network of Treasury offices has been set up with offices in the capital city, each of the 20 or so Oblasts (regions) and about 220 rayons (districts). A new budget classification structure and associated chart of accounts, conformant with the IMF GFS system has been designed and implemented. A Treasury single account has been set up at the National Bank of Kazakhstan and all spending unit bank accounts operating prior to the start up of the treasury have been closed. Budget appropriations approved by Parliament are recorded in the Treasury system, as are planned expenditures for each spending unit, by month and type of expenditure. During the course of the year the MOF issues monthly warrants to spending ministries which define the limits of expenditure for that month. Spending units route their payment requests to a designated treasury office for approval. The treasury system, operated by all treasury offices, checks for the availability of budget appropriations and warrants prior to approving expenditures. After approval the treasury forwards the payment request to the designated branch of the central bank that holds the TSA and the Bank pays the government creditor. This payment could be in the form of a check or a direct deposit to the creditors' Bank account in a private bank. A commitment system has been instituted for contracts exceeding a specified threshold. A full set of fiscal reports are produced by the system to assist the government in the management of its financial resources.

An interim computer system has been set up to support the Treasury's functioning, partly financed from the World Bank Institution Building Technical Assistance Loan and is functioning at the central treasury and each of the oblast (regional) and rayon (district) treasury offices. The Treasury is currently in the process of upgrading the technological

infra-structure for the treasury system and has chosen the ORACLE FINANCIALS application software package to implement Treasury functions. This is one of the first cases in a country of the Former Soviet Union where an off the shelf application software package has been shown to be fully responsive to the Treasury's functional requirements, without customization. This has direct relevance to efforts in other FSU countries which are in the process of implementing treasury systems, since the functional requirements are very similar. The interim system operates under a distributed transaction processing architecture described in the text. However, the Oracle-based full function system is envisaged to operate under a centralized model with all transaction processing carried out at the Central Treasury. Remote treasury offices will communicate with the center via satellite-based communication links that are currently being installed.

The Kazakhstan treasury project holds valuable lessons for other similar projects. Government commitment to reform over the entire project duration, which has extended to seven years to date, has been a critical success factor for this project. Successive finance ministers and Treasury managers have recognized the importance of treasury reforms and have continued to press for progress. A decision early in the project to go for an interim computer system to handle core aspects of Treasury functionality has been critical in several respects. Projects of this sort involve widespread change in business processes and methods of working. Procurement and implementation of information systems on this scale is also a very complex undertaking. The implementation of the interim system has enabled the introduction of change in a gradual and a more manageable manner. It has enabled staff within the Treasury to become familiar with a simpler computer-based system before the full function, more complex system is introduced. Moreover, since this system has enabled the introduction of the key functional processes for the treasury, it has made it possible to hold the end user's attention over the extended period required for full systems implementation.

Close project monitoring and advice rendered by the Bank and IMF in the implementation of the project has also been very crucial. In this connection an important factor has been the consistency and continuity in the advice given by the Bank and the IMF. This has been possible by continued association of the same IMF Treasury advisor and key project staff on the Bank side throughout the project. This is very unusual for projects of this duration in the Bank, where staff responsible for project design often do not stay with the project during its critical implementation phases.

Lack of capacity within the MOF to handle the implementation of complex information systems and change management on such a wide scale, have been the main impediments to the project being completed more speedily. Low government pay scales continue to be a crucial impediment to attracting qualified technical staff, on both the functional and the IT sides, required for project implementation. This will also be a constraining factor during the operational phase. The total cost associated with the implementation of the treasury systems to date has been about \$25.0 million including a World Bank Loan of US \$15.8 million.

Ukraine Treasury Systems Project

World Bank and IMF interventions in the Ukrainian Treasury systems area date to the early nineties. A IMF treasury advisor has been resident in Ukraine since 1994.

The State Treasury of Ukraine has, since 1997, taken over budget execution functions formerly carried out by financing departments of the Ministry of Finance. A three tier Treasury organization has been set up with offices at the center, the 26 or so oblasts and some 700 rayons. A GFS conformant Budget classification structure has been implemented. Most spending units' bank accounts have been closed and Government finances are lodged in the central bank. Budget execution processes have been re-engineered and spending units, now, route their expenditure transactions through designated treasury offices which then process them at accounts set up for spending units at designated branches of the central bank (National Bank of Ukraine - NBU) operating at oblast levels. Currently the Treasury operates a warrant based expenditure release system. A rudimentary computer system at Treasury offices enables the offices to check for availability of budget appropriations, and warrants before approving payment requests received from spending units. The overall topology of the Ukrainian Treasury is very similar to that of the Treasury in Kazakhstan.

The Government has strengthened the budget implementation process considerably over the period 1997-2000. The Treasury system has been gradually extended to cover all central government budget operations, including former extra-budgetary funds and off-budget revenue activities of the central government institutions Starting from FY2000. Off-budget activities of budget institutions and most extra-budgetary funds are covered by the formal budget appropriation process. The Treasury has become the central accounting system for all initial budget allocations and any changes introduced during the course of the year. A basic commitment registration and control system has been initiated from FY 2001.

At present, only the Customs Department, selected national security agencies, Pension Fund, and Social Insurance Fund remain outside the purview of the Treasury.

The Treasury based government accounting system meets the periodic fiscal reporting requirements reasonably well. Monthly fiscal reports for the operations of state budget and local budgets are produced within 20 to 25 days after end of month. Fiscal reports produce information that is IMF-GFS compatible. The Ministry of Finance is becoming increasingly dependent on information on fiscal performance maintained by the Treasury. However it still has problems ensuring on-line access to this information from the Treasury system data bases.

The Central Treasury has also begun extending its coverage to local budgets. Under a pilot exercise initiated in July 1999, the local governments of the Dnipropetrovsk and Cherkasy oblasts are covered by the treasury. Extending Treasury coverage to local budget execution would allow the uniform application of expenditure and procurement control regulations and better information on the fiscal position of all level government budgets in Ukraine.

However, the overall budget execution process still needs some improvements and there is a need to establish good internal controls for all stages of budget execution, including: (i) registration of appropriations, (ii) establishing individual spending unit budgets and subsequent changes to these budgets, (iii) registering and controlling commitments, (iv) registering vendor's invoices; (v) verifying receipt of goods and services, (vi) registering and settling payment requests.

The Treasury has started the establishment of a computerized transactional Treasury Ledger System, which would serve as an accounting backbone for the Government Financial Management Information System, GFMS, and allow registration of initial budgets and any subsequent changes, cash allocations, recording of all stages of an expenditure transaction, posting of receipts against respective heads of accounts, performing basic accounting functions, and producing reports for the Treasury, MOF budget management, and auditing purposes. This system is expected to be fully implemented by 2002.

The Treasury is also in the process of improving its capacity for cash management process by implementing an internal payment system that will enable all Treasury offices in the region to process payments through a single correspondent account with the NBU Branch for that region, instead of requiring the NBU branch to set up separate accounts for spending units or rayon treasury offices within the region. Two regions have launched pilots for this new system which channels all payments and receipts through a single correspondent account with the regional office of the NBU. It is expected that during 2001 this system will be extended to all regions.

Work on setting up the Treasury and associated systems has been financed from the Government's own resources and the World Bank, first through an Institutional Building Loan which had a Treasury component, followed by a Treasury systems project of U.S. \$16.4 million.

Hungary Public Finance Management Project

Prior to the establishment of the Treasury and setting up the TSA, the MOF transferred cash directly to spending unit accounts. Government did not receive or have access to accurate and timely information on cash available in spending unit bank accounts. This led to generation of idle balances. There was little control on whether actual expenditures were in accordance with budget appropriations. To remove these problems, under IMF advice, the government has set up Treasury – TSA based payment arrangements.

Treasury development efforts in Hungary have been financed by the World Bank as part of a Public Finance Management Project approved in 1996. In Hungary the Government has moved quickly to set up a two-tier Treasury organization with branches at the center and each of the 18 provinces. Government funds are lodged in a TSA at the Central Bank. Spending units send their expenditure transactions to the appropriate branch of the treasury, which processes them and authorizes payments from the TSA at the Central Bank. The Treasury operates a centralized transaction processing architecture where all transactions are processed at the center and remote treasury offices are linked to the

transactions are processed at the center and remote treasury offices are linked to the center via telecommunication links in an online mode. The application software used by the Hungarian Treasury has been custom developed. There is some thought now being given to moving to a more full function solution that can be provided by an off-the-shelf application software package. Greater availability of technical and financial specialists within the government and previous experience in managing complex institutional reform projects, have enabled the Government to set up the core functionality associated with the Treasury relatively quickly, over a period of four years.

PART II

DETAILED PROCESS CHARTS, PROCESS QUESTIONNAIRE, FUNCTIONAL SPECIFICATIONS & DATA ARCHITECTURE

PROCESS DIAGRAMS

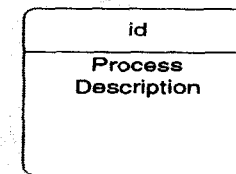
PROCESS DIAGRAMS

Names of departments or organizational entities responsible for carrying out the process

Process diagram

Legend of symbols

Functional process

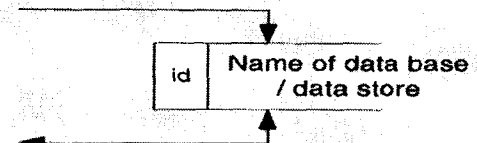


Information flow

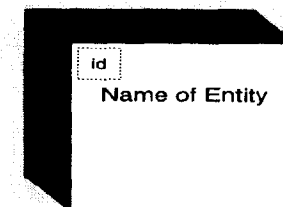


Data base/data store

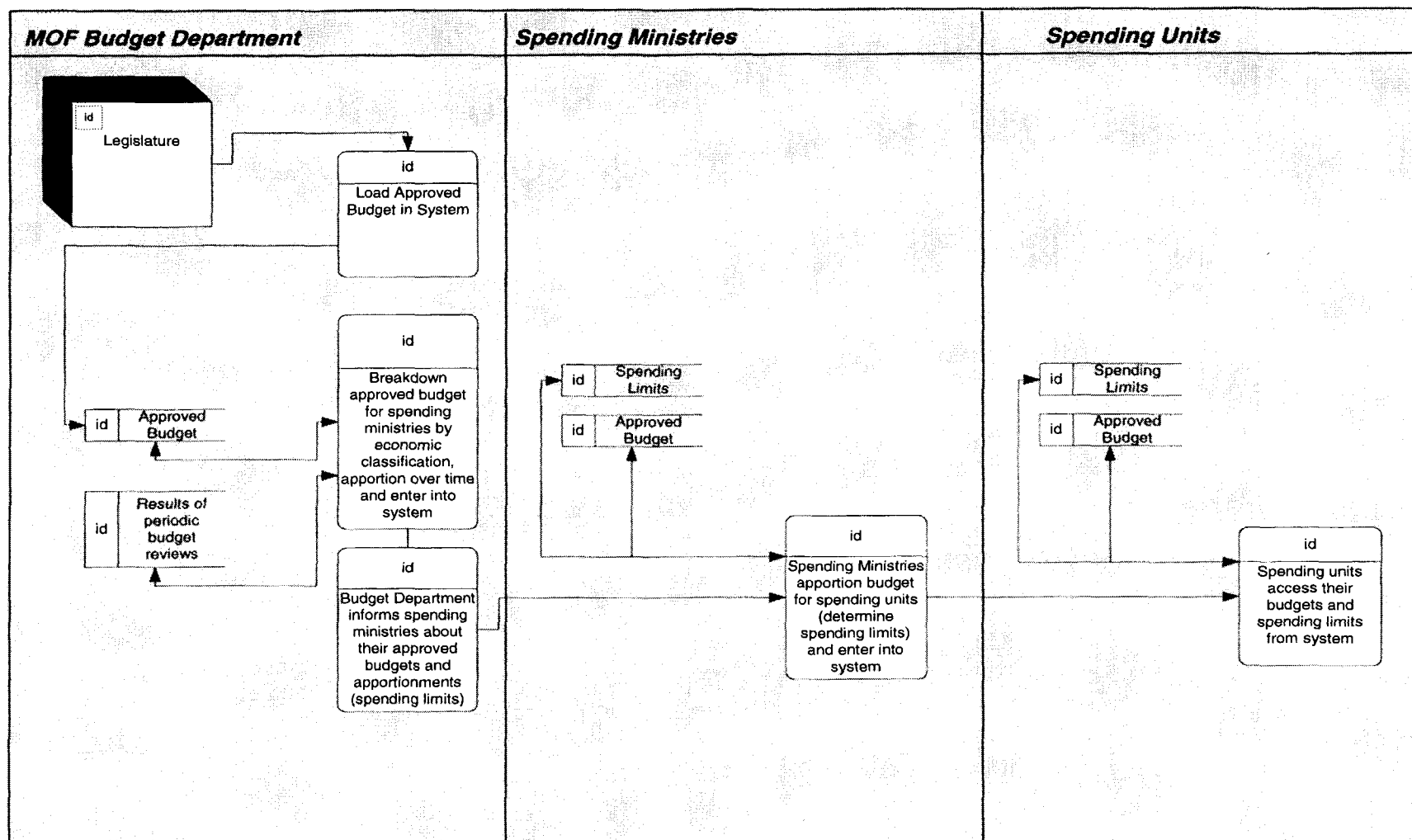
Information flow with one arrow indicates updates to data base.
Information flow with two arrows indicates both read access and update



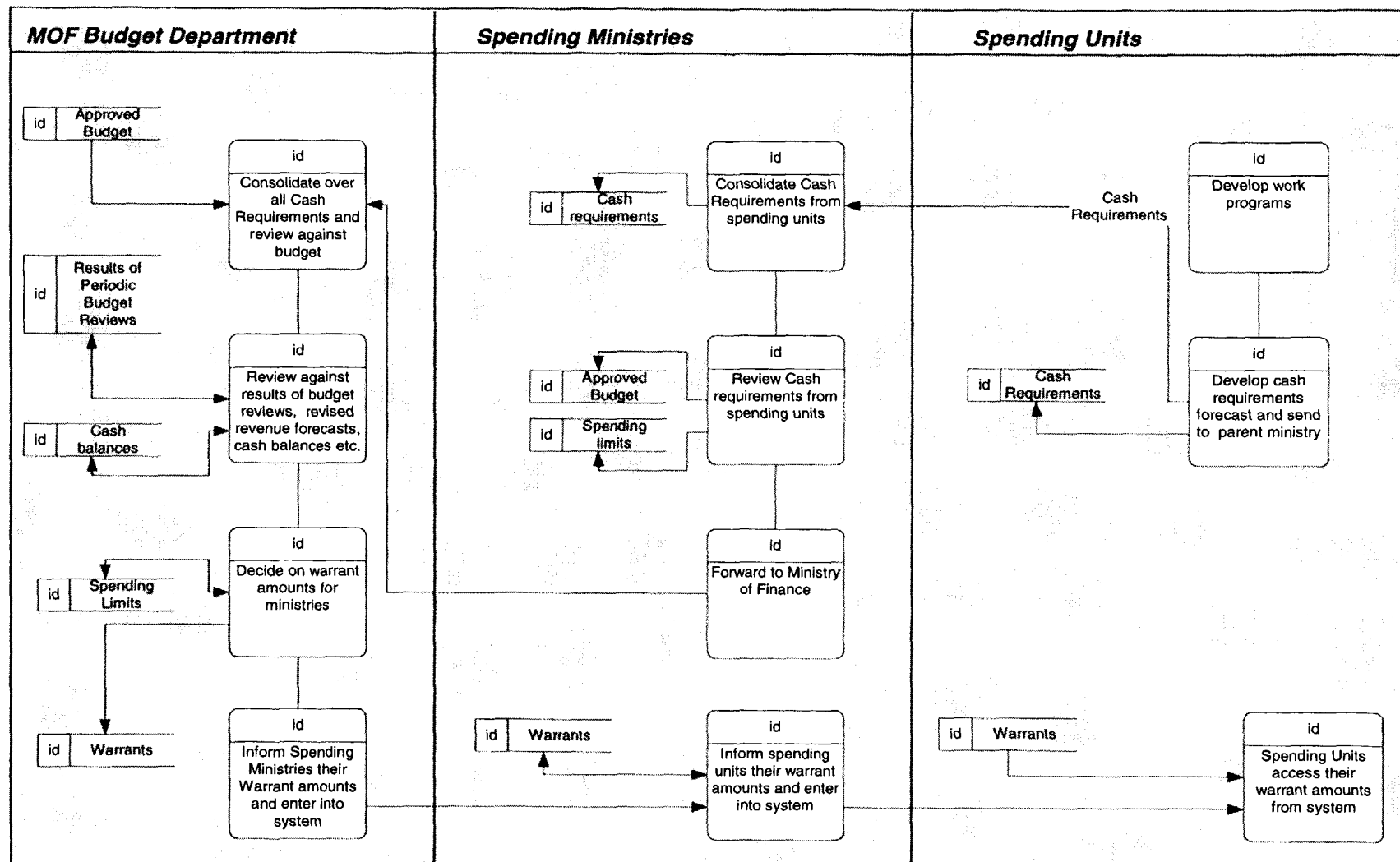
External entity



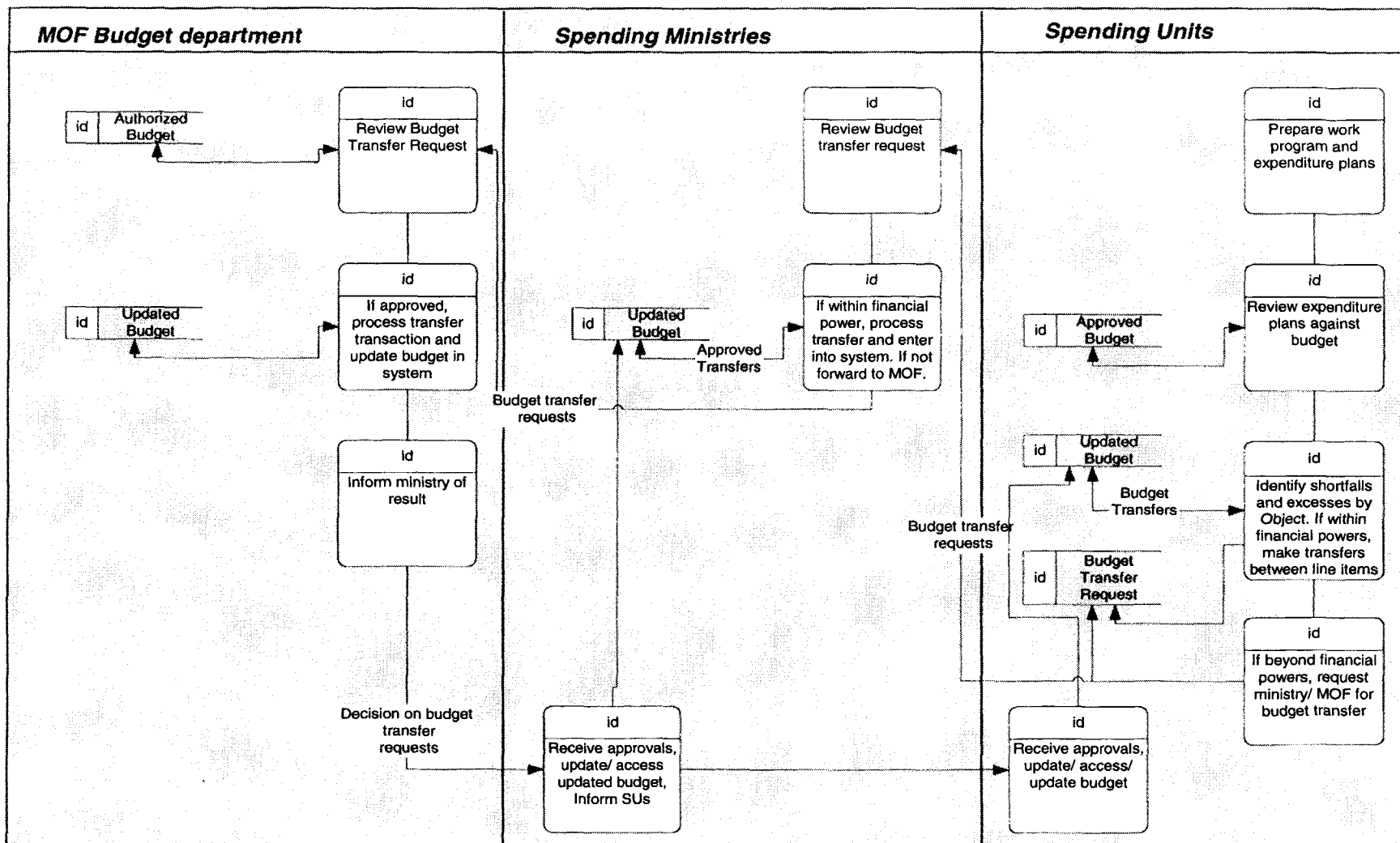
Process description



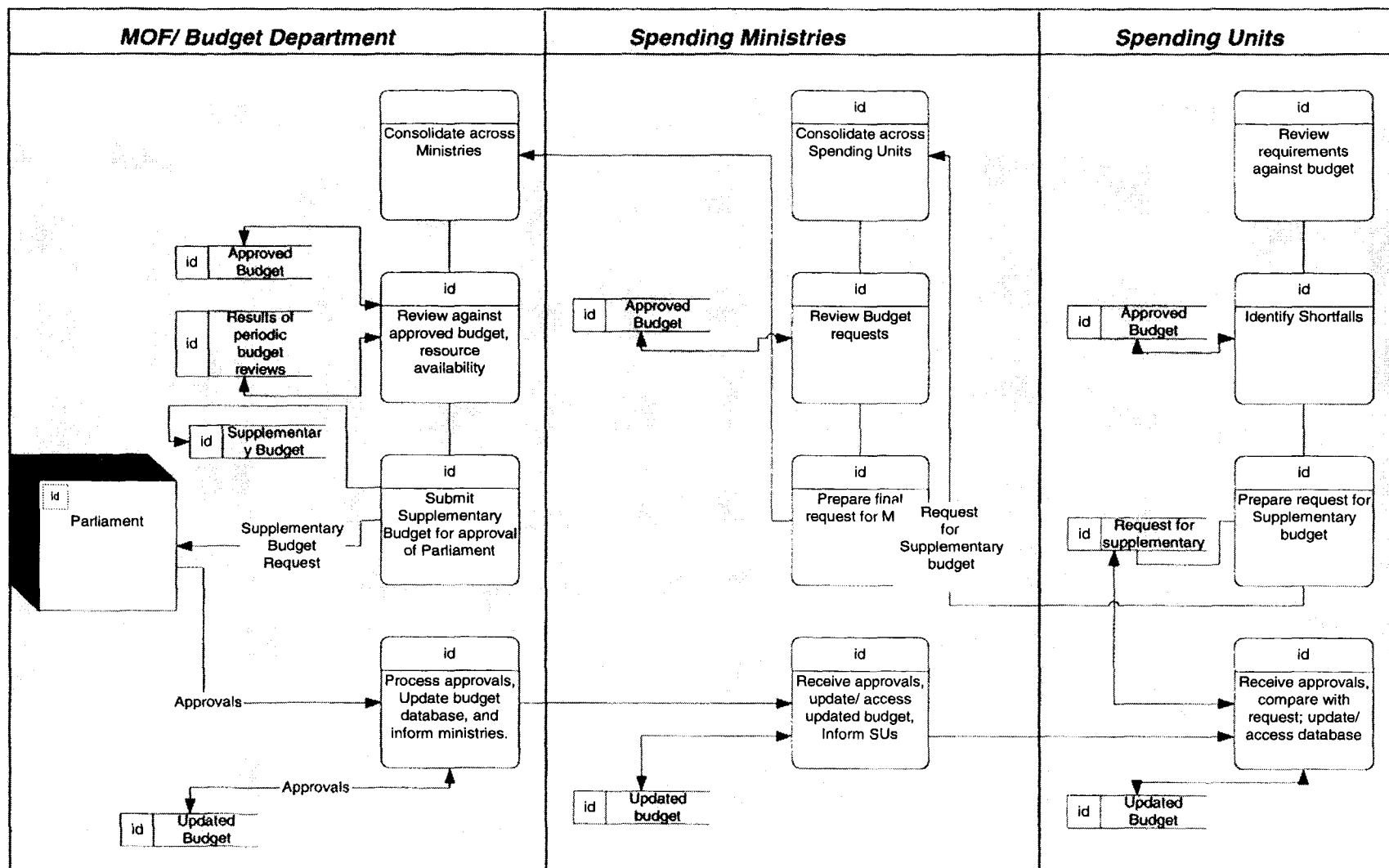
1. Management of Budget Authority: 1. Apportionment and Allotment: After approval of the annual budget by Parliament it is loaded into the system by the Budget Department of the MOF. The approved budget for spending ministries is then broken down to the detailed level of economic classifications and is apportioned over time (quarters and months) and is registered in the system by the MOF and communicated to the spending ministries. The spending ministries, in turn, register the detailed budget for their subordinate spending units and communicate the **allotments** to the spending units. These are the **spending limits** for the spending ministries and spending units by quarter/ month for the fiscal year. Spending limits may be varied during the course of the year in accordance with the results of monthly or quarterly reviews of budget performance. For example changes may be caused by variations in the revenue forecasts, commitment and expenditure patterns, etc.



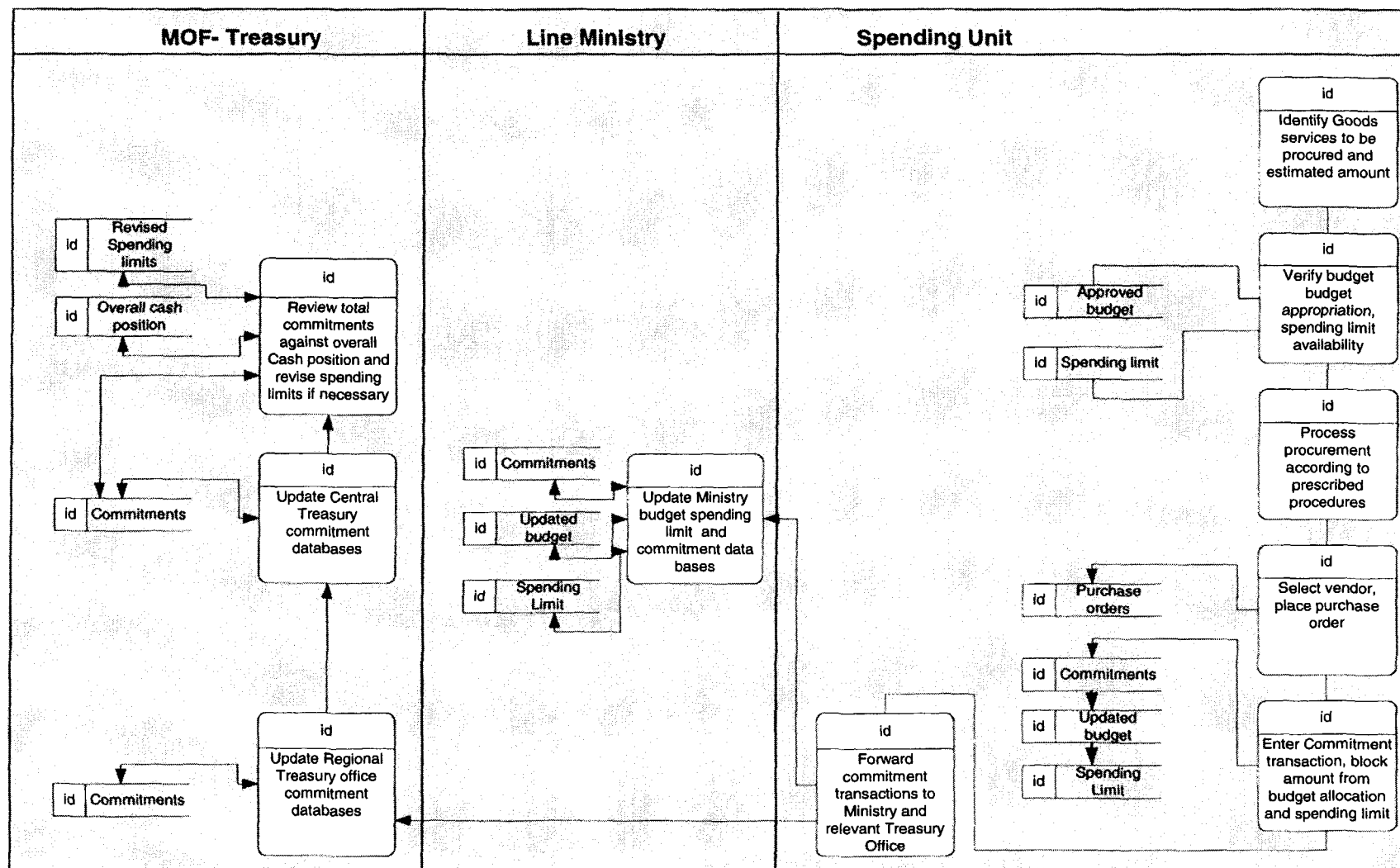
1. Management of Budget Authority: 2. Warrant allocation: Each year, financial plans detailing projected outlays and receipts are developed by spending units and ministries. As the year progresses, sector agencies prepare periodic requests for funds by economic category, which are also captured. The MOF then issues warrants to ministries for each category of spending. From these amounts the ministries issue sub-warrants for their spending units and advise the appropriate spending units. These processes take place periodically through out the year. The warrant and sub warrant amounts need to be within the amounts specified in the spending limits for these organizational units. Warrant amounts are determined in the light of the results of periodic budget reviews, revised revenue forecasts and cash balances.



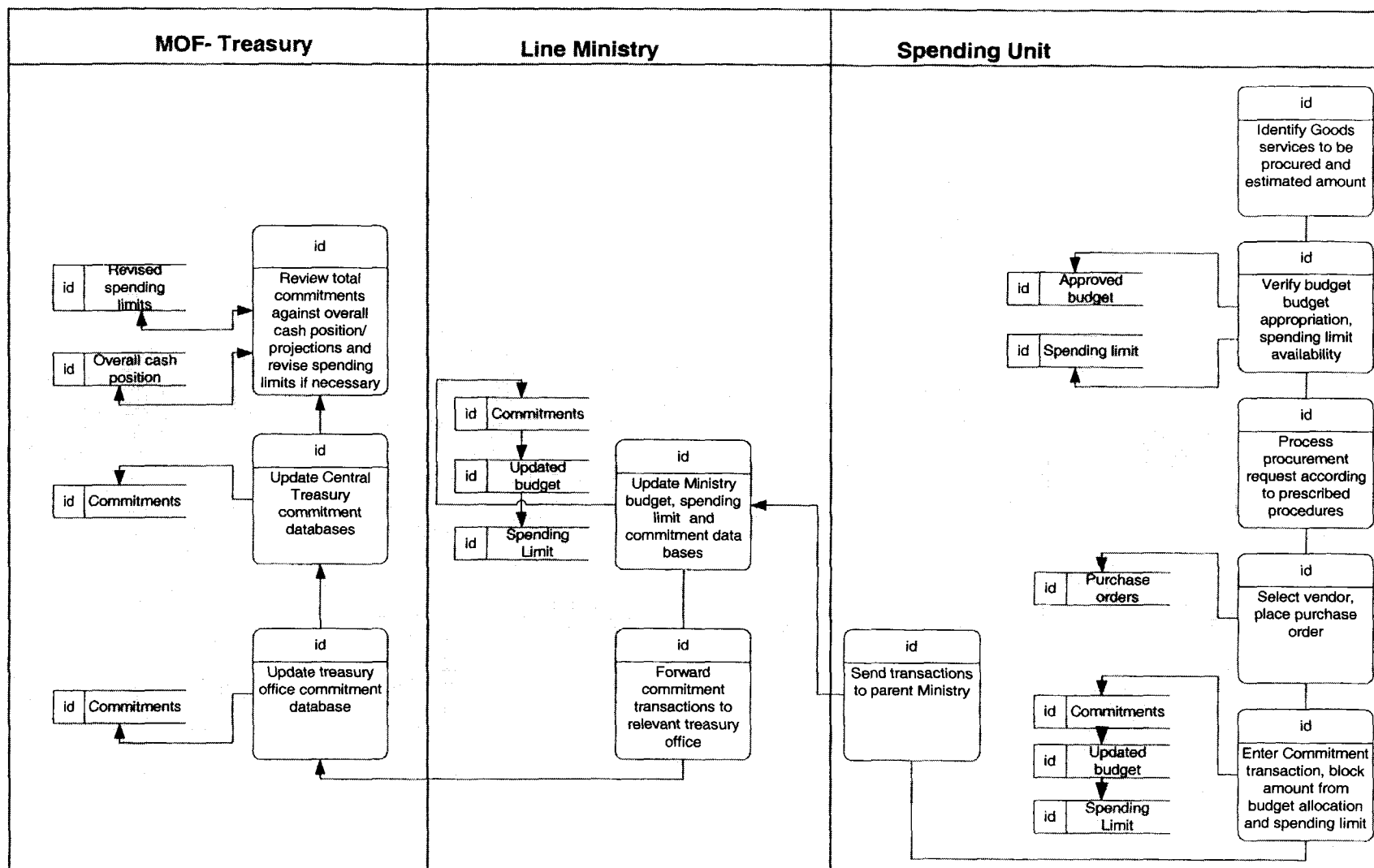
1. Management of Budget Authority: 3. Budget Transfers/ Virements: Normally the Budget Law permits the MOF, the spending ministries and the spending units to shift the approved budget between organizational and object classifications within restrictions set by the relevant laws. Shortfalls identified by spending units in one or more economic categories may be met from excesses in other economic categories in their budget. For this, a budget transfer request needs to be processed. For some items and within certain thresholds, spending units may have the financial powers to make the transfer themselves. For these cases, they will update the budget data base in the system. For cases which are beyond their financial powers, they will request the parent ministry or MOF to process the transfer, depending on the type of transfer. If approved, the Ministry / MOF will process the transfer and update the data base. The spending unit will be informed of the decision on the request.



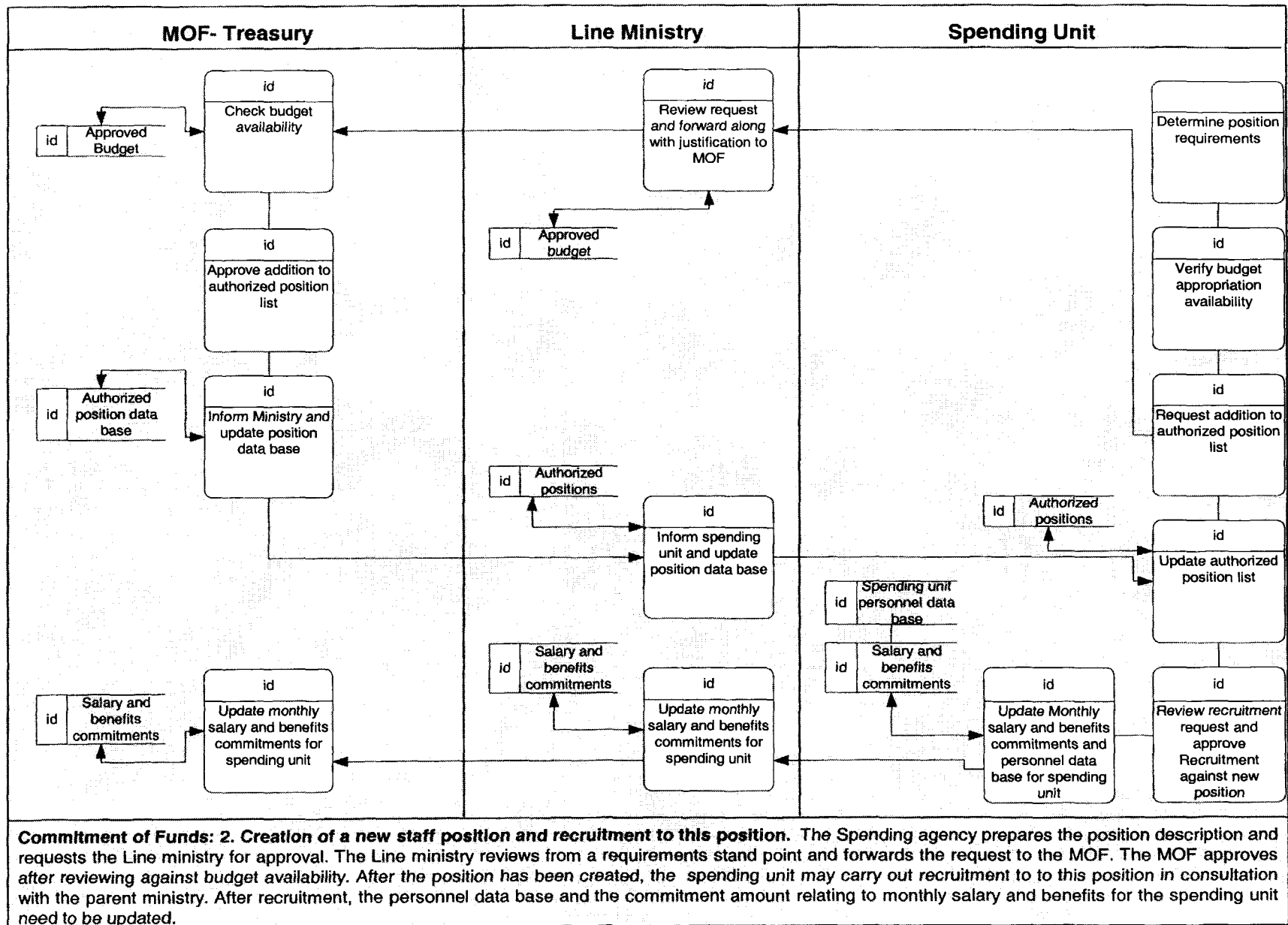
1. Management of Budget Authority: 4. Supplementary Budgets: During the course of the year revisions to the approved budget may be carried out by the Parliament. These revisions are carried out in accordance with the procedures for finalizing the original budgets. The process of preparing supplementary budgets covers the preparation, routing and approvals of requests for a supplementary budget. Supplementary budgets are normally presented to the Parliament for approval at mid year.

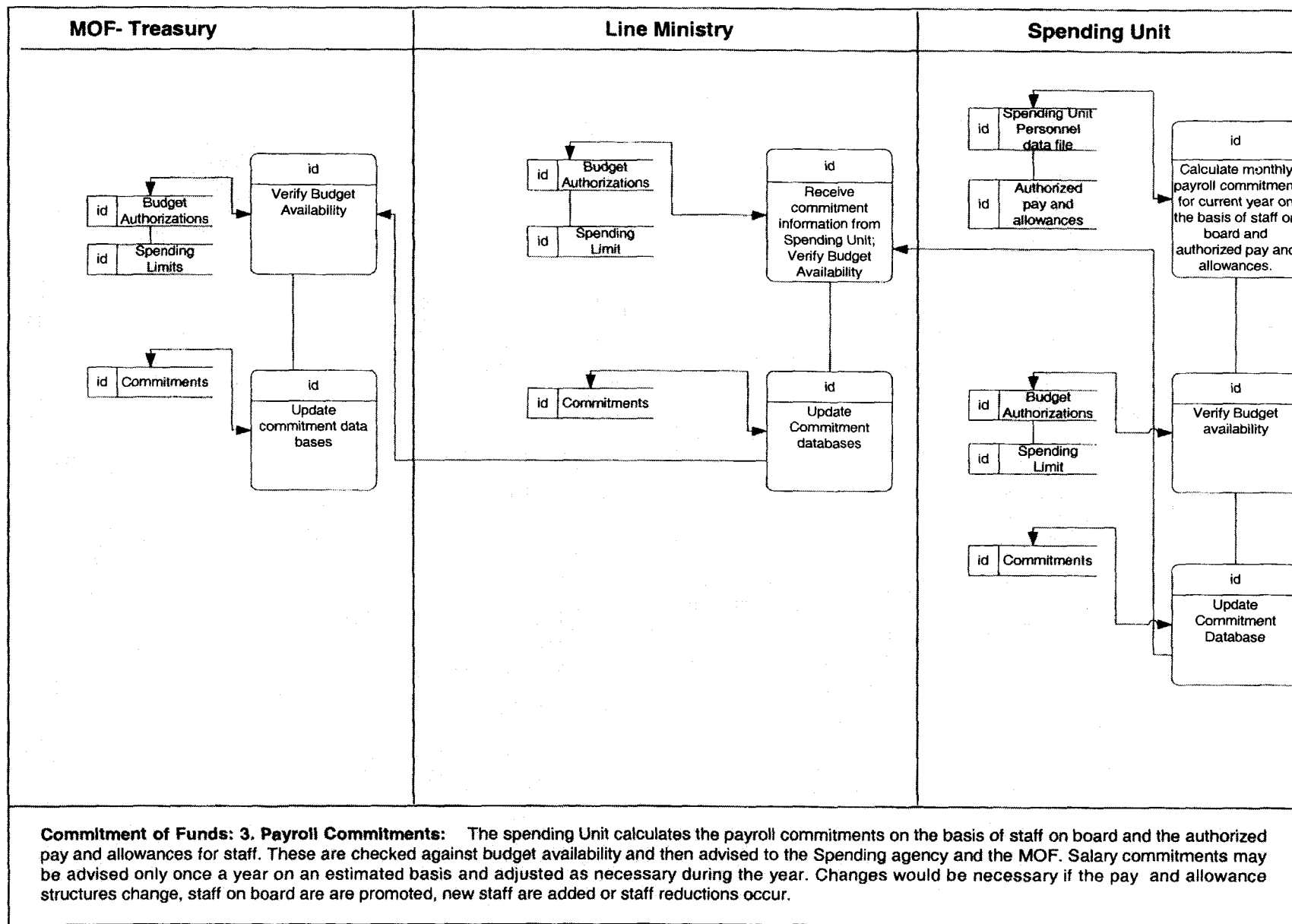


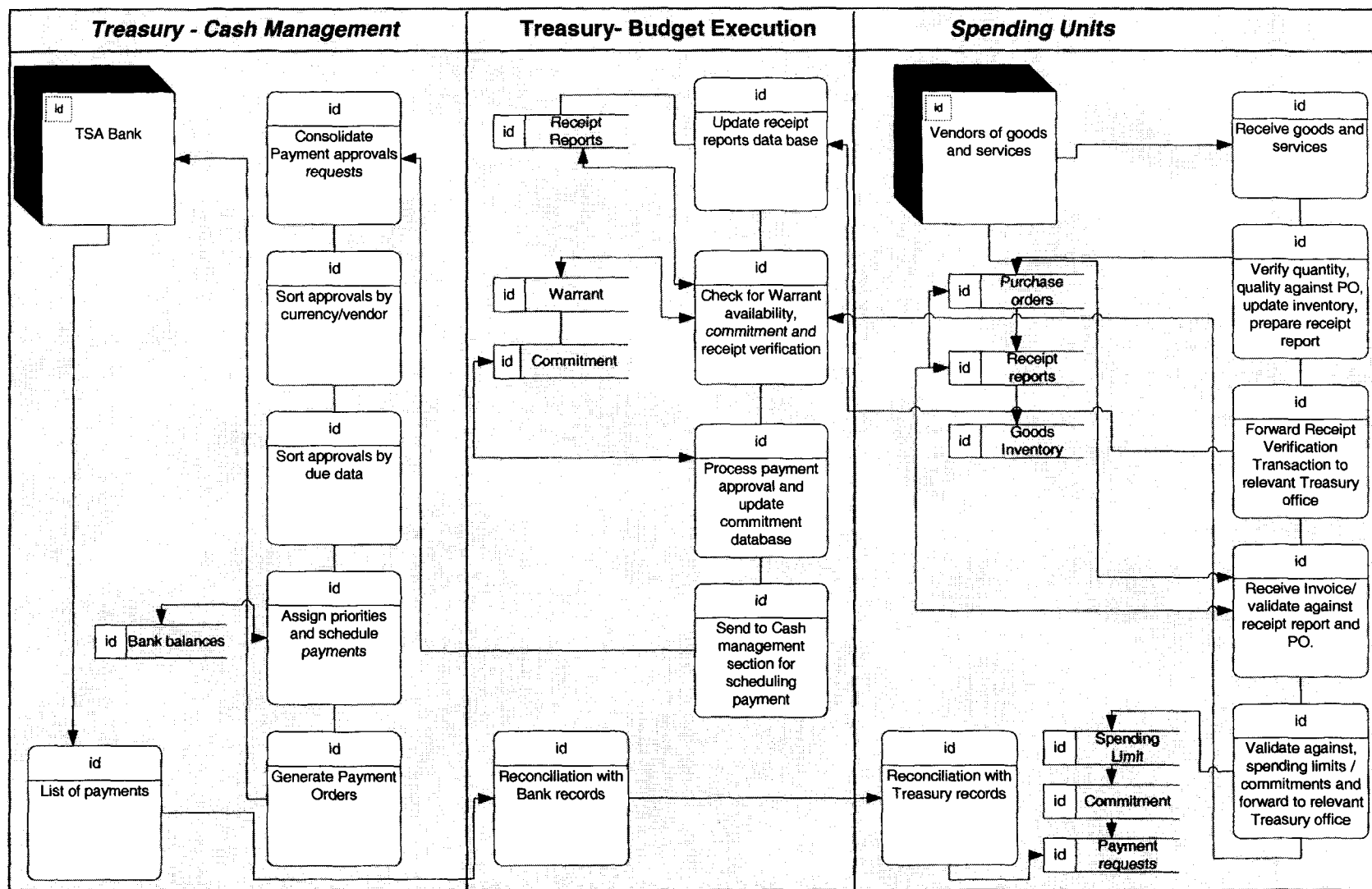
2. Commitment of Funds: 1. Procurement of goods and services. (Case 1: Spending units process transactions directly through regional treasury offices). As the year progresses, spending units process requests for goods and services. After verifying the appropriateness of the expenditure and availability of budget and spending limit, the spending unit will process the procurement request according to prescribed procedures and place a purchase order on a vendor for the procurement of goods and services. The vendor should be registered in the database of vendors. The spending unit will then register a commitment in the system and block the corresponding amount from the available budget and spending limit. The commitment transaction is forwarded to the parent ministry and the MOF-Treasury regional office that will process the payment against this commitment.



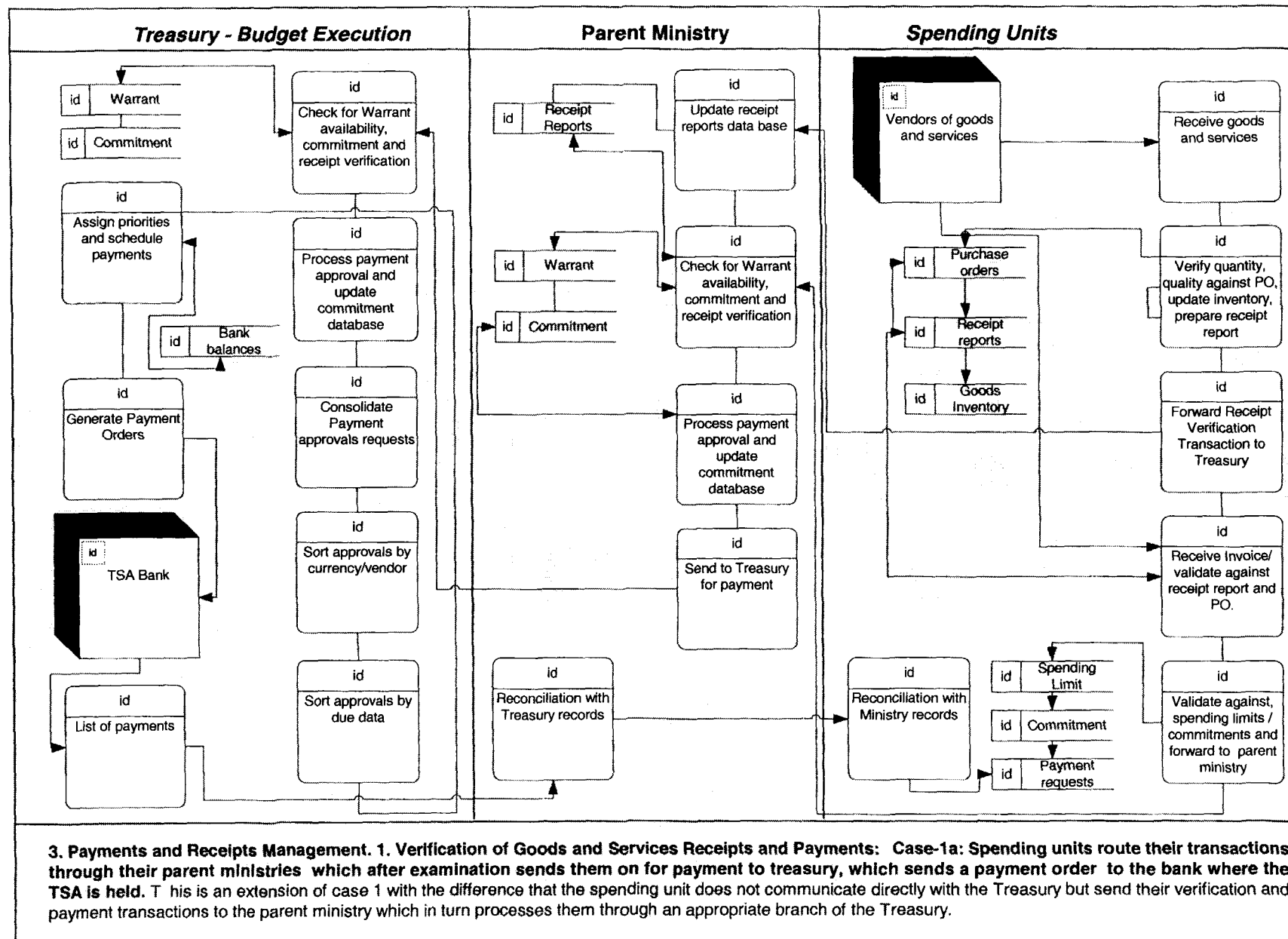
2. Commitment of Funds: 1. Procurement of goods and services. (Case 2: Spending units route their transactions to the spending ministries which then process send them through the relevant treasury office. Treasury does not have a regional network) . As the year progresses, spending units will process requests for goods and services. After verifying the appropriateness of the expenditure and availability of budget and spending limit, the spending unit will process the procurement request according to prescribed procedures and place a purchase order on a vendor for the procurement of goods and services. The vendor should be registered in the database of vendors. The spending unit will then register a commitment in the system and block the corresponding amount from the available budget and spending limit.

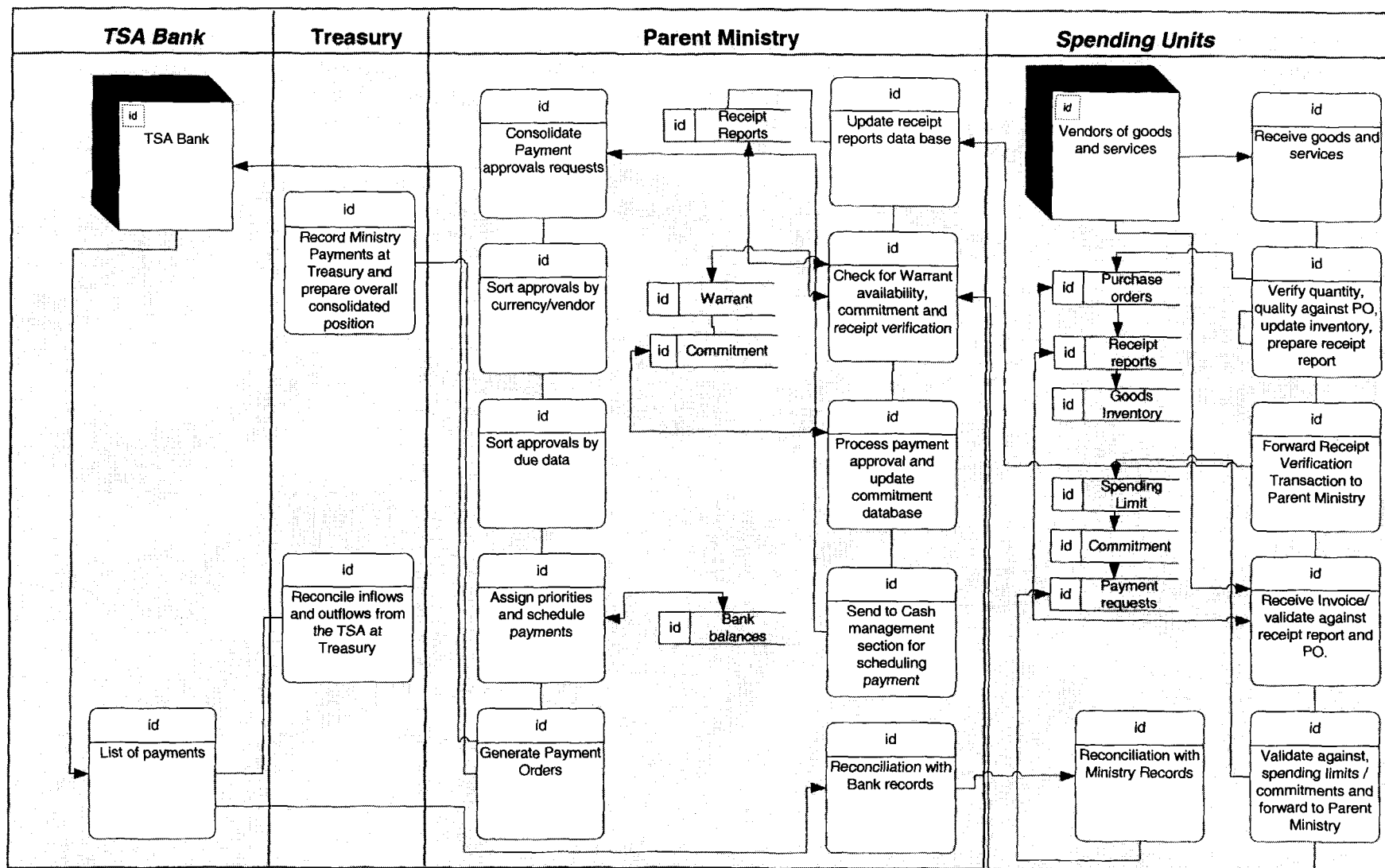




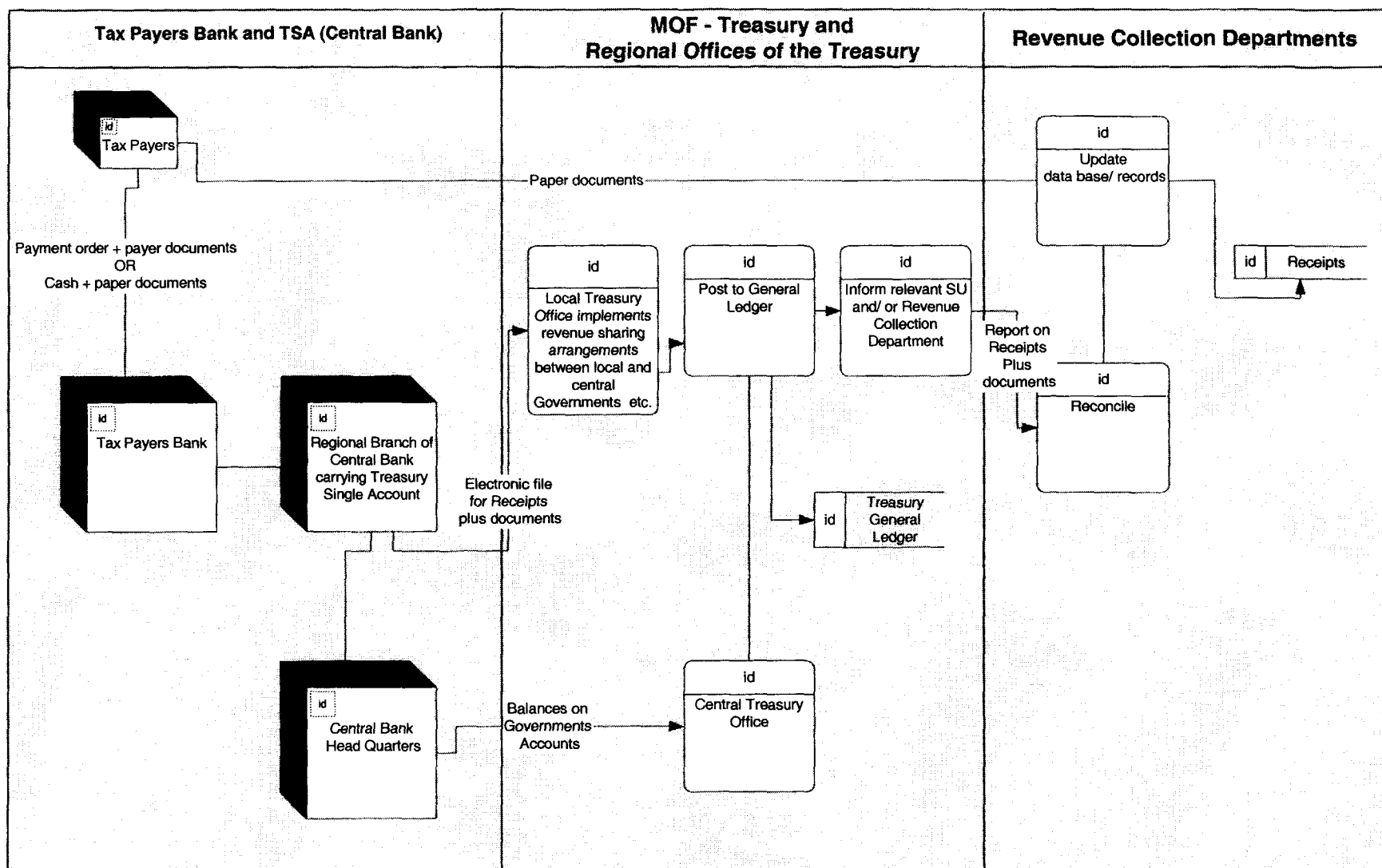


3. Payments and Receipts Management: 1. Verifications of Goods and Services Receipt and Payments: Case 1: Spending units route their transactions through the relevant Treasury office which, after examination, sends a payment order to the bank where the TSA is held. The process starts with the receipt of goods and services. These need to be validated against the purchase order and a verification of receipts report is generated and entered into the system. On receipt, the invoice from the vendor is checked against the receipts report, the purchase order and the payment approval process commences. The requests for payment are examined with reference to the available budget (spending limits, warrants) and the existence of a prior commitment. After approval, the request is sent to the cash management section and scheduled for payment. The list of completed payments received from the TSA Bank (normally the Central Bank) is used for reconciliation of of records at the Treasury and the Spending Unit.

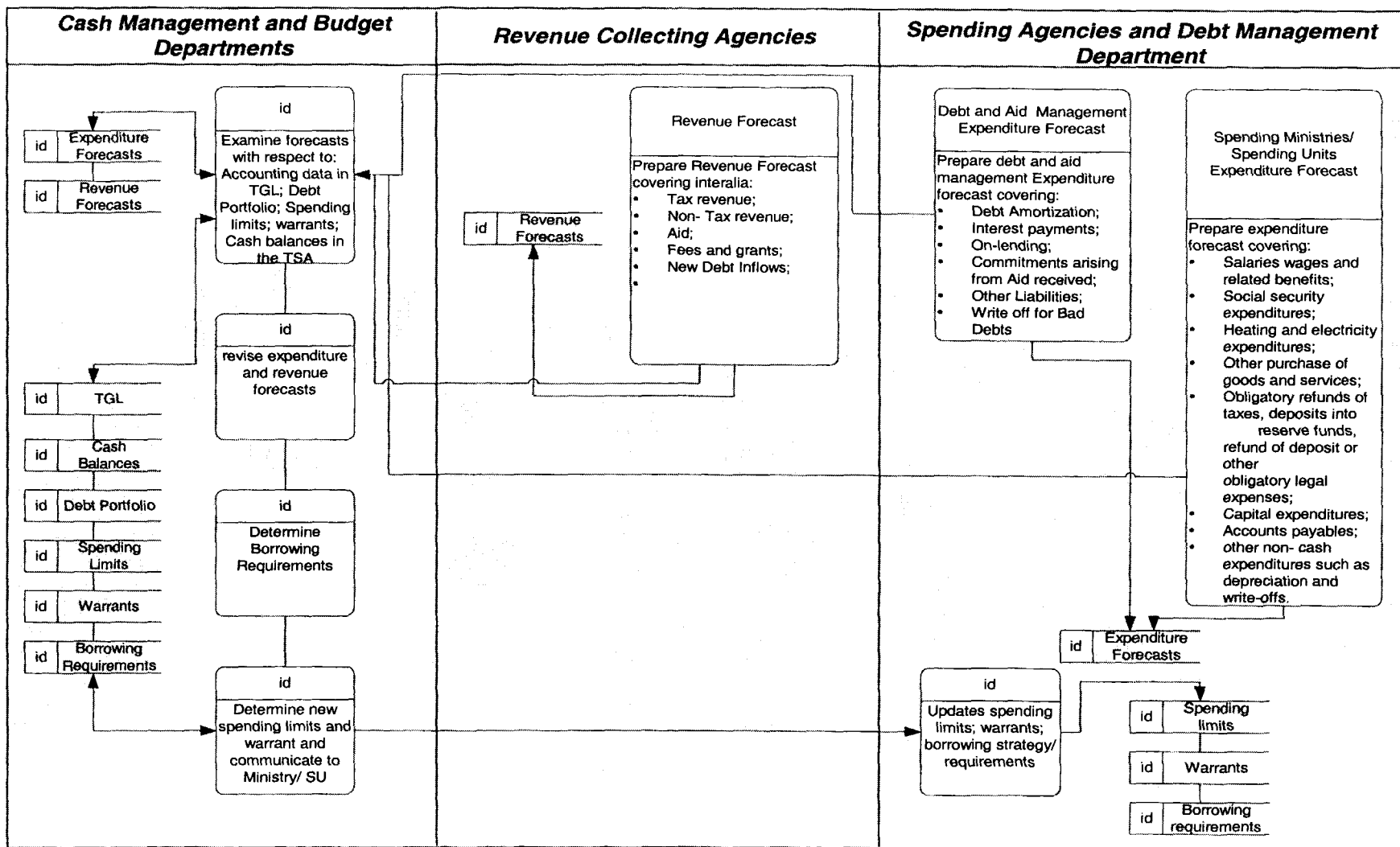




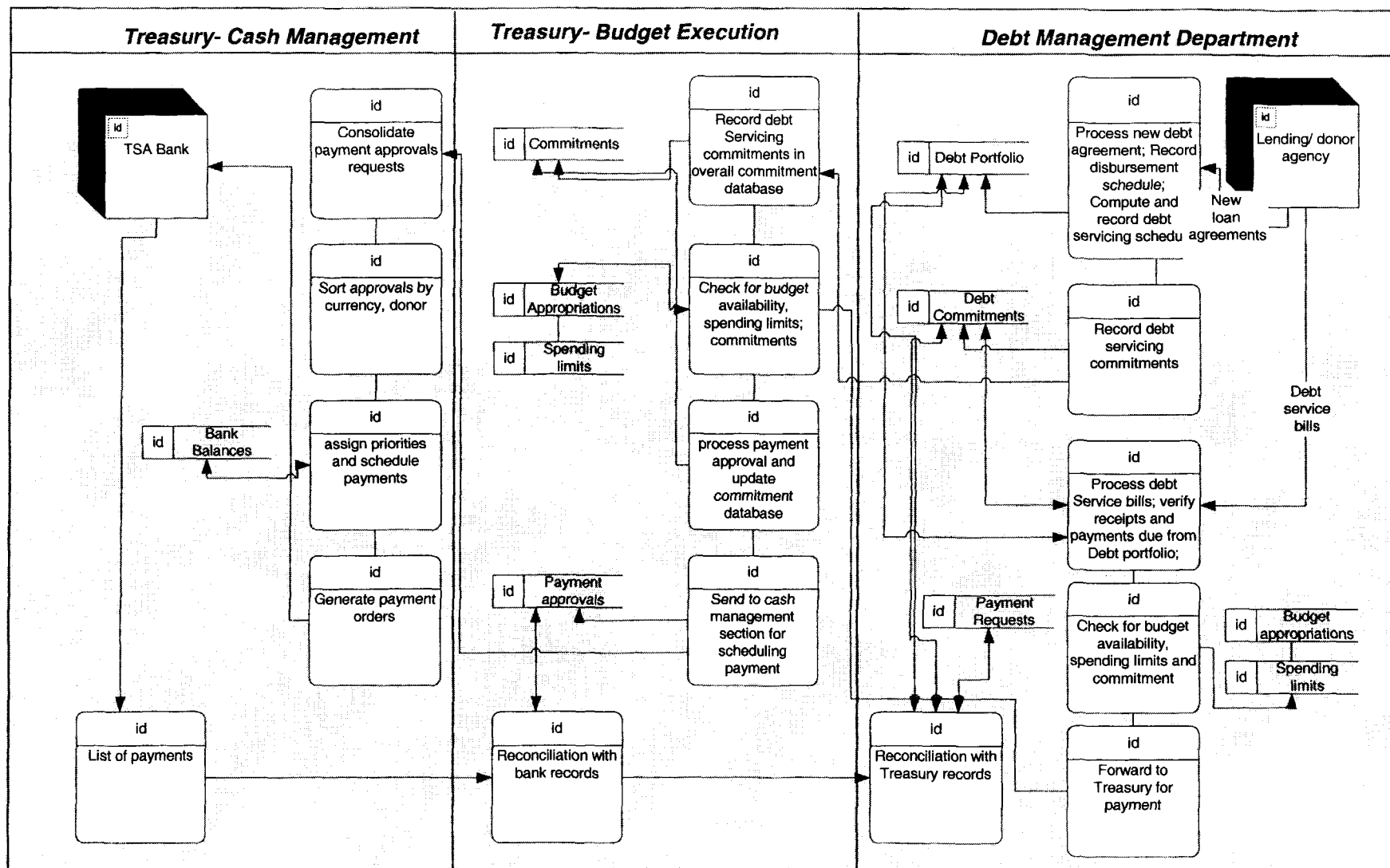
3. Payments and Receipts Management. 1. Verification of Goods and Services Receipts and Payments: Case 2: Spending units route their transactions to the spending ministries which then process them directly through a bank where the TSA is held. The process starts with the receipt of goods and services. These need to be validated against the purchase order and a verification of receipts report is generated and entered into the system. On receipt, the invoice from the vendor is checked against the receipts report, the purchase order and the payment approval process commences. The requests for payment are examined with reference to the available budget (spending limits, warrants) and the existence of a prior commitment. After approval, the request is sent to the cash management section of the Ministry and scheduled for payment. The list of completed payments received from the TSA Bank (normally the Central Bank) is used for reconciliation of records at the Ministry and the Spending Unit.



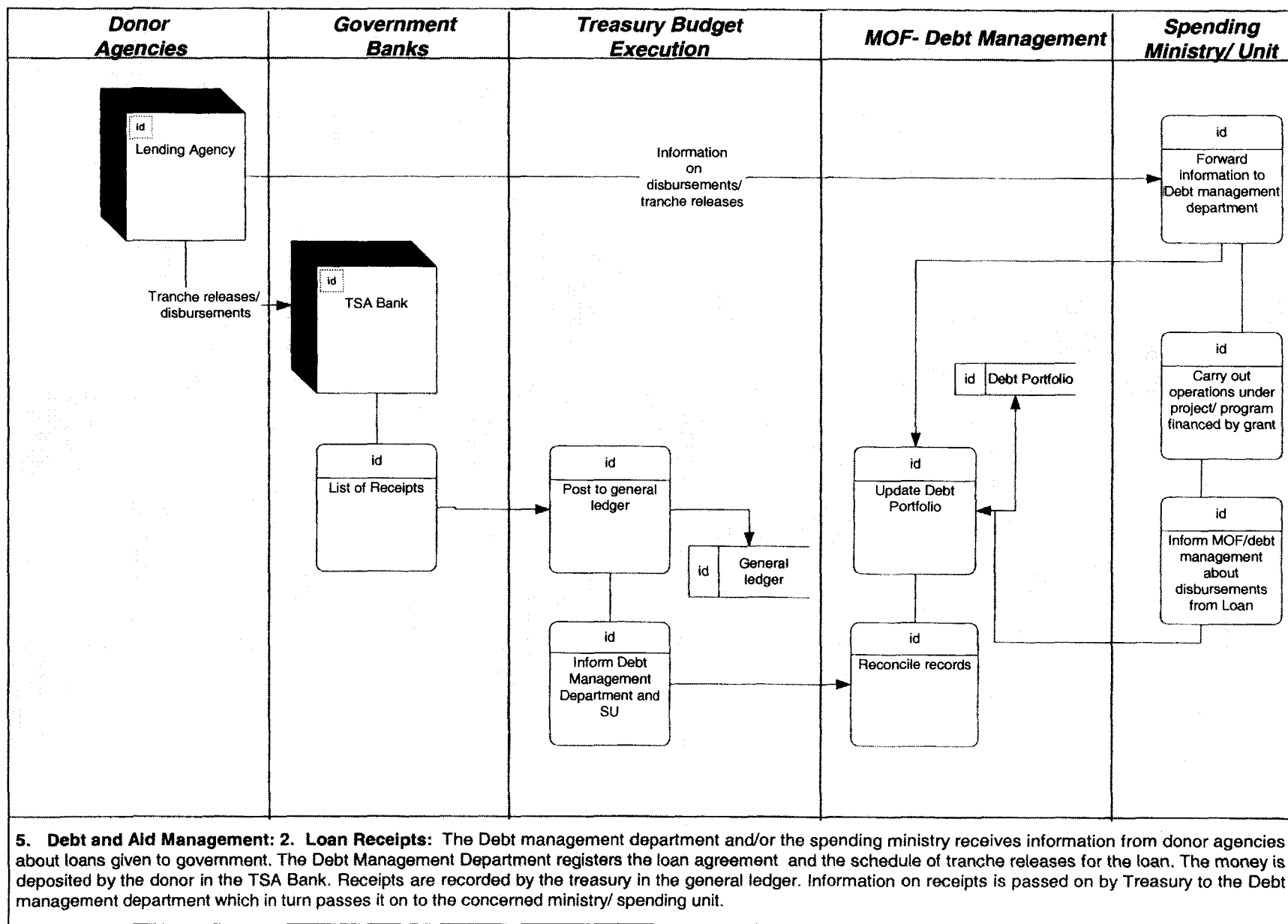
3. Payments and Receipts Management. 3. Receipts : Government receipts are paid through payment orders issued by the payee on his Bank. The Bank transfers the payment to the Treasury single Account at the Central bank. The Treasury monitors the deposits of Government receipts through daily statements received from the Bank. The Treasury implements any revenue sharing arrangements that are in place between the central government and the sub national governments etc. and posts the detailed revenue category wise figures in the General Ledger and informs the relevant SU or revenue collection department of the receipts.

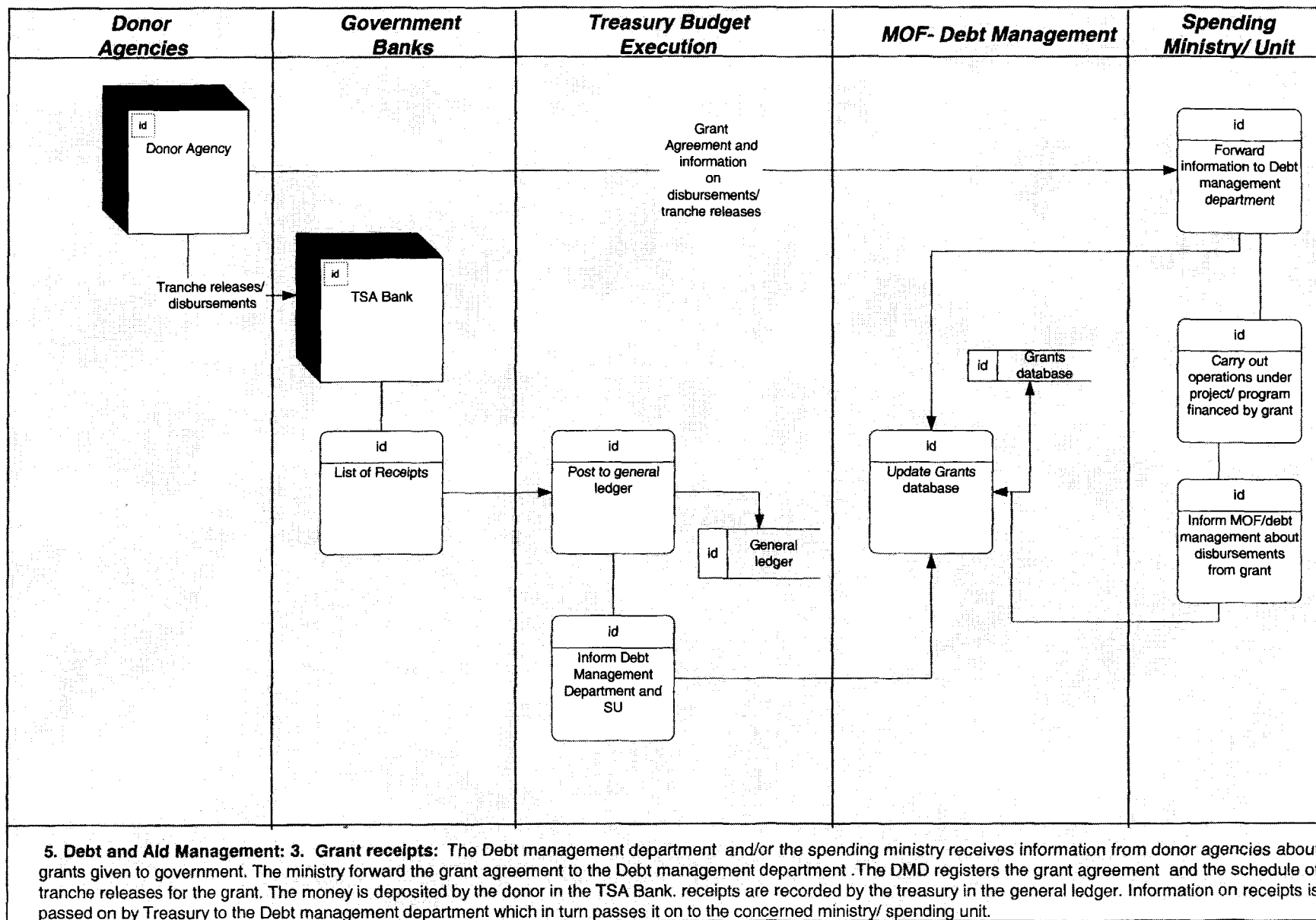


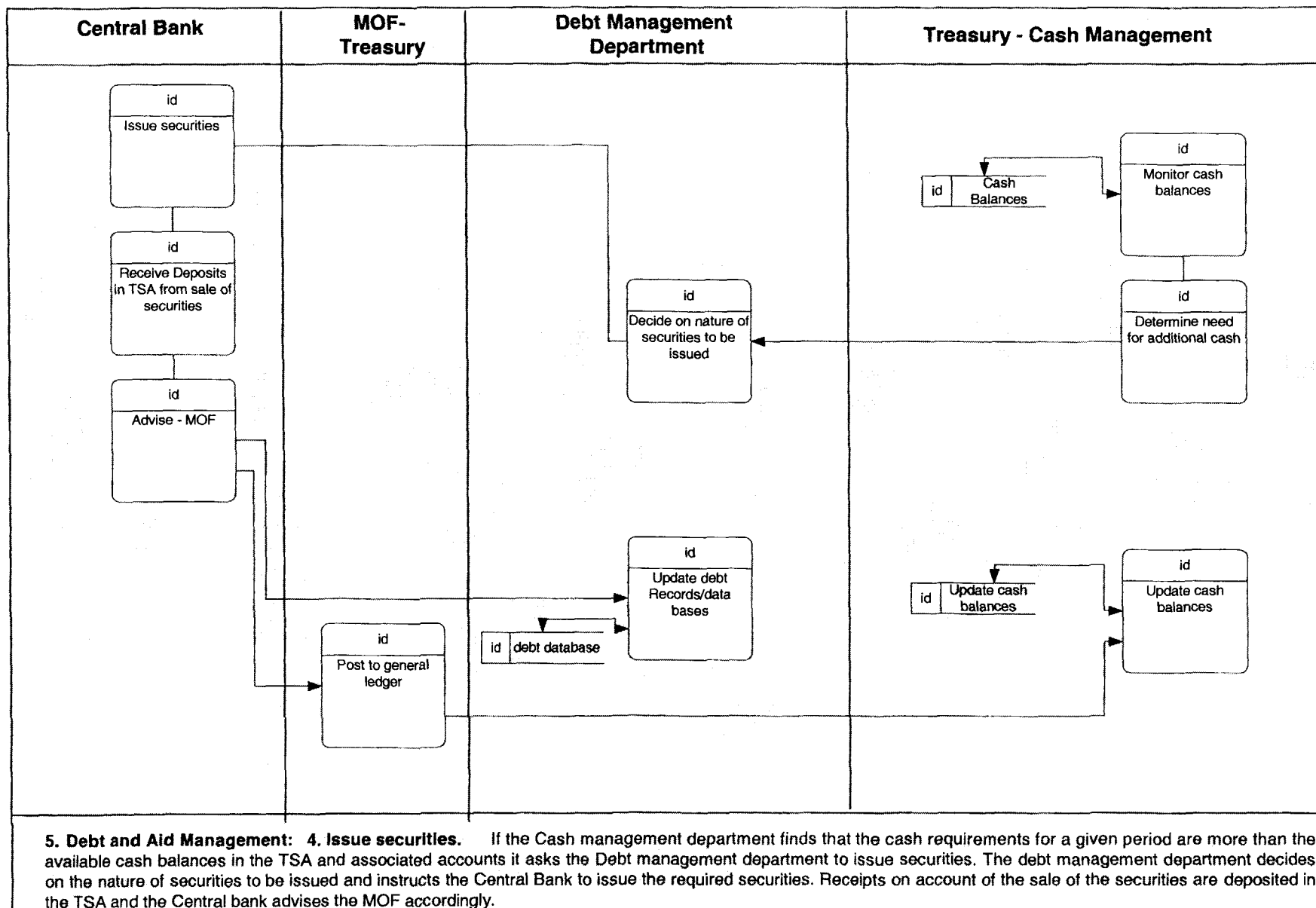
4. Cash Management: 1. Expenditure and Revenue Forecasting, 2. Cash Monitoring, 3. Borrowing strategy : The cash management department receives expenditure and revenue forecasts from the spending ministries and from the debt management department on debt servicing expenditures. The revenue collection agencies prepare revenue forecasts. The Cash management department examines this data with respect to the accounting data booked in the TGL, the Debt management database and the cash balances in the TSA and its component sub- accounts. This enables it to determine the liquidity position of the government and shortfalls/ surpluses. This information form the basis of the MOF determining the borrowing requirements and the spending limits and warrants for spending ministries and units.

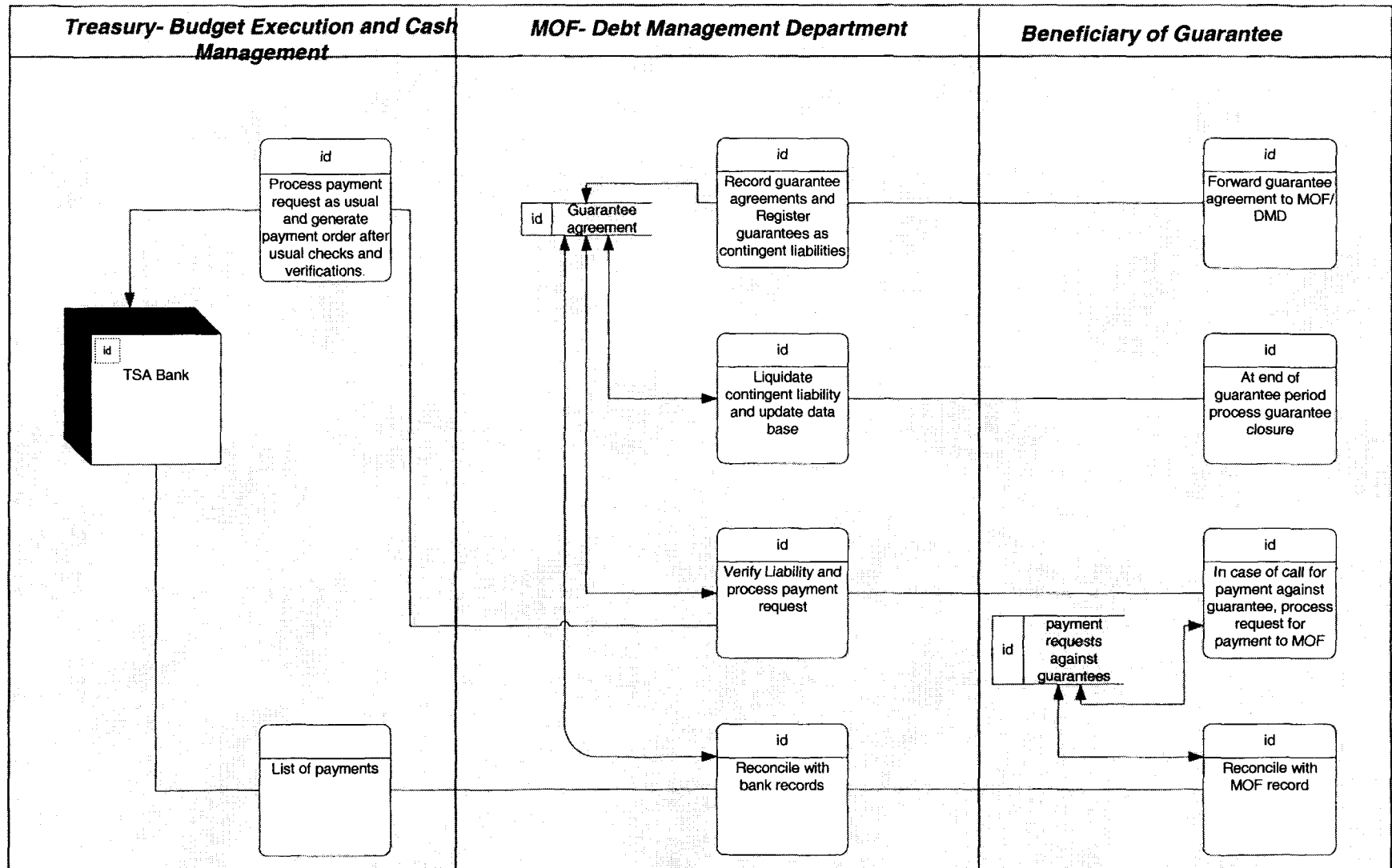


5. Debt & Aid Management: 1. Debt recording and servicing: The debt management department receives the loan agreements from the donor/ lending agencies and registers the loan details in the system, including the disbursement and debt servicing schedules. The debt management department also records commitments related to debt servicing. On receipt of debt service bills, the department verifies receipts and payments due against the debt portfolio and forwards it to the Treasury for payment. The Treasury processes these payment requests in a similar manner to that for other payment requests. On conclusion of the transaction the paying bank sends a list of payments to the treasury which in turn sends the list of debt related payments to the debt management department. These are used for reconciliation purposes.

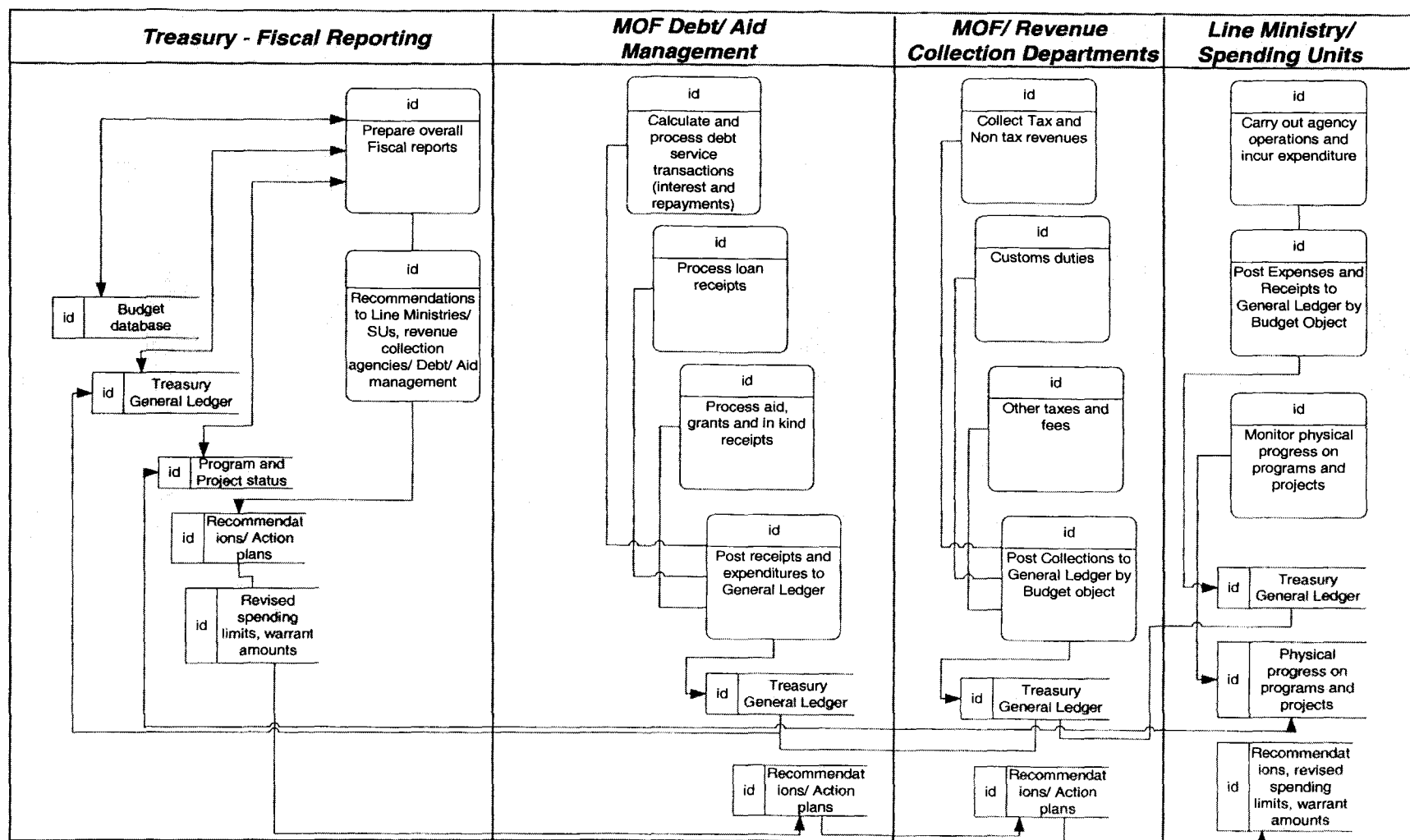








5. Debt and Aid Management : 5. Recording Guarantees as contingent liabilities and processing payments against Guarantees. The debt management department will register guarantees given by government. These will be treated as contingent liabilities. The DMD will receive information from the beneficiary of the guarantee at the time the guarantee is initiated. At end of the guarantee period, the beneficiary will inform the DMD about liquidating the contingent liability. In the case of a call for payment against the guarantee the beneficiary will send a payment request to the DMD which, after verifying the existence of the liability, will request treasury to make the payment.



6. Budget Review and Fiscal Reporting: The Treasury System is used to produce periodic fiscal reports that give a consolidated picture of all receipts and expenditures and progress against budget targets. For these reports to be comprehensive, all items of receipts and expenditure need to be captured. The Government Chart of Accounts is the basis of the fiscal reporting process. These include the Fund, organizational, functional and economic classifications structure of the budget and the classification of account groups, assets and liabilities. As line ministries and spending agencies carry out their work programs, expenses and receipts are posted to the GL by the Treasury system by budget object. Ministry systems record physical on programs and projects. This information is forwarded to the MOF. The Treasury General ledger records receipts of various types of tax revenues, loan/ aid receipts, and debt servicing expenses. On the basis of this data the MOF can prepare overall fiscal reports that compare actual expenses and receipts with the budget estimates. These reports provide a status report and recommendations and action plans for corrective action during the course of the year. These could include revisions to spending limits, warrant amounts etc.

PROCESS QUESTIONNAIRE

Organization Structure of the Treasury

Question	Response
Is there a fully functioning Treasury operating in the country; is a Treasury organization envisaged in the future.	
What is the model for payment processing operating / envisaged?	<p>a. Centralized with all payment transactions from spending units routed to an appropriate branch of the Treasury.</p> <p>b. Centralized with all payment transactions from the spending unit routed through the parent ministry to the treasury.</p> <p>c. Decentralized with spending ministries/ units being directly responsible for processing payment transactions.</p>
Where is the Treasury Single Account held and what are the government banking arrangements.	<p>a. Central Bank</p> <p>b. Central Bank with payment and receipts being made through designated fiscal agent(s), commercial banks.</p>
Does the Central bank have branches at the sub national /provincial level.	
Is a two tier or a three tier structure of Treasury offices envisaged.	
How many second tier / third tier Treasury offices are there in the country.	
How many first level spending units are there?	
How many subordinate spending units are there?	

Management of Budget Authority

Budget Apportionment, Allotments, and Warrant Allocations

Question	Response
What is the budget classification structure in use. Does the budget classification structure have: Organization, Economic , and Functional classification segments. Please give details of the budget classification structure in use.	
Is an automated budget preparation system in use for preparing the annual budget estimates. How is the approved	c. Electronically (please state medium)

budget received? When is the approved budget received?	d. Paper format
What is the level of detail to which the budget is divided when it is used in the MOF for budget execution and control purposes. Is it broken down by individual spending units and by economic classification for each spending unit?	
What is the volume of budget data that needs to be loaded into the budget execution system at the start of the year. (No of individual records).	
How is the process of budget apportionment (for ministries) and allotment (for spending units) carried out. Are the limits set at 1/12 th of the overall approved amount or are they set taking into account the ministry/ spending unit expenditure plans.	
What is the horizon of expenditure plans prepared by the Line Ministries/spending units? How are these plans sent to MOF by the Ministries/spending units?	a. 1 month b. 3 months c. 6 months d. 1 year
How often are expenditure plans prepared / revised?	
What is the horizon for cash requirements forecast? Are any tools used to prepare the cash forecast?	a. 1 month b. 3 months c. 6 months d. 1 year
Are cash requirements forecasts matched against expenditure plans?	a. Yes b. No
What are the controls in place on the releases of warrants? Typically how often are warrants/ sub-warrants released per year/ per month? What is the frequency of releases.	a. Weekly b. Monthly c. As required
How many warrants/ sub warrants were processed last year?	
Is warrant sub warrant processing automated or are they handled manually?	a. Automated b. Manual
Are sub warrants (to subordinate spending units) processed by the Line Ministries? By the Ministry of Finance?	a. Line Ministry b. Ministry of Finance
How is approved warrants and sub-warrant information sent to Ministries /Spending Units?	a. Electronically b. Manually by paper form
What kinds of controls are imposed to ensure that total sub warrants do not exceed total warrants and the total warrants do not exceed the apportionments/ allotments? Are the controls imposed for every budget line?	
Are warrant/ sub warrants done on the basis of Spending Unit expenditure plans?	a. Yes b. No
If warrants/ sub warrants are not based on expenditure plans, how are sub-warrant allotment amounts determined?	a. Profiling of budget b. Past year expenditures c. Other (please specify)
Are existing obligations and un-obligated funds reviewed before processing new warrants?	a. Yes b. No

Budget Transfers and Virements

Question	Response
What are the rules in place regarding budget transfers between economic categories, between organizational units etc. Which agencies have the authority to make these transfers.	
Who has final authority for changing a budget? What is the authority is exercised at the spending unit level, at the line ministry level and the MOF.	
From which department are the budget adjustments data received ?	
Are the budget adjustment procedures the same for capital and current budgets?	a. Yes b. No
If not, please describe each of the processes.	
How many budget adjustments were processed last year/ per month?	
Is the volume of budget adjustments evenly distributed throughout the budget year? If not, is there any specific time period when more adjustments are processed?	a. Yes b. No

Supplementary Budgets

Question	Response
Under what conditions are supplementary budgets processed?	
Who has final authority for supplementary budget authorizations?	
Are supplementary budget authorizations received as a new approved budget in its entirety or are only the changes received?	
Are the supplementary budget adjustment procedures the same for capital and current budgets?	a. Yes b. No
If not, please describe each process.	
How many supplementary budget authorizations were processed last year?	
What is the primary reason for processing supplementary budget authorizations?	a. Unforeseen events b. Lack of adequate planning data c. Other (please provide details)
Is the volume of supplementary budget authorizations evenly distributed throughout the budget year? If not, is there any specific time period when most authorizations are processed, e.g. mid year?	a. Yes b. No

Commitment of Funds

Procurement of Goods and Services

Question	Response
What are the thresholds and other criteria for approval of procurement requests for spending unit, ministry and at the MOF level. that would require your review and approval.	a. Yes b. No
Who is responsible for the review, validation and approval of the procurement request at each level?	
How are requests and approvals (to and from line ministry / spending agency) transmitted?	a. Electronically b. Manually by paper c. Both
How many procurement requests are generated during a year, per month.	
How many resulted in the issue of a purchase order/ contract signature?	
Is there a vendor database? How is stored and accessed?	
Is the budget and available funds up-to-date and readily available for viewing?	a. Yes b. No
Are existing commitments reviewed before approving new requests; and are those approvals based on the line ministry's / spending agency's expenditure plans?	
How are procurement requests tracked?	
What happens if estimated amounts transmitted by the line ministry / spending agency do not match with estimated amounts captured during the approval process?	
What types of adjustments, if any, can be made to the procurement request?	
What is the stage during the procurement that a commitment is recorded in the system. Is it at the stage of the procurement request or the actual placement of a PO.	
How often are updates to commitments performed? Is there a centralized accounting of commitments?	a. Daily batch b. Real-time c. Other
Are procurement guidelines up-to-date and readily available to all staff?	a. Yes b. No
Do the following databases exist – master contracts, existing and potential vendors? Are they integrated?	a. Yes b. No
Once the PO / contract is sent to the vendor, how is it tracked?	
Is the procurement system linked with the budget system? If yes, how do you ensure the integrity and completeness of the information transmitted between the two systems?	a. Yes b. No
Who ensures that the proper procurement methods are followed?	
What is average cycle time for a PO to be issued?	

How is PO performance recorded and tracked? How detailed is this information? Where is the data stored?	
Who is primarily responsible for the draft, approval and issuance of the PO?	
What types of contract management and corresponding financial management reports are generated? Who sees these reports and how is the information used?	
Please provide us with samples of pro forma POs (include pro forma).	
What would trigger a rejection of a PO?	
Who is primarily responsible for determining the validity of an amendment or cancellation of a PO / contract? For final approval of the change / cancellation?	
Is there an interface between the receiving system and procurement system? Is it able to flag discrepancies between existing procurement and actual receipts?	a. Yes b. No
How often are POs amended (increased or decreased) / cancelled? What types of POs experience the most change / cancellation? What are the most common reasons for these changes?	a. Rarely b. Sometimes c. Frequently
Are guidelines and procedures for amending and canceling a PO / contract readily available? Who ensures that the guidelines for amending or canceling a PO / contract are followed?	
How are requests for amendment and cancellation tracked? Classified?	
If it has been determined that central action is required to process an amendment or cancellation, how is request transmitted to the budget department?	
How are amendment and cancellation details recorded? Where is this information stored? Is it available for viewing and easy retrieval by staff?	a. Scanned b. Keyed in
Are amendment / cancellation details viewable electronically?	a. Yes b. No
What would cause the system to reject an amendment or cancellation?	
Once a PO / contract amendment / cancellation is processed, do commitments reflect the new amount? How soon does this happen?	a. Yes b. No
Please describe the receiving process.	
Does the receiving department have a copy of the PO for validation purposes? Is this available electronically – If so, does the receiving department have viewing access to the procurement system?	a. Yes b. No
If goods received require testing how is this process tracked?	
How is receipt information communicated with the contract management and accounting?	a. Electronically b. Manually by paper c. Both (if both, please categorize)
Where are supporting documents forwarded to? Stored?	

Creation of a New Staff Position and Recruitment to this Position

Question	Response
How are position requirements identified, classified and cataloged? Where is this data stored?	
How is HR cost data determined? Is this kept up-to-date?	
How are position requests and approvals received and tracked? Is there a central receiving area? How many position creation requests are generated per month/ per year?	a. Electronically (please state medium) b. Manually by paper c. Both
Are there checklists that facilitate processing? Is processing automated or handled manually – are those checklists online or on paper? If on paper, how are they filed?	
Is the human resources information system (HRIS) integrated with the financial management information system (FMIS)? If so, is the budget and available funds up-to-date and readily available for viewing?	a. Yes b. No
Who is responsible for the review, validation and approval of the position and separation requests?	
What is the horizon of HR expenditure plans prepared by line ministries / spending agencies? Is this information readily up-to-date and readily available during processing? Are existing commitments reviewed before approving new requests; and are those approvals based on the line ministry's / spending agency's HR expenditure plans?	
Are any new position requests approved without HR expenditure plans? What are the main reasons for these approvals and how often does this occur?	
What would cause the rejection of request, position approval / separation in the system?	
How many positions were filled last year? Separations?	
How often are updates to HR commitments performed? Is there a centralized accounting of HR commitments?	a. Daily batch b. Real-time c. Other

Changes to the Payroll and Benefits Structure

Question	Response
How are changes to pay and benefit structures transmitted to the budget department?	a. Electronically b. Manually by paper c. Both
How often were changes made to the payroll and benefit structures last year?	
How is the impact of these changes on the budget and commitments calculated? Who is primarily responsible for carrying out this process?	
What types of analytical tools are used to assess the impacts on the overall budget and existing commitments?	

Do the impacts of changes automatically trigger adjustments, supplementary authorizations, etc.	a. Yes b. No
What is done to ensure that the processed changes are reflected accurately in both the budget and existing allocations?	
What types of reports are generated (Please provide examples)? Who sees this information and how is it used?	
How is information on payroll or benefit structure changes sent to line ministries / spending agencies?	a. Electronically b. Manually by paper c. Both

Personnel and Grade Changes

Question	Response
How are changes to personnel and salary grades transmitted to HRIS?	a. Electronically b. Manually by paper c. Both
How is this information classified, organized? Where is it stored?	
How is the impact of these changes on salary commitments computed? Who is primarily responsible for carrying out this process?	
How many staff and staff levels are in the organization? Please categorize by level? What are the primary allowances and benefits for each level?	
How many staff promotions were processed last year?	
Please describe the salary grading system? How many salary levels / grades are there?	
What types of reports are generated (Please provide examples)? Who sees this information and how is it used?	
How is information on grade changes communicated to staff?	a. Electronically b. Manually by paper c. Both
Is there a central receiving area that consolidates new and additional salary burdens / reductions and calculates net amounts?	a. Yes b. No

Payments and Receipts Management

Verification of Payment Requests

Question	Response
How do you confirm the receipt of goods / rendering of service?	a. Manual check for receipt (inventory) b. Confirmation from receiving party c. System-generated report d. No confirmation e. Other

Is there a requirement for an existing PO, contract or authorization?	a. Yes b. No
If so, what?	a. PO b. Contract c. Other type of authorization
Are POs, contracts or authorizations available online? If not, please state medium.	a. Yes b. No
Is the receiving department able to confirm receipt – enter data – directly into the contract management system (against POs, contracts, authorization)?	a. Yes b. No
How are payment requests tracked?	a. Electronically b. Manually c. Both
If electronically, is there a common code on payment requests that would link it to the appropriate budget and accounting items?	a. Yes b. No
What percentage of (monthly / quarterly / annual) payment requests are above approval thresholds?	a. 0% to 15% b. 16% to 30% c. 31% to 45% d. 46% to 60% e. Above 60%
Of the (monthly / quarterly / annual) payment requests <u>above</u> approval thresholds, what percentage of them do <u>not</u> have firm commitment against the budget?	a. 0% to 15% b. 16% to 30% c. 31% to 45% d. Above 45%
Of the (monthly / quarterly / annual) payment requests <u>above</u> approval thresholds that do <u>not</u> have firm commitment against the budget, what percentage of them are approved?	a. 10% or below b. 11% to 25% c. 25% and above
How often are budgets exceeded?	a. Never b. Rarely c. Regularly d. Very often
What are the thresholds for goods? Civil works? Services?	(Please list below)
Are thresholds captured in the system?	
Is payment information accurately captured and available for viewing?	a. Yes b. No
Is there a vendor database?	a. Yes b. No
How often are payment exceptions made?	a. Never b. Rarely c. Periodically d. Often
How are exceptions recognized and handled? Please describe.	
Please provide us with samples of forms and reports under this function.	

Authorization of Payments

Question	Response
Are payment authorization guidelines and procedures up-to-date, well-documented and readily available?	a. Yes b. No
Do you have a written policy specifying who is authorized to sign fiscal documents?	a. Yes b. No
How is the list of individuals authorized to approve payments maintained?	
Are signature samples held in the legal department?	a. Yes b. No
Are payment authorization guidelines and procedures up-to-date, well-documented? How are they communicated to staff?	a. Yes b. No
How are payments authorized?	a. Signature b. Secure ID code (electronic) c. Both
What percentage of payment approvals are paper-based?	a. 15% or below b. 16% to 35% c. Above 35% d. All are paper-based
Is the system automatically able to check total funds available against the budget?	a. Yes b. No
How often are payments rejected due to insufficient funds?	a. Rarely b. Sometimes c. Regularly d. Often
How often are payment requests rejected due to incomplete payment information?	a. Rarely b. Sometimes c. Regularly d. Often
What mechanisms are in place to flag authorizations that overdraw the budget?	
How is funding level information communicated?	a. Electronically b. Printed report c. Both d. Not communicated
What is the average time to approve a payment?	a. One day or less b. 2 to 3 days c. More than 3 days
Where is payment criteria stored? Is it online?	
How are approvals tracked? Where is this information stored?	a. Electronically b. Paper checklist c. Other
Is payment information accurately captured and available for viewing by staff?	a. Yes b. No
How are exceptions recognized and handled?	

How often are payment exceptions made?	a. Never b. Rarely c. Periodically d. Often
How many payment authorizations are made per month?	a. Less than # b. (enter #): _____
What percentage of (monthly / quarterly / annual) payments are made electronically?	a. 75% and above b. 50% to 74% c. 25% to 49% d. Below 25%
What percentage of (monthly / quarterly / annual) payments are made by check?	a. 75% and above b. 50% to 74% c. 25% to 49% d. Below 25%
What percentage of (monthly / quarterly / annual) payments are paid in cash?	a. 25% and above b. Below 25%
Please provide us with samples of forms and reports under this function.	

Payments against Invoices

Question	Response
Who is responsible for making payments? If both, what are the payment thresholds for line ministries / spending units?	a. Treasury b. Line Ministries / Spending Units c. Both
Are thresholds stored in the system?	
Are payment processing guidelines and procedures up-to-date? Well-documented? Readily available?	a. Yes b. No
Are approved payments transmitted to a central receiving area? How?	a. Electronically b. Manually by paper c. Both d. Other
How many payments were made last year? Of those payments how many were below the threshold?	
How many people verify <u>one</u> payment?	
How many people are required to review, approve payment, authorize and sign off on <u>one</u> payment?	
How are requests for payment above threshold levels received by Treasury? How are payment requests above threshold levels prioritized?	a. Electronically b. Manually, by paper c. Other
Who is responsible for approving payment requests and tracking them at the line ministry / spending unit level? At the Treasury level?	
Is invoice detail captured on the payment?	a. Yes b. No
Is invoice detail captured when PO updates are made?	a. Yes b. No

Is payment confirmation information accurately captured and available for viewing by staff? How?	a. Electronically b. Report c. On request by line ministry / spending unit d. Other
Are periodic reviews of payment activity conducted? If yes, how often?	a. Yes b. No
How is payment progress tracked? What is the average payment pipeline (in days)?	a. Less than 3 days b. Between 3 and 5 days c. More than 5 days
Are payments in different currencies pooled in the payment schedule?	a. Yes b. No
How often are payment confirmations received?	a. Instantly b. Daily c. Every other day d. Other
Are updates to commitments, expenditure plans, POs automated or manual? Do commitment and expenditure updates occur simultaneously?	a. Automated b. Manual c. Both (please explain)
How often are payment exceptions made?	a. Never b. Rarely c. Periodically d. Often
How are exceptions recognized and handled?	
What happens when a payment request exceeds the contract balance?	
Is there a mechanism that flags potential duplicate payments? If yes, how?	a. Yes b. No
Please provide us with samples of forms and reports under this function.	

Payroll and Benefits Payments

Question	Response
Who is responsible for making payroll and benefits payments? Is the payroll calculated by the line ministries / spending units and a payment request forwarded to the Treasury, or is the payroll calculated by the Treasury itself, with individual personnel transactions being transmitted to the Treasury from the spending units.	a. Treasury b. Line Ministries / Spending Units c. Both Treasury and line ministries / spending units d. Out-sourced
Is the human resources information system (HRIS) linked to the financial management information system (FMIS)?	a. Yes b. No
How many employees are there in your organization?	a. Less than 100 b. Between 100 and 500 c. Between 501 and 1,000 d. More than 1,000

Does each employee have a unique identifier aside from name (e.g. social security #, staff #, etc.)? If so, please list types.	
What percentage of employees are salaried?	
How is time and attendance data captured?	a. Electronically (employees key time directly into system) b. Manually on paper c. Both d. Other
Are payroll costs and classifications captured in the system? If yes, where are they stored?	a. Yes b. No
How often are payroll payments made? Benefits payments?	a. Weekly b. Bi-weekly c. Monthly d. As required e. Other
How are payroll payments made? Benefits payments?	a. Electronic deposit b. Check c. Cash d. Combination (please indicate combination here: _____)
To the best of your knowledge, what percentage of payroll payments are paid by	a. Electronically (_____ %) b. Check (_____ %) c. Cash (_____ %)
To the best of your knowledge, what percentage of benefits payments are paid by	a. Electronically (_____ %) b. Check (_____ %) c. Cash (_____ %)
How is the computation of salary performed? Benefits payments?	a. Electronically b. Manually c. Both
Are all calculations captured and detailed on each payment?	a. Yes b. No
What is the average number of rejections generated per payment period? Are the sources (causes) of rejections captured?	
Of the rejections generated per period, which represents the highest occurrence? Please rank with #1 being the area in which the rejections occur most frequently.	_____ Time / Attendance system _____ Benefits system _____ Deductions _____ Tax (withholding, etc.) system _____ Reimbursements
What is the average number of days exceptions are kept in the pipeline?	a. Less than 3 days b. Between 3 and 5 days c. More than 5 days
Does the system notify the user of the agency's cash position prior to generating a payment request?	a. Yes b. No
How are payroll and benefit requests tracked? How is payment progress tracked?	a. Electronically b. Manually (paper checklist) c. Both

Is there a common code that links each payment to an appropriate departmental budget and accounting item?	a. Yes b. No
How is payment confirmation information transmitted by the payment processing agency? Are confirmations received on a timely basis?	a. Electronically b. Paper Report c. Other
Please provide us with samples of forms and reports under this function.	

Pension Payments

Question	Response
Are pension payments calculated and implemented centrally? If so by which agency?	
How many pensionable employees are there in your organization?	a. Less than 100 b. Between 100 and 500 c. Between 501 and 1,000 d. Over 1,000
Is there a central database which stores pension data? Where is this housed?	
Is the pension payment processing handled entirely within the agency or aspects of the process out-sourced?	
If so, which aspects of the process?	
How are benefits calculated? Are there special tools used to calculate the benefits, deductions and withholdings?	
Is the benefits calculator online?	a. Yes b. No
Are rules for protected benefits, early retirement and grandfathered plans updated? Are they readily available?	a. Yes b. No
How are pension payments made?	a. EFT b. Check c. Cash at the dept window
How often are pension payment made?	a. Weekly b. Bi-weekly c. Monthly d. Bi-monthly e. Other
What controls are imposed to ensure that budgeted pension allocations meet pension payment requests?	
Can pension plan participants readily access their account records?	a. Yes b. No
How do plan participants access their account records?	a. Online b. Period statements mailed out c. On request d. Circle a group → [online / statements]; [statements / requests]; [online / requests]

How many payment rejections are generated each month?	
Of the monthly rejections, how many are due to (please give number)	a. Incomplete participant information _____ b. System problems _____ c. Incorrect calculation _____ d. Human error _____ e. Unknown _____
Does the pension system interface with (circle one) →	a. HRIS (yes / no) b. Accounting (yes / no) c. Payroll (yes / no) d. Trust (yes / no)
What types of external systems does the pension system interface with?	
How are pension payment requests received by the budget execution department?	a. Electronically b. Paper c. Both
Are pension fund balances readily available?	a. Yes b. No
Are you able to forecast pension payments? If yes, how?	a. Yes b. No
How are exceptions recognized and handled? What is average number of days exceptions are kept in the pipeline?	a. Less than 3 days b. Between 3 and 5 days c. More than 5 days
At what point are payments ceased?	
How do you get information if a participant has passed away?	a. Informed by survivor b. Access and/or receive information from death registry or hospital c. Both d. Other
Please provide us with samples of forms and reports under this function.	

Other Payments

Question	Response	
What other kinds of payments do you make?	(Enter text here)	
What are the thresholds for these types of payments?	(Enter types here)	(Enter amounts here)
In what form are these payment requests received?	a. Electronically b. Manually by paper c. Both	
Of all monthly payments made, what percentage of them consist of these "other" payments?	a. Less than 5% b. Between 5 and 10% c. More than 10%	

How do you confirm the validity of the payment request?	a. Paper confirmation from receiving party with manager's signature b. Electronic confirmation c. Both
Is payment detail captured when commitment updates are made?	Yes No
Is supporting documentation attached or referenced?	a. Always b. Not always (depends on _____) c. Never
How are exceptions recognized?	
What is the average number of days exceptions are kept in the pipeline?	a. Less than 3 days b. Between 3 and 5 days c. More than 5 days
Are periodic reviews of this type of payment activity conducted?	a. Yes b. No
If yes, how often?	a. Weekly b. Monthly c. Quarterly d. Ad hoc e. Other _____
Please provide us with samples of forms and reports under this function.	

Scheduling Payments

Question	Response
How are payments prioritized (by size, by currency, recurring vs. one-time, vendor, etc.)? How are these priorities set?	
Where are payment priorities stored – are these readily available to staff?	
Is the payment pipeline available to the line ministry or spending agency for viewing?	a. Yes b. No
How is payment information received by the cash management department?	a. Electronically b. Paper
What criteria and related approvals are required to speed up payments?	

Payments Processing

Question	Response
What percentage of total payments are made by EFT? By check? In cash?	a. EFT _____ % b. Check _____ % c. Cash _____ %

How are payments monitored and tracked?	
Is the payment pipeline available to the line ministry or spending agency for viewing?	a. Yes b. No
Where is payment information stored?	
What is the average number of days to process a payment? To Clear a payment?	
How is payment completion transmitted to the line ministry or spending agency for reconciliation against the budget, PO, payment authorization?	a. Electronically b. Paper
Who holds primary responsibility for processing exceptions?	

Processing Transfers

Question	Response
How many transfers to agencies were made last year? What percentage of those transfers were supplementary transfers?	
Describe the process of identifying transfers to be processed.	
How are transfers prioritized?	a. By budget priorities b. By program priorities c. By currency and cash balance amount d. By receipt of authorization
Who has the final authority of approving initial and additional transfers? Are they matched against expenditure plans?	
Are there certain times – “seasons” – during the year when the number of transfers processed increase significantly? If so, when?	
Are transfers made without transfer authorizations? If so, how are these transfers determined?	

Receipts: Tax Revenues

Question	Response
What are the points of revenue collection? Please circle all that apply.	a. Central tax agency b. Regional / local tax centers c. Lock box d. Other (e.g. post office)
Is there a central data repository for tax revenue collected?	a. Yes b. No
How many types of taxes are collected?	
Is there an integrated tax system that administers and processes returns and payments for different tax types?	a. Yes b. No
If no, are returns and payments processed by the individual tax silos?	a. Yes b. No
Which unit within the tax department is responsible for the receipt and validation of returns?	

If a return cannot be validated, is there a unit responsible for exceptions processing?	a. Yes b. No
Does the department have a contract with one bank that processes all tax payments? If no, how many commercial banks process tax payments for the department?	a. Yes b. No
If a return or payment is delinquent is there a separate processing system that handles delinquency?	a. Yes b. No
What percentage of delinquent taxes sent to collection agencies are recovered?	a. 50% b. 25-50% c. less than 25%
Does the agency outsource the collection of delinquent taxes?	a. Yes b. No
When payments for penalties and interest are received, is there an allocation priority?	a. Yes b. No
How are revenue collections sorted (please circle all that apply)?	a. Revenue source b. Program c. Budget classification
Once revenue is sorted and accounted for is there a central accounting system where tax revenue is posted? If yes, is the system automated or manual?	a. Yes b. No
What is the frequency of the reconciliation between the deposits at the bank and returns/payments received at the tax administration department?	
What reports are generated by the tax administration? How frequently are they produced? Who receives them?	

Sharing Tax Revenues

Question	Response
Do you have written policies and procedures on revenue sharing?	a. Yes b. No
What is the basis of revenue sharing (please circle all that apply)?	a. Statute b. Budget c. Historical estimates
Who is authorized to submit revenue sharing requests?	
Describe the process of revenue sharing (e.g. computing, verifying request, process payment order)	
During the verification process does the system automatically to check revenue sharing requests against revenue rules?	a. Yes b. No
What is the cycle time to complete the revenue sharing process?	a. 2 to 3 days b. More than 3 days c. 5 days
How many revenue authorizations are made per month?	a. Less than # b. (enter #'s)

How does the department notify Treasury of a payment order?	a. Direct interface (electronic) b. Tape c. Report
How does Treasury transmit/transfer shared revenue?	a. Check b. EFT
How is revenue sharing information communicated?	a. Electronically b. Printed report c. Both d. Not communicated
Please provide us with samples of forms and reports under this function.	

Receipts: Non-Tax Revenues

Question	Response
Are individual revenue units responsible for collecting and processing their own duties and fees within their organization or is the process centralized?	Yes No
If the process is centralized which department is responsible for receipt, validation and documentation of these revenues?	
How are non- tax revenue collections segregated?	Circle all that apply a. By Programs b. Source of Revenue (fees, duties &, penalties) c. Agency
Is there a separate system for processing penalties and interest collections?	
Do you map revenue collection to budget classifications? Please describe.	a. Yes b. No
Are there defined revenue accounting rule sets that govern the posting of collections?	a. Yes b. No
Please describe the bank reconciliation process.	
Is the non-tax revenue collection sub-system compatible and consistent with agency financial management systems?	a. Yes b. No
Is the sub-system manual or automated?	a. Manual b. Automated
Is there a central data repository for non-tax revenues collected?	
Please provide us with samples of forms and reports under this function.	

Cash Management

Cash Flow Forecasts

Question	Response
Are cash flows regularly forecasted? How often?	a. Yes b. No How often: _____
Is inflow / outflow information sent to and collected in a central repository for comparison? Are there multiple platforms on which inflow / outflow information resides?	a. Yes b. No
How are inflow / outflow information received? Is this benchmarked – if so, against what?	a. Electronically b. Manually / Paper c. Combination of both
How far back is past data used to compare trends? How far out are cash flows forecast? Where is this data stored?	
Do you analyze historical clearing patterns to arrive at a base daily cash flow and determine funding positions? Is this compared to the budget?	
What kinds of tools are used to determine trends, compare data and arrive at forecasts?	
If surpluses or shortfalls have been determined, which area holds the primary responsibility for prioritizing, addressing and resolving these issues? How is this information communicated to agencies?	
What types of forecasts / related reports are generated and who are the primary recipients of these reports?	

Revenue Forecasts

Question	Response
Is there are central repository to collect data on all revenue and cash inflows?	a. Yes b. No
Who is responsible for ensuring the integrity of data collected?	
How are the data from multiple sources received? How often?	a. Electronic feeds b. Paper reports to data entry
Please describe the process and related analyses of preparing the revenue forecast. Who is responsible for preparing the revenue forecast? How long does this process take?	
How often are revenue forecasts revised?	

Expenditure Forecasts

Question	Response
Are all expenditure data collected in a central repository for validation and comparison? How?	a. Electronic b. Paper c. Both
Who is responsible for ensuring the integrity of data collected?	
How are these expenditures organized and categorized? How are you able to sort this data?	
Please describe the process and related analyses of preparing the cash requirements plan. Who is responsible for preparing the revenue plan? How long does this process take?	
What kinds of tools are used to determine trends, compare data and arrive at forecasts?	
How often are the cash requirements plans revised?	

Monitoring Cash Balances

Question	Response
Who is responsible for retail banking operations?	a. Central Bank b. Approved Commercial Bank
Do you receive TSA balance information sorted by currency? How is this information received?	a. Yes b. No
Is there a consolidation account in one location where notional pooling of balances occur?	a. Yes b. No
How are Treasury and Agency cash requirement plans received? Are plans in a standard format for both Treasury and agencies? How often are plans received, and are they up-to-date?	a. Electronically b. Manually on paper c. Both
What types of tools do you use to conduct the review against revenue and expenditure plans and identify shortfalls and surpluses?	
Where is foreign currency reserve requirements information stored? Does the system automatically flag when cash balance levels are approaching reserve requirements?	
How are cash balance reports transmitted to agencies? How often?	a. Electronically b. Manually by paper c. Both
What subsequent actions are taken when shortfalls and/or surpluses are determined? Does the system automatically trigger processes – i.e. issue securities/sell other currencies for shortfalls; invest surpluses – or automatically notify Treasury staff (If so, who)?	

Managing Cash Balances

Question	Response
Please provide examples of reports and its recipients.	
Are cash balances based on	a. Budget priorities b. Program or project priorities c. Liquidity targets
Do you have an integrated cash management system? Please describe your existing cash management system.	a. Yes b. No

Reconciling TSA (Treasury Single Account) and Sub-Account Balances

Question	Response
How <u>timely</u> is account balance information from line ministries / agencies received? Payment order information? Transfer authorization information? Collections by line ministries / agencies information?	
In what format are these groups of information received?	a. Electronically b. Manually by paper c. Both
Are line ministries / agencies required to submit account balances on pre-set dates?	a. Yes b. No
Do line ministries' / agencies' charts of accounts (COAs) map up to the Treasury COA?	a. Yes b. No
How frequently is transaction information from line ministry / agency GLs summed up to TGL control accounts? How is this activity performed ?	a. Automatic feed b. Paper report
How often is reconciliation between the TSA and sub-account balances performed? Is reconciliation carried out automatically?	
How long does the reconciliation process take?	
When out-of-balance conditions are detected, how are variances communicated to the areas responsible?	
What other reports are generated as a result of the reconciliation process? Who receives them?	
How often are audits of the TSA conducted? TGL? Line ministry / Agency GLs?	

Monitoring Payables

Question	Response
On average, what is the days outstanding for payables? Are they in line with performance targets?	
How are payables from agencies transmitted to cash management? Is transmission standardized across agencies?	a. Electronically b. Paper c. Both

How is payable data organized and stored? Where?	
How are payable performance targets determined?	
How are payables monitored and evaluated? Is this process automatic or manual?	
Are there any specialized tools to compare, evaluate / analyze trends, forecast and measure payable performance? Please describe.	
What kinds of performance reports are generated?	
Is payable information compared with receivables?	

Monitoring Receivables

Question	Response
On average, what is the days outstanding for receivables? Are they in line with performance targets?	
How are receivables from agencies transmitted to cash management? Is transmission standardized across agencies?	a. Electronically b. Manually c. Both
Please describe the receivables aging process.	
How is receivable data organized and stored? Where?	
How are receivable performance targets determined?	
Are there any specialized tools to compare, evaluate / analyze trends, determine shortfalls, measure and forecast receivable performance? Please describe.	
Is receivable information compared with payables?	a. Yes b. No

Investing Idle Cash

Question	Response
How often are idle/excess cash balances invested?	a. Daily b. Weekly c. Monthly
Who is responsible for investing idle/excess cash balances?	
Describe the process of determining investment guidelines.	
How are investment guidelines communicated to the unit responsible for investing?	a. Electronically b. Manually by paper form
What type of controls exist to ensure that liquidity requirements are met prior to investing cash balances?	
What corrective actions are taken when idle/excess balances exist on the one hand, and a shortfall in cash exists for a particular period?	
How are funds transferred to the Investment Agency?	
Please provide any reports generated by this function.	

Maintaining Portfolio Records

Question	Response
Is there an investment management operations unit?	
Who is responsible for validation and computation of investments?	
Is the process of maintaining portfolio records out-sourced to a third party vendor or performed internally?	
How frequently is portfolio data received from the Bank/Custodian?	a. Weekly b. monthly c. quarterly
Describe the process of data capture, storage and retrieval of portfolio records?	
Is there a centralized records repository where bank/custodian, counterpart/agent and other information is stored ?	
Is the process of maintaining portfolio records automated or manually?	a. Automated b. Manually
Please provide reports for this function.	

Debt and Aid Management

New Debt Agreements

Question	Response
Who is responsible for monitoring the maturity and interest schedule of the debt?	
What is the tracking mechanism for monitoring the maturity and interest of the debt?	
Does the system automatically notify the responsible parties of approaching maturity and payments due?	
Is an amortization schedule automatically produced? Where is this data stored?	
How often the system process the new debt agreements?	a. Automatically b. Daily c. Weekly
Does this function produce paper debt record? How is it filed?	

Foreign Aid and Grants Receipts

Question	Response
How are foreign aid/ grants terms and conditions tracked?	
What legal frameworks or legislation govern the processing of the agreements?	
How are aid/grants allocated to agencies? How are the funds	

prioritized?	
How are aid/grants received by the central bank?	
Is there a central data store that tracks the receipt of foreign aid and grants?	
Are there any reports produced by this function?	

New Debt Inflows

Question	Response
How do you track the life of the debt instrument?	
Which area is responsible for maintaining the debt portfolio?	
Describe the process of transmitting receipts information? Is it segregated into domestic and hard currency debt receipts?	
What is the process of monitoring receipts against contracted debt agreements?	
How are funds transmitted to the bank?	a. EFT b. Check c. Cash
Does this function produce reports?	

Debt Service Payments

Question	Response
Does the treasury system interface with (circle for each) →	a. Accounting (yes / no) b. Cash Management (yes / no)
Do you have the capability to forecast debt service payments?	Yes No
How do you receive bills from lenders?	a. Electronically (SWIFT, etc.) b. Paper (mail, fax, telex, etc.) c. Both
Please list the types of reports generated by the loan system – include report numbers.	
How is the payment prioritization strategy linked to bill receipt and processing?	a. Electronically b. Paper (reports, etc.)
Is the maturity schedule of instruments in the portfolio linked to bill receipt and processing?	a. Yes b. No
How often is consolidations of payments due conducted?	a. Instantly b. Daily c. Every other day d. Other
How often is debt revaluation conducted?	a. Instantly b. Once daily c. Twice daily d. Don't know
Are payment and maturity terms for each instrument readily available?	a. Yes b. No

How do you get information on interest rates, foreign exchange rates, etc.?	a. Interfaces with external systems b. Bank rates from specific banks c. Publications d. Combination (List _____) e. Other (_____)
Are you able to call up portfolio items by (please circle all that apply and list others below).	a. Currency b. Amount c. Maturity d. Lender e. Other (_____)
How are exceptions recognized?	
What is the average number of days exceptions are kept in the pipeline?	a. Less than 3 days b. Between 3 and 5 days c. More than 5 days
Is your hedging policy explicit and communicated to all Treasury staff?	a. Yes b. No
Please describe the average level of education for staff in this department. You may enter comments below:	a. High school or below b. Bachelors degree c. Masters d. Doctorate e. Other certification
Out of monthly payments due, what percentage of these are late?	a. Less than 5% b. Between 5 and 15% c. Between 16% and 25% d. More than 25%
What percentage of late payments is based on incomplete payment information or rejected payment by recipient bank?	a. Less than 5% b. Between 5% and 10% c. More than 10%
What percentage of late payments is based on insufficient cash/currency?	a. Less than 5% b. Between 5% and 10% c. More than 10%
Do you feel that the system assists in enhancing your analytical ability to make management decisions on borrowings policies and strategies?	a. Yes b. No
Who makes the decision to accelerate payments, unwind positions, etc.?	
Please provide us with samples of forms and reports under this function.	

Issuance of Securities

Question	Response
Please describe the guidelines (including risk profiles, hedging) and procedures for issuing securities. Are these readily available?	
Where are security details stored? How are they classified?	
How often are securities issued? Where do you issue securities?	
Please indicate the number of banks and bank accounts that	

you maintain in each country.	
How is information transmitted / received to / from banks? Where is this data stored?	
Who holds primary responsibility for approving and issuing securities?	
Are your treasury, cash management and accounting systems linked? Are these systems on different platforms? If so, how do you ensure the integrity of data transmitted between systems?	
How do you match bookings between Treasury, Cash Management and Accounting? How is information exchanged between treasury, cash management and accounting systems (daily batch, real time, other)? What is the base currency that you account in?	
How is the issuance of securities tracked? Who is primarily responsible?	
What types of analytical tools do you use to perform liquidity and risk analysis, simulation, planning and optimization?	
Are transactions reported on both a gross and net basis?	a. Yes b. No

Redemption of Securities

Question	Response
Please describe the guidelines and procedures for redeeming securities. Are these readily available?	
How do you repatriate your money for securities issued in other countries? Do you have bank accounts in those countries?	
Please indicate the number of banks and bank accounts that you maintain in each country.	
How is information transmitted / received to / from banks? Where is this data stored?	
How is the information on the redemption of securities fed into the pooling or netting system?	a. Electronically b. Manually c. Both
How do you repatriate your money for those securities issued in other countries?	
How is the redemption of securities tracked? Who is primarily responsible?	
Who approves the redemption of securities before maturity?	
What types of analytical tools do you use to perform liquidity and risk analysis, simulation, planning and optimization?	
Are transactions reported on both a gross and net basis?	a. Yes b. No.

Budget Review and Fiscal Reporting

Question	Response
How frequently are fiscal report prepared?	
These reports are based on data received from which agencies?	

Revenue Monitoring

Question	Response
How frequently are data received from tax administration agencies?	
How frequently are data received from customs administration agencies?	
What other agencies send collection data?	
How is collection data received?	a. Electronically (please explain) b. Manually (reports)
How frequently are revenue collections formally reviewed?	a. Daily b. Weekly c. Monthly d. Quarterly e. Other
Is past collection data used in reviewing current year collections?	a. Yes b. No
If so, how many years of past data is used in comparing trends?	
How many years of past data are stored in the system?	
Are there any specialized tools used in comparing current collections against expected collections? If so, please provide details.	
Where does the primary responsibility reside for preparing corrective plans in case of revenue collection shortfalls?	
How are these corrective or surplus management plans communicated to the agencies?	

Expenditure Monitoring

Question	Response
How frequently are expenditure plans received from line ministries / spending units?	
How frequently are actual expenditure data available from the line ministries / spending units?	
Are program progress / status reports used in monitoring expenditures? If so, are there well-defined program progress measurement criteria?	a. Yes b. No

How is expenditure, program progress data received?	a. Electronically (please explain) b. Manually (reports)
How frequently are expenditures formally reviewed?	a. Daily b. Weekly c. Monthly d. Quarterly e. Other
Is past expenditure data used in reviewing current year expenditures?	a. Yes b. No
If so, how many years of past data used in comparing trends?	
How many years of past data is stored in the system?	
Are there any specialized tools used in comparing current expenditures against expected expenditures? If so, please provide details.	
Where does the primary responsibility reside for preparing corrective plans in case of deviations in actual expenditures from plan?	
How are these corrective plans communicated to the agencies?	

Work Program Monitoring

Question	Response
Are work program progress / status reports used in monitoring program status? If so, are there well-defined program progress measurement criteria?	a. Yes b. No
How frequently are work program status reports received from line ministries / spending units?	
How is work program progress data received?	a. Electronically (please explain) b. Manually (reports)
How frequently are work programs formally reviewed?	a. Weekly b. Monthly c. Quarterly d. Other
Is past work program data used in reviewing current year programs?	a. Yes b. No
If so, how many years of past data is used in comparing trends?	
How many years of past data is stored in the system?	
What basis is used in creating groups of similar projects for purposes of comparison?	
Are there any specialized tools used in comparing current work program data against expected work program progress? If so, please provide details.	
Where does the primary responsibility reside for preparing corrective plans in case of deviations in actual work program progress from plan?	
How are these corrective plans communicated to the agencies?	

TREASURY SYSTEM – OVERALL FUNCTIONAL REQUIREMENTS

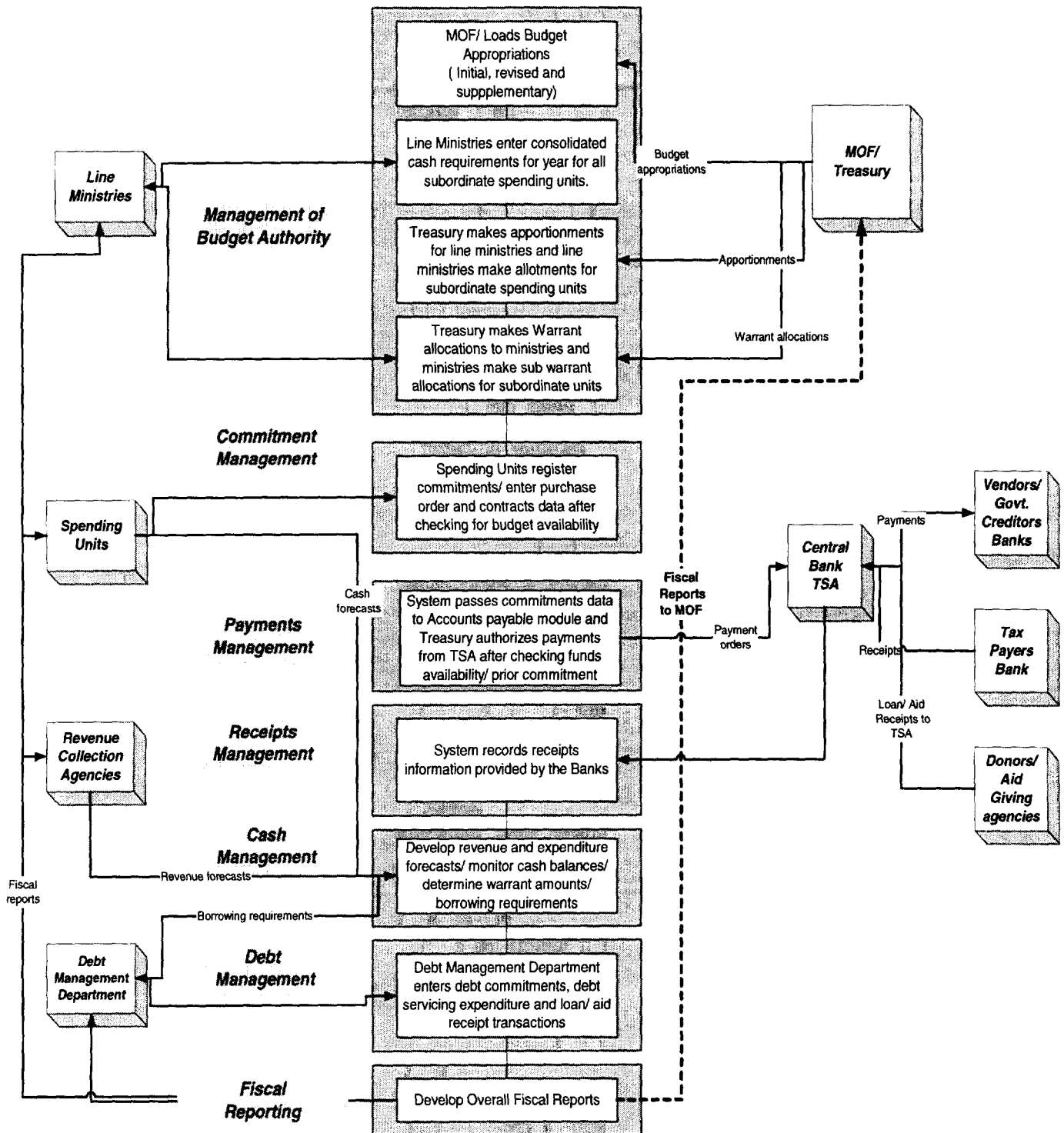
This section gives description of the overall functional requirements for a Treasury system. These requirements have been compiled on the basis of requirements for similar systems in several similar Bank financed projects in Kazakhstan, Pakistan, Ukraine, and Mongolia. These requirements will need to be customized for a specific country to take into account country specific requirements. In particular, the input and output formats of the various transaction documents, reports and the specific data format of the various entities used by the system would need to be specified. However, these requirements do give a sense of the overall functional requirements for a Treasury system and could form the starting point for development of a more country specific version that could be used for the acquisition of application software for the systems.

A typical organization structure of the Treasury consists of a Main office at the Center, second tier branch offices at provincial / regional headquarters and third tier offices at the district level. In some cases this structure is compressed to only two tiers one at the center and the second tier at provincial/ regional level. References to the regional and district offices of the Treasury in these specifications relate to these sub offices.

As mentioned earlier in this document this is one of several organizational arrangements used for setting up a Treasury. However, the functional processes associated with budget execution and therefore the functional requirements for the system stay the same irrespective of these arrangements. However, the location of the responsibility for expenditure control and for maintaining the organizational and Government accounts do vary with different organizational arrangements. This would effect the location and placement of specific modules of the system and their inter-linkages with the Banking system but not the functionality of the modules themselves.

To put the functional requirements in context, the diagram on the next page shows the main modules of the Treasury System and the information flows from and to the various agencies such as the MOF, Treasury, Spending Units, the Central Bank etc. who use the Treasury system during the budget execution process. This section first lists the functional processes associated with Government Fiscal Management and then goes on to detail the functional requirements for each process.

Figure 14. Treasury System Models



Functional Process - 1. Management of Budget Authority

1. Apportionment and allotment: After approval of the annual budget by Parliament it is loaded into the system by the Budget Department of the MOF. The approved budget for spending ministries is then broken down to the detailed level of economic classifications and is apportioned over time (quarters and months) and is registered in the system by the MOF and communicated to the spending ministries. The spending ministries, in turn, register the detailed budget for their subordinate spending units and communicate the allotments to the spending units. These are the spending limits for the spending ministries and spending units by quarter/ month for the fiscal year. Spending limits may be varied during the course of the year in accordance with the results of monthly or quarterly reviews of budget performance. For example changes may be caused by variations in the revenue forecasts, commitment and expenditure patterns, etc.

2. Warrant allocation: Each year, financial plans detailing projected outlays and receipts are developed by spending units and ministries. As the year progresses, sector agencies prepare periodic requests for funds by economic category, which are also captured. The MOF then issues warrants to ministries for each category of spending. From these amounts the ministries issue sub- warrants for their spending units and advise the appropriate spending units. These processes take place periodically through out the year. The warrant and sub warrant amounts need to be within the amounts specified in the spending limits for these organizational units. Warrant amounts are determined in the light of the results of periodic budget reviews, revised revenue forecasts and cash balances.

3. Budget transfers / virements: Normally the Budget Law permits the MOF, the spending ministries and the spending units to shift the approved budget between organizational and object classifications within restrictions set by the relevant laws. Shortfalls identified by spending units in one or more economic categories may be met from excesses in other economic categories in their budget. For this, a budget transfer request needs to be processed. For some items and within certain thresholds, spending units may have the financial powers to make the transfer themselves. For these cases, they will update the budget data base in the system. For cases which are beyond their financial powers, they will request the parent ministry or MOF to process the transfer, depending on the type of transfer. If approved, the Ministry / MOF will process the transfer and update the data base. The spending unit will be informed of the decision on the request.

4. Supplementary budgets: During the course of the year revisions to the approved budget may be carried out by the Parliament. These revisions are carried out in accordance with the procedures for finalizing the original budgets. The process of preparing supplementary budgets covers the preparation, routing and approvals of requests for a supplementary budget. Supplementary budgets are normally presented to the Parliament for approval at mid year.

Functional Requirements

Start of the Year Processes

At the start of the fiscal year, there is a need to set up the Budget classification structures and Chart of Accounts for recording commitments, expenditures and receipts. The system should have facilities to accommodate a variety of budget classification structures, since these can vary from country to country. An example of budget classification structure is given in Part I. This structure specifies that the budget classification structure could have segments that specify Source of Funds, Organization, Economic, Functional, Program and Project classifications. Thus the system would need to be able to accommodate these segments and will need to have the capacity to accommodate a sufficient number of digits in each segment.

For example, the system must be able to handle a government-wide chart of accounts with the following dimensions:¹⁰

- Fund code with one level of classification
- Organization code with three levels of classification
- Economic category with four levels of classification
- Functional code with four levels of classification (class, sector, sub-sector, chapter)
- Program code with two levels of classification
- Project and cost code with two levels of classification each

The system must be flexible enough to permit an increase in the number of dimensions and the levels of classification of any of these codes. The system should also permit user-specified number of digits/ characters at each level. The coding pattern at each level could be either serial or hierarchical. Given a specific relationship between any of the 5 types of codes, the system must be able to map and generate the related classification. All the code elements must be alphanumeric.

It must be possible to hold a description field against each code (or element) in the chart of accounts. It must be possible to revise code definitions and descriptions. The system must allow the user to manually enter the data of revenue and expenditure budget classification codes. In particular, the system should allow the user to enter, the following:

- Revenue classification code and the description of each segment of the code
- Expenditure classification code and description of each segment of the code
- Additional explanatory information for each budget classification code (if applicable)

¹⁰ The fund classification code will be used for tracking permitted extra-budgetary funds; the program code will be used for tracking programs when the MOF moves toward a Medium Term Budget Framework; the project code is used to track expenditures pertaining to capital and investment expenditures; the cost code will be used in the future to track expenditures at the level of cost centers within the budgetary units

The system should ensure that each revenue and expenditure budget classification code is unique and the size of each code segment description are in accordance with the requirements.

The system should allow the grouping of budget classification codes by functional, institutional, economic classification.

Establish chart of accounts

The system should allow the user to manually enter the Chart of Accounts data. In particular, the system should allow the user to enter the following:

Revenue accounts

- Revenue Account Number and Description.
- The system should ensure that each revenue account number is unique.

Expenditure accounts

- Expenditure Account Number and description.
- The system should ensure that each expenditure classification code is unique

Procedural Accounts

- Account Head and Sub-Head for each procedural account and description for each segment of the code.
- The system should ensure that each procedural account is unique.

Accounts for funds from chargeable services

- The system should ensure that each account number is unique

Distribute and import budget classification structure data

At the beginning of each fiscal year, the Central Treasury shall distribute to all spending units and subordinate treasury offices valid budget classification codes organized on magnetic medium (diskette or tape) or by transmission over a network. The system should have facilities to disseminate the data of active budget classification codes (taking into account all current changes and additions) to spending units and Regional treasuries.

During the course of the fiscal year the Treasury may distribute newly established and/or revised budget classification codes to spending units and subordinate treasury offices. The system should have facilities to collect and import the budget classification data distributed by the central Treasury. The system should have facilities to roll over the budget classification structures and Chart of accounts etc. to the succeeding year, if the same account numbers and classifications are desired.

Enter budget classification structure data manually

The system should have facilities to allow the user to enter budget classification data manually. This should include facilities to enter budget classification codes (Fund, Organization, Program, Sub-program, projects and Economic classification) and an appropriate description for each code segment. These facilities would normally be used for creation of new budget classification codes during the course of the fiscal year as a result from changes in the budget law or introduction of new expenditure programs or to load the entire Budget classification structure tables into the system.

Maintain budget classification codes

The system should have facilities to allow the user to modify the description of each existing expenditure budget classification code and delete a budget classification code where necessary. However, modification and deletion of budget classification codes should be performed under the control of built-in data validation check routines. For example, the system should not allow the deletion of a budget classification code if there is a warrant or sub-warrant or sub-sub-warrant already recorded against it.

Maintain register of spending units

The system should have facilities to maintain a register of spending units containing the organization code, the name and other details about the spending unit. It should have facilities to accommodate a sufficient number of digits/ characters for the code/ name , descriptions etc., for the spending unit.

The system should allow the user to import the spending unit data transmitted from external systems or distributed on magnetic medium. The system should also allow the Central Treasury to add, modify or delete the records of spending units if necessary. However deletion of a spending unit record should not be allowed if there is a warrant or sub-warrant or sub-sub-warrant already recorded against it.

Maintain Budget Data**Enter budget data**

The system should allow the user to enter the approved budget and revised budget for the year for each expenditure budget classification code. The system should by default equally apportion the approved budget for the year for 12 months, but allow the user to override the monthly apportionment figure supplied by the system. The system should check the validity of data to ensure that the expenditure budget classification code exists in the established chart of accounts.

The budget management system module should have the facilities for entering the following data for each budget classification code:

- (a) The total amount of approved budget for the year approved by the Ministry of Finance for the parent spending unit and its monthly apportionment over the year;
- (b) The total amount of the approved budget for the year by each subordinate spending unit and its monthly allotment (spending limits) over the year.

The system should ensure that the spending units code entered for entering the budget data are valid according to the Register of spending units and the totals in b) agree with the corresponding figures entered in a).

This module should be accessible from the Central Treasury the subordinate (second tier) Treasury offices and the Ministry Head Offices.

Revision of apportionments and allotments

The system should allow the user to revise the current apportionments and allotments for each budget classification code for each spending unit. The system should ensure that for each budget classification code the sum of the revised figures for the spending units, agrees with the total for the expenditure budget classification code.

The system should ensure that the amount of money withdrawn from a particular budget classification code does not exceed the total amount of free balance of the plan available for issue of warrants and unspent warrants.

These facilities will also be used to enter supplementary budget data and data relating to budget transfers.

Warrants**Funds allocation documents**

The Treasury allocates funds to Line Ministries by the issue of Treasury Warrants. Line Ministries allocate funds to spending units by the issue of Sub-warrants. Spending units may further allocate funds to subordinate agencies by the issue of Sub-sub-warrants.

The Budget management system running at the Treasury Central Office should have facilities to issue Treasury Warrants within the limit of the Budget appropriations for the budget classification.

The Budget management system running at Line ministries head office should have facilities to record Treasury Warrants received from the Treasury and issue Sub-warrants to subordinate institutions within the limit of Treasury Warrants.

The Budget Management system running at subordinate (second tier) treasury offices should have facilities to record sub-warrants received from the parent institutions, and issue sub-sub-warrants against a sub-warrant where necessary.

Normally the warrants and sub warrants will be communicated to the Line ministries, spending units and subordinate treasury offices electronically over the network.

Funds control register

Commitment is made on the basis of a combination of expenditure budget classification code and sub-warrant or sub-sub-warrant number. Funds availability is determined by the difference between the accumulation of funds allocated by sub-warrant(s) or sub-sub-warrant(s) and the progressive total of commitments under each expenditure budget classification code.

In order to ensure that:

- The Warrants issued by Central Treasury are recorded accurately and completely,
- The issue of sub-warrants is within the limits of available warrants for each budget classification code,

The issue of sub-sub-warrants is within the limits of available sub-warrants for each budget classification code, and

The commitments against each budget classification code are within the limits of available sub-warrant or sub-sub-warrant;

The system should maintain a funds allocation control register to record the details of funds authorization, commitments and payments for each budget classification code analyzed by warrant, sub-warrant and sub-sub-warrant.

Import treasury warrants

The Budget management system running at spending unit head offices and Regional treasury offices should have facilities to import the warrants data transmitted by the central Treasury and update the relevant budget data for control of warrants. The system should update the relevant budget tables in the data base by the warrant data and incorporate appropriate validity checks to ensure data integrity.

Enter treasury warrants

The system should allow the user to enter details of Treasury Warrants individually for updating relevant budget data in the database.

Withdraw treasury warrants

The system should allow the user to withdraw full or, part of the warrant, limited by the amount of unspent warrant under each budget classification code. The withdrawal of a warrant will be based on the warrant issued by the Treasury on which the withdrawal amount for each budget classification code will be denoted by a minus sign.

The system should ensure that the withdrawal amount does not exceed the amount of unspent warrant under each expenditure budget classification code.

Issue sub-warrants

The Budget Management system running at line ministries should have facilities to prepare and print sub-warrants collectively or selectively.

The system should determine for each spending unit the amount of funds required under each expenditure budget classification code for the month specified by the user. The funds requirements is derived from the expenditure forecasts prepared by spending agencies. The process of entering expenditure forecasts is described in the Cash Management section.

The system should then determine the total amount of funds required under each expenditure budget classification code and check that the amount is within the limit of available funds under the Treasury Warrant as recorded in the Warrants Register.

The system should print one sub-warrant for each spending unit that should include all expenditure budget classification codes for the spending unit, in the order of expenditure program, sub-program and economic classification codes.

The system should allow the user to adjust the “Funds requirement” under each expenditure budget classification code and each spending unit if necessary. The system should have facilities to keep track of the adjustments made during the current session and to reverse the selected adjustments where necessary. The system should allow the user to adjust the “Funds requirement” by percentage or by specific amount for each specific expenditure budget classification code or budget classification codes selected by:

Expenditure program; or
Expenditure sub-program; or
Economic specific codes; or
a combination of any of the selection criteria.

Examples:

Reduce the “Funds requirement” for the month for all “Administrative Expenditure” programs by 5%.

Reduce the “Funds requirement” for the month for economic classifications 135, 136 and 137 by 5%.

Withdraw Sub-warrants

The system should allow the user to withdraw full or, part of the sub-warrant limited by the amount of unspent sub-warrant under each budget classification code.

Disseminate sub-warrants data

The Budget Management system running at line ministries head office must have features to disseminate sub-warrants data to designated Regional treasuries. For that purpose, the system should have facilities to organize the sub-warrants data for each spending unit in a file and transmit the file to the relevant Regional Treasury.

The Budget Management system running at the Central Treasury must have facilities to distribute the sub-warrants data received from line ministries. This office will consolidate the data by Regional Treasury and transmit the consolidated sub-warrants data to relevant Regional treasury offices.

In case of network breakdown or communications failure the system should have facilities to load the data on diskettes or magnetic tapes for delivery to the systems of relevant Regional treasuries.

Import sub-warrants

The Budget Management system running at Regional treasury offices should have facilities to import sub-warrants data electronically transmitted or distributed on magnetic medium by the central Treasury.

The system should update the relevant data on sub-warrants, register of spending units and funds control register.

Enter sub-warrants manually

The system should have facilities to manually enter sub-warrants. The system should have control and checking features to ensure that the data elements contained in the sub-warrant are entered correctly according to the contents of the sub-warrant.

Functional Process - 2. Commitment of Funds

1. Procurement of goods and services. (Case 1: Spending units process transactions directly through regional treasury offices.) As the year progresses, spending units process requests for goods and services. After verifying the appropriateness of the expenditure and availability of budget and spending limit, the spending unit will process the procurement request according to prescribed procedures and place a purchase order on a vendor for the procurement of goods and services. The vendor should be registered in the database of vendors. The spending unit will then register a commitment in the system and block the corresponding amount from the available budget and spending limit. The commitment transaction is forwarded to the parent ministry and the MOF-Treasury regional office that will process the payment against this commitment.

2. Creation of a new staff position and recruitment to this position. The Spending agency prepares the position description and requests the Line ministry for approval. The Line ministry reviews from a requirements stand point and forwards the request to the MOF. The MOF approves after reviewing against budget availability. After the position has been created, the spending unit may carry out recruitment to this position in consultation with the parent ministry. After recruitment, the personnel data base and the commitment amount relating to monthly salary and benefits for the spending unit need to be updated.

3. Payroll commitments: The spending unit calculates the payroll commitments on the basis of staff on board and the authorized pay and allowances for staff. These are checked against budget availability and then advised to the Spending agency and the MOF. Salary commitments may be advised only once a year on an estimated basis and adjusted as necessary during the year. Changes would be necessary if the pay and allowance structures change, staff on board are promoted, new staff are added or staff reductions occur.

Functional Requirements

Commitment Entry

Requisitions

Goods and services requisitions are a medium for entering commitments into the system. A Purchase requisition is used for committing funds for the issue of a purchase order. A Travel requisition is used for committing funds for payments of travel expenses and a General expense requisition is used for making commitments for current expenses such as payroll expenses.

The system should have features to allow a user to commit funds using the data provided on approved requisitions. The system should control the committed amount to be within the funds availability under relevant expenditure budget classification code and sub-warrant or sub-sub-warrant.

If the commitment amount for a sub-warrant/sub-sub-warrant, within the expenditure budget classification code, exceeds the funds availability, appropriate message should be displayed on the screen and the commitment transaction should be rejected by the system.

In the case of committing a General Expense requisition, if sufficient funds are not available, the system should allow the user to record the requisition data in the database with the status "**Commitment Entered and Awaiting Funds**" for commitment at a later stage when funds are available.

Upon satisfactory checking of the parameters and availability of funds the system should record the commitments and ensure that:

the available funds under relevant sub-warrant/sub-sub-warrant and expenditure budget classification code are reduced by the commitment amount, and

a unique commitment number is generated in ascending order.

In the case of committing a Purchase Requisition, the system should provide facilities to generate unique purchase order numbers and print purchase orders, on a user-specified printer. The vendor database should be updated according to the purchase order data.

The system should be capable for recording multiple payments against a purchase order. In the case of a vendor requiring advance payment for a purchase order, the system should generate payment data for transfer to the relevant Accounts Payable system.

Committing requisitions that are awaiting funds

The system should have facilities to commit the requisitions that exist in the system with the status "**Commitment Entered and Awaiting Funds**" when funds become available under relevant budget classification code and sub-warrant. Upon confirmation by the user, and if funds are adequate the system should update the status of the requisition to "**Funds Committed**" and reduce the available funds under the relevant budget classification code and sub-warrant by the committed amount.

Deleting requisitions that are awaiting funds

The system should allow the user to delete requisition that exists in the system with the status "Commitment Entered and Awaiting Funds".

Commitment deletion

The system should allow an authorized user to delete a commitment previously entered. Before a commitment is deleted, the system should ensure that the referred commitment is marked with the status '**Funds Committed**' and display the detailed commitment data and ask the user to confirm the intended deletion. If the user attempts to delete a commitment that does not exist or whose status is "Claim registered" or a subsequent stage such as "Claim authorized for payment", an appropriate error message should be displayed and the request should be rejected by the system.

Upon confirmation by the user, the system shall mark the commitment record in the database as '**Commitment Deleted**' and adjust the funds availability under the effected sub-warrant/sub-sub-warrant within the budget classification by the commitment amount. The system should not remove the deleted commitment record from the database and should retain the record for audit trail purpose.

Commitment enquiry

The system should allow a user to produce screen-displayed enquiry or hard copy reports of commitment information for: (a) each individual commitment or, (b) a group of commitments selected by user-defined criteria.

Examples of user-defined criteria are:

- Selection of commitments grouped by vendor;
- Selection of commitments grouped by status;
- Selection of commitments grouped by sub-warrant/sub-sub-warrant;
- Selection of commitments grouped by expenditure budget classification code;
- Selection of commitments grouped by spending unit etc.

Allow/disallow commitment

For management reasons, there may be a need to freeze commitments against a particular sub-warrant/sub-sub-warrant within a budget classification code. The system should provide features to freeze commitments against the user-specified sub-warrant/sub-sub-warrant and expenditure budget classification code.

Functional Process - 3. Payments and Receipts Management, (a) Payments Management

1. Verifications of goods and services receipt and payments: Case 1: Spending units route their transactions through the relevant Treasury office which, after examination, sends a payment order to the bank where the TSA is held. The process starts with the receipt of goods and services. These need to be validated against the purchase order and a verification of receipts report is generated and entered into the system. On receipt, the invoice from the vendor is checked against the receipts report, the purchase order and the payment approval process commences. The requests for payment are examined with reference to the available budget (spending limits, warrants) and the existence of a prior commitment. After approval, the request is sent to the cash management section and scheduled for payment. The list of completed payments received from the TSA Bank (normally the Central Bank) is used for reconciliation of records at the Treasury and the Spending Unit.

2. Payroll payments: The Spending Unit computes the salary of the employees on its rolls. This involves, updating the data base for three types of change: (a) Changes to the employee's data that would impact the salary. This includes changes such as promotions, addition of new allowances etc.; (b) Changes to the employees general data such as transfers, change of address, account number etc.; and, (c) Changes that would impact the employee salary only in the current month. After these updates, the spending unit computes the payroll. This is validated against the authorized position list for the spending unit. The request for payment is then forwarded to the Treasury for approval and payment. The Treasury approves this request after checking the available budget (spending limits, warrants) and the authorized position list. The request is then sent to the cash management section and a payment order is sent to the TSA Bank to deposit the appropriate amount in the employee's Bank account. In case employees do not have bank accounts, the TSA bank may make the cash available to the spending unit for the payment of salaries.

Functional Requirements

Invoice Entry

Registration of claims

The system should provide facilities to register the claims lodged by vendors and authorize payments for registered claims.

The system should have facilities to allow the user to enter vendor invoices. The system should allow the user to enter invoice details such as invoice number, due date for payment, payment method etc. and record the invoice data with the status "**Invoice registered**".

During the entry of each invoice the user shall enter the Purchase order number or General expense requisition number for which the invoice is entered. The system should

ensure that the details of invoice being entered match the details of relevant Purchase order or General expense requisition recorded in the Commitment Accounting system. In the case of increasing the commitment amount on the original purchase order as a result from the difference in the quantity or price of goods or services ordered, the system before updating the commitment amount, should check the funds availability under relevant sub-warrant/sub-sub-warrant and budget classification and ensure that the increased amount is within the limit of available funds.

The system should allow the user to enter invoice details such as invoice number, due date for payment, payment method etc. and update the commitment status to '**Claim Registered**' and record the registration date. The system should also allow the user to change the vendor code if necessary.

The system should allow registering multiple invoices for a single commitment, such as in the case of a purchase order partly delivered and invoiced.

The system should be capable of tracking an advance payment made for a purchase order for offsetting against the total amount due for the supplied goods or services.

Claim registration reversal

The system should allow the user to reverse the registration of a claim

Claim authorization

The system should allow the user to authorize a registered claim for payment.

The system should display the detail information of the commitment and allow changing the commitment amount within the limits of funds availability under relevant sub-warrant/sub-sub-warrant within the budget classification.

The system should be capable of tracking the advance payment and subsequent payments made for a purchase order for adjusting the total amount due for the supplied goods and services. The system should allow authorizing payments of multiple invoices for a purchase order.

After authorization the system should update the status of relevant commitment record in the database to '**Claim Authorized for Payment**' and record the date of Authorization.

Upon completion of the payment authorization process, the system should update the status of the relevant commitment to '**Payment data transferred to Accounts Payable System**'.

Claim authorization reversal

The system should allow the user to reverse the authorization of a claim before its payment data is transferred to Accounts Payable System.

The system should not allow changing the status of the claim after it has been transferred to Accounts Payable System.

Transfer payment data to accounts payable system

The system should, daily, or at a frequency determined by the Treasury, transfer the authorized payment data from Commitment Accounting System to Accounts Payable System.

Update payment details

After payment, the system should have facilities to transfer payment data from the accounts payable system to the commitment system to update commitment records with payment details such as Payment Order No., Date, Payment amount etc., supplied by the Accounts Payable System.

Upon completion of the process, the system should update the status of the relevant commitment record to '**Payment order Executed**'.

Accounting journal entries

In case of a payment charged to inappropriate budget classification code and/or sub-warrant/sub-sub-warrant, identified after the payment has been made, the system should have a Journal facility to correct the accounting entry. The system should allow the user to post a journal entry to transfer the expenditure from incorrect account to the correct account without changing the payment amount.

Contract Administration

The system should have facilities to administer the contracts concluded from the government budget, to process payment of expenses resulting from the execution of the registered contracts and produce related reports. The Commitment Accounting and Accounts Payable modules shall share the data of registered contracts. In particular the facilities described below are required as a minimum.

Establish vendor database

The system should have facilities to maintain a vendor database that records the details of vendors and business data. The data available in the vendor database should be accessible by the associated Commitment Accounting system.

Vendor permanent data

The system should maintain permanent data for each vendor. The system should provide facilities to add or delete a vendor and modify the permanent data of an existing vendor. The execution of add, delete and modify processes should be restricted to a systems administrator, controlled by a password and fully audit-trailed. The system should not allow the deletion of a vendor code, if transactions against the vendor exist in either the Commitment Accounting or Accounts Payable System.

The system should be capable of automatically generating new vendor codes as new vendor records are entered into the system while ensuring that the vendor codes are unique and that no duplicate vendor codes are created.

Vendor code maintenance

In order to ensure the consistency of vendor codes it is desirable that:

- (a) at Regional Treasury sites where Commitment Accounting system shares the same hardware with Accounts Payable system, a common vendor table is shared by the two systems; and
- (b) at spending units where Accounts Payable system does not operate, a sub-set of the vendor table should be constructed using the vendor data from the Regional Treasury Accounts Payable system. In order to ensure data consistency, necessary changes in the vendor table should be initiated by the Regional Treasury Accounts Payable System.

Vendor transaction data

The vendor database should maintain transaction data relating to invoices received from and payments made to the vendors.

Vendor enquiry

The system should provide Query facilities by:

- vendor name,
- vendor short name,
- vendor address,
- vendor invoice number,
- purchase order number,
- payment order number,
- transaction date,
- transaction value,
- invoice status,
- wild card searches etc.

Classification of contracts

The system must be able to classify the contracts in the contract register as described below:

- (a) "Current" type contract for which funding is provided from the currently available sub-warrant,
- (b) "Yearly" type contract for which funding is provided from the free balance of the planned allocation for the year, and
- (c) "Long term" type contract which is valid over more than one fiscal year and is funded from the budgets of multiple years.

Register a contract

The system should have an efficient search facility to assist the user to select the relevant and valid vendor code from the vendor database by using the contractor's name provided on the application. The user will use the vendor code to access the vendor record and for recording the data for a new contract. On accessing the record the user will enter the details of the contract such as description of the contract, the completion date of the contract, the total value of the contract, the amount payable from the current year budget and the amount payable from the budget of the forthcoming year(s). The system should

ensure that the sum of payments proposed from current year budget and the payments proposed from future year(s) budget agree to the total contract value.

The user will then supply the details of funding data for the contract. In particular, the user shall supply the details of budget classification, sub-warrant / sub-sub-warrant number from which the payment of contracted expenditures are proposed.

The system shall then check the availability of financial resources under each budget classification and sub-warrant / sub-sub-warrant to fund the contract depending on the type of each contracted expenditure as follows:

(a) if the type of expenditure is “Current”, the system should check the unspent sub-warrant / sub-sub-warrant against the proposed budget classification is adequate sufficient to pay the proposed contracted expenditure.

(b) If the type of contracted expenditure is “Yearly” the system should ensure that the sum of contracted expenditures previously funded and the contracted expenditure proposed for funding from the proposed budget classification and sub-warrant / sub-sub-warrant under the contract being registered is within the limits of the planned allocation for the year for the same budget classification and sub-warrant / sub-sub-warrant.

Upon satisfactory checking of funding information for all budget classifications proposed for funding the contract, the system should register the contract and reserve the funds for the purpose of paying the expenses under the contract when they become due.

The system should assign to the contract, a unique Contract Registration Number that consists of (say) ten digits of which the first seven digits represent the spending unit number and the last three digits represent the sequential number of the contract registered under the spending unit.

For the contracted expenditures proposed under the contract as “Current” type, the system should commit the proposed amount against the proposed budget classification and sub-warrant / sub-sub-warrant and reduce the amount of unspent sub-warrant / sub-sub-warrant by the committed amount. The commitment should be recorded in the Contract register and the Commitment Details sections of the system with the status “Funds committed”.

For the contracted expenditure(s) proposed under the contract as “Yearly” type, the system should record the contracted expenditure in the Contract register with the status “Registered and awaiting funds”. The same data should be recorded in the Commitment Details section of the system with the status “Commitment entered and awaiting funds”. The system should have facilities to reserve the contracted expenditure amount from the free balance of planned allocation for the year for the budget classification and sub-warrant / sub-sub-warrant proposed for funding.

The amount of funds reserved for the contracts already registered, from the balance of the yearly planned allocation for the relevant budget classification and sub-warrant / sub-sub-

warrant must be taken into account while checking the funds for registration of subsequent contracts of "Yearly" type.

The amount of funds reserved for the contracts already registered must be taken into account when revising the planned allocation for the year for the **relevant budget classification and sub-warrant / sub-sub-warrant**.

Changes in a registered contract

The user will supply the number and date of application for changes in the contract.

The user shall supply the Contract registration Number for the contract proposed for change. The system shall refer to the contract register and display on the screen the details of the contract proposed for change.

The user shall verify the screen-displayed information with the relevant details of the application and upon satisfaction shall enter the appropriate details as follows:

- i) Reason for change,
- ii) Contract amount,
- iii) The amount payable from current year budget,
- iv) The amount payable from future year(s) budget(s)

Should there be a change in the amounts specified in ii), iii) and iv) above the system should perform an arithmetical check to ensure that the sum of the amounts in iii) and iv) agrees to the amount specified in ii).

The user shall be allowed to alter or delete the details of the contracted expenditure for each budget classification and sub-warrant / sub-sub-warrant. The system should also allow the user to add new lines to the details of the contracted expenditure for funding from expenditure budget classifications and sub-warrant / sub-sub-warrant that are not yet registered under the contract.

Upon satisfactory checking of funding information and updating of funds for all budget classifications the system should register the contract and reserve the funds for the purpose of paying the expenses under the contract when they become due.

Cancellation of a registered contract

The system should have facilities to cancel a contract. In such a case:

- i) The system should update the status of the relevant record in the contract register to "Contract cancelled".
- ii) The system should update the payment data of the relevant commitment record in the Commitment Transaction detail section with the amount already paid.
- iii) The system should reverse the reservation of funds for the unpaid amount from (i) The planned allocation for the year or (ii) The balance of sub-warrants / sub-sub-warrants, for the affected budget classification whichever is applicable.

Re-register an incomplete contract in a new fiscal year

Contracts that are not complete at the end of the fiscal year need to be re-registered at the beginning of the succeeding fiscal year.

The user shall enter the total contract value and the amount to be funded from the current fiscal year. The system should refer to the relevant record in the contract register and ensure that:

- i) The total contract value is the same as that of the original contract,
- ii) The amount proposed for funding from the current fiscal year is not more than the outstanding amount in the original contract.

The user shall then enter the details of contracted expenses analyzed by expenditure budget classification and sub-warrant / sub-sub-warrant for **funding from the current fiscal year**.

Payment of expenses incurred under registered contracts

The system should allow multiple payments for each registered contracted expenditure to the limit of the registered amount.

The system should ensure that the requested payment amount does not exceed the balance of unpaid amount of the registered contracted expenditure.

For payment of "Current" type contracted expenditure the system shall:

- i) Update the payment data for the relevant commitment record in the Commitment transaction details section.
- ii) Update the payment data for the relevant record in the contract register.
- iii) Transfer the payment data to the co-existing Accounts Payable system for payment order generation.
- iv) After the payment has been made for the full amount of the contracted expenditure the system should update the status of the registered contract as "Contract completed".

For payment of "Yearly" type contracted expenditure the system shall:

- i) Ensure that funds are available under the relevant budget classification and sub-warrant / sub-sub-warrant nominated for funding the contract are adequate to process the requested payment.
- ii) Update the payment data for the relevant commitment record in the Commitment transaction details section.
- iii) Update the payment data for the relevant record in the contract register.
- iv) Transfer the payment data to the co-existing Accounts Payable system for payment order generation.

After the payment has been made for the full amount of the contracted expenditure the system should update the status of the registered contract as "Contract completed".

Controls

The system should maintain a register of certificate numbers to ensure that a Contract Registration Number assigned to each contract is unique.

The system should maintain a register of registration numbers of contracted expenditures to ensure that each contracted expense is registered with a unique registration number.

For the purpose of classifying the type of contracted expenditure the system should maintain a register of expenditure specifics with annotation of the allowable type(s) of expenditure "Current / Yearly" for each specific, that is subject to revision from time to time. The system should refer to this table and ensure that the proposed type of contracted expenditure is allowable for the expenditure specific proposed for funding.

When revising the planned allocation for a budget classification the system should take into account the amount of funds reserved from the plan for payment of "Yearly" type contracted expenses to ensure that the revised allocation amount is sufficient to pay the expenses incurred from registered contracts.

When entering "Recovery" or "Offset" type sub-warrant / sub-sub-warrant against a budget classification the system should take into account the amount of funds reserved from the plan for payment of "Yearly" type contracted expenses, to ensure that the balance of planned allocation is sufficient to pay the expenses under registered contracts.

Payment Administration

Funds control

Maintain sub-warrants and sub-sub-warrants

In order to ensure that the execution of payment orders are within the limits of allocated funds, the Accounts payable System should provide facilities to maintain the budgetary information of the serviced spending units.

The system should maintain the limits of sub-warrants/sub-sub-warrants and update the funds balance by the amounts expended.

The system with reference to the budget data should check the funds availability under relevant account for each requested payment and generate **payment orders only when funds are adequate.**

Maintain details of bank account

The system should provide facilities to maintain a continuous tracking on the bank accounts associated with payment order processing. Balances of the bank accounts should be updated periodically upon generation of payment orders.

The system should provide facilities to reconcile the balances of bank accounts with those appearing on the account statements provided by the concerned banks. The bank reconciliation facilities should match the entries in each bank account with relevant bank statement entries and produce a comprehensive bank reconciliation statement.

The system should provide facilities to record the details of daily bank statement for each bank account.

Interface with the commitment accounting system

The Commitment Accounting system during the process of payment authorization should generate the payment detail data such as:

- i) Organization number of the spending agency, invoice details, payment order details; and
- ii) Budget classification, sub-warrant/sub-sub-warrant number etc. in the case of payment for budgetary expenditure;
- iii) Relevant account code and bank account reference in the case of payment for extra-budgetary expenditure;

within the database or in an external file, depending on the specific features of the selected software package.

The Accounts Payable system should have facilities to import the payments data transferred by the Commitment Accounting system using the methods discussed below:

In the case of Regional Treasuries where Commitment Accounting System shares the same hardware with the associated Accounts Payable system, the data transfer should be on-line, initiated by the user of the Commitment Accounting system; and

The case of those sites where Accounts Payable system services the Commitment Accounting systems of the ministries, data collection should be performed on-line for locally generated payment requests and in a batch mode using communications facilities for payment requests initiated by spending unit head offices.

The system should provide facilities for checking the validity and integrity of the collected data and generate reports if any error is detected.

Upon execution of payment orders, the system should generate the details of completed payment data for transmission to the associated Commitment Accounting system(s) for updating relevant commitment records.

Central treasury

The system should provide features to generate daily expenditure data aggregated by budget classification or account for transmission to Central treasury and updating the Treasury Ledger system. Data transmission to Central Treasury shall be done on a daily basis.

Payment Processing

Retrieve records for payment processing

The system should select records from the database, marked as 'Awaiting Payment' either individually or in batch. The system should provide facilities to distinguish the completed records from new records in order to ensure that the records for which payment orders have been executed are not re-processed.

Prior to selecting records for payment processing, the system should allow the user to view or produce a hard copy list of all claims awaiting payment. The system should allow the user to set priority of claims for payment according to the criteria that will be defined by the user. The system should have facilities to set the maximum limit for payment from each bank account for each day and select claims for payment according to the user-defined priority while ensuring that the total amount of payments for the day does not exceed the limit set for the day.

Check data validity

The system should have facilities to check the details of each payment record and ensure that:

- i) the payment related data such as spending unit number, budget classification code, account code, sub-warrant/sub-sub-warrant number, bank account number, vendor bank details etc. are correct, and
- ii) the duplicate invoice number from the same vendor is not posted.

If any invalid data is detected, the system should generate a report highlighting the error and hold the effected record as a rejected payment request until the error is corrected.

Ensure funds availability for each payment

The system should check the funds balance under relevant sub-warrant/sub-sub-warrant within budget classification code for payment of Central budget expenditure.

If a shortage of funds is identified for any payment record, the system should exclude the record from payment order processing and generate appropriate report for necessary actions.

Authorize payments

The system should provide facilities to authorize payments for the transaction records that have passed the data validity and funds checking tests.

Transmit payment order data

The system should generate a record for each claim in a payment order data file for transmission to the designated servicing bank. The payment order record shall include the following as minimum:

- payment order number and date;
- payment order batch number and date;

- amount;
- VAT
- net amount
- organization number of the spending agency;
- vendor's bank code;
- vendor's bank account number;
- vendor's tax payer registration number;
- details of the bank where payment shall be made from
- bank code;
- bank account number;
- budget classification code;
- sub-warrant/sub-sub-warrant number;
- payment reference (purchase order number, general expense requisition number etc.)
- invoice number and date

The system should also include on each payment order record the payment system message containing instructions for the transfer of funds, the routing details such as Guarantor bank, Correspondent bank, Beneficiary bank and information from sender to the recipient etc. Each system message should be recorded in the system together with the relevant payment order record and identified by a unique reference number.

The system should produce a report showing the details of all payment orders transmitted in a file for control and reconciliation purposes. One copy of the report signed by an authorized Treasury official shall be delivered to the servicing bank.

Control of payment order numbers

The system should maintain a register to control the generation of payment order numbers. The user will at the beginning of the year define the starting payment order number that should be sequentially incremented by the system for each payment order generated. The system should ensure that the payment order numbers are unique during each payment order generation process.

Print payment orders

The system should have facilities to produce hard copy payment orders. This option shall be used in the case of failures in the transmission of payment order data to the servicing bank or network breakdowns.

The system should allow the user to print payment orders for all claims or on a selection basis. Selection criteria shall be by amount, by claim reference number, by vendor number, by expenditure budget classification code, by subordinated spending unit etc.

Print checks

The system should have facilities to allow the user to print checks for selected payments using pre-printed check stationery on the user-specified printer. This facility is required to process payments of salaries and wages for regular payrolls and some other special purposes.

The system should maintain a register to control the generation of check numbers. The user will at the beginning of the year define the starting check number that should be sequentially incremented by the system for each check produced. The system during each check printing process should refer to the register and use the next available check number.

The system should have facilities to ensure that:

- i) check numbers generated by the system are sequential;
- ii) the amount, name and address and other details printed on each check are consistent with the details of the relevant commitment record;
- iii) details of the printed checks including the bank details are recorded in the system for future references;
- iv) the payments are posted to appropriate bank accounts or control accounts specified by the user;
- v) details of the checks are recorded in the database in such a way that the system allows reconciliation of checks.

The system upon completion of printing a batch of checks, should produce a “Check Usage report” listing the details of the checks printed in the batch. The following information should be printed on the report as minimum:

- Date
- Check number
- Bank Code
- Bank Account Number
- Payee’s Name and short address
- Payment reference
- Amount
- Payer spending unit number

Alternatively, the system should allow the user to update the payment records with details of manually drawn checks. The system should ensure that the manual check number entered by the user is unique.

The system during the payment authorization process should ensure that the payment for each invoice is charged to appropriate bank account or control account

Update balance of accounts

The system should upon completion of a payment order generation process for each payment request, update the funds balance under relevant sub-warrant/sub-sub-warrant within the budget classification code.

For each generated payment order or printed check the system should update relevant expenditure ledger account(s) and the Cash control account controlling the balance of the source bank account with appropriate amounts.

Maintain payment data

The system should provide facilities to record the data with appropriate reference for all payments processed. The recording of data should include necessary details to allow the user to analyze the data by different types of expenditure, i.e. budgetary and extra-budgetary, by method of payment (Check, Payment order) by spending unit, by period, by expenditure budget classification, by region etc.

The system should update the vendor database with payment related data to produce vendor business history and vendor performance analysis etc.

The system should be capable to maintain the vendor and payments data for a minimum of three years.

Transmit payment orders to servicing bank

The system should provide facilities to transmit payment order data to the designated servicing bank in batch mode using data communications facilities. The system should provide alternate facilities to export payment order data to a magnetic medium such as diskette or tape for use in the circumstances where data communications over telephone lines are not dependable. Upon completion of the payment order transmission to the designated servicing bank, the system should update the status of the relevant payment order to **'Payment order sent to servicing Bank'**.

Update payment order status

The system should provide facilities to receive the completed payment order data from the servicing bank in batch mode using data communication facilities. The system should provide alternate facilities to import completed payment order data from a magnetic medium such as diskette or tape for use in the circumstances where data communications over telephone lines are not dependable. Upon receiving the data of completed payment orders from the servicing bank, the system should update the status of relevant payment order to **'Payment order completed'**.

Transmit cash disbursement authorization to banks

The system should provide facilities to generate authorization advice for transmission to designated banks to release cash to nominated employees. This facility is required for release of cash to spending units remotely located for payment of salaries, travel allowances etc.

The Authorization advice should contain the following as a minimum:

- Bank name;
- bank code;
- bank address;
- date of advice;
- date for release of cash;
- name of employee authorized to collect cash;
- identification number of employee authorized to collect cash;
- amount to be released;

- purpose of payment;
- authorizing agency name and address;

The advice should be transmitted to treasury offices where telecommunications facilities are dependable. A hardcopy of the advice should be printed by the system for delivery by courier to offices where data communications links are not reliable.

Freeze/unfreeze payments

The system should provide facilities to freeze payment of a selected claim or group of claims selected by user-defined criteria for management purposes. For example, claims payable to a particular vendor may be frozen in the case of investigation etc. Selection criteria shall be by vendor, by invoice number, by spending unit, by expenditure budget classification, by amount limit, all claims etc.

The operation of this facility should be strictly controlled by a security password.

The system should provide a facility to unfreeze payments, which should also be controlled by a super-user password.

Respond to inquiries

The system should provide adequate enquiry facilities in order to allow the Treasury office to provide prompt and accurate responses to queries from spending units regarding vendor payments.

Reconciliation

The system should have facilities to reconcile the balance in each bank account against relevant bank statement, identify discrepancies (if any) and produce a reconciliation statement. Described below are the steps involved in the bank reconciliation process:

Reconciliation of payments

Produce a list of payment orders that were not processed by each bank on the day for which the reconciliation is required.

Produce Daily Payments Reconciliation statement.

Reconciliation of receipts

The co-existing Revenue Management system will perform the daily receipts reconciliation.

Bank reconciliation

On the basis of the information produced from the above, the system shall produce the Daily Bank Reconciliation Statement. Should there be any variance resulted from the banking transactions that are not recognized by the system, the user should have facilities to add, insert and modify the details of the bank reconciliation statement and reproduce the statement.

Cancellation of payment orders

The system should have facilities to allow the cancellation of a payment order after it has been generated. The possible reasons for canceling a payment order can be:

- i) payment order generated by mistake; or
- ii) servicing bank informs Treasury that the vendor's bank account has been frozen or closed; or
- iii) any invalid data contained in the payment order record; or
- iv) any administrative decision.

The system should perform the following in each case:

- i) mark the payment order record in the database with the status "Cancelled". The user shall enter the date and reason for cancellation (if available) which should also be recorded in the system.
- ii) Post reversal entries to the relevant expenditure ledger account(s) and cash control account to where the payment was charged.
- iii) Reset the status of the paid invoice to the original status before the payment order was generated.
- iv) Produce a report on the cancellation of a payment order to advise the concerned spending unit or ministry.

The system should retain the cancelled payment order record and ensure that the cancelled payment order number is not re-used. The system should have facilities to reprocess when needed, the payment of the invoice for which the payment order has been cancelled.

Payroll

Maintain payroll reference data

The system should provide facilities to establish reference data for use in routine payroll processing. The system shall record, as a minimum, the following data:

Job classifications and descriptions

Employee status codes and descriptions

Allowance codes, descriptions and Tax indicators

Benefit codes, descriptions and Tax indicators

Deduction codes and descriptions

Beneficiaries for deductions (Account code, individuals etc.)

Method-of-payment code {cash=01|card account=02|bank transfer=03}

State Institution Code, corresponding State Institution Name, Location

Location (Disbursement Center) codes and descriptions

Treasury Office code and names

Leave codes and descriptions

Payroll Calendar

Pay scale number, Pay scales, Pay scale description

The system should also record the history of changes to payroll reference data. For example, when there is a change to the rate of an allowance, or an allowance is withdrawn from the payroll, or a new allowance type is created, the history of these changes should be recorded in the system for control and analysis by auditors.

The maintenance of such reference data should provide the facility to permit the capture of documentary information against reference data objects. For example, when the introduction of a new allowance type occurs as the result of a legal Act, it is required to allow the payroll administrator to enter a textual note against the allowance. He should be able to do likewise whenever the object is altered, and so preserve a history of why changes were made.

Maintain tax table

The system should provide facilities to record tax parameters for use in computing personal income tax due from employees' salaries and benefits.

Maintain job positions data

The system should provide facilities to add, modify, reclassify or abolish job positions in accordance with the approved manpower ceiling. In particular, the following data should be recorded in the system as a minimum:

Position Number

Designation

Position Category

State Institution

Division/Department

Job Classification

Occupant's employee identification number

Position creation date (*date created in the position list*)

Position status {occupied|vacant|unfunded}

Occupancy History

Start Date

End Date

Adding a new employee into the system should be controlled by job position numbers.

The system should allow a new employee to be added only against a vacant position. As each position is filled the status should be reflected in the database.

The system should update the records by appropriate dates and employee number of the occupant as and when each position is engaged and vacated.

Maintain employee details data

The system should provide facilities to maintain detailed data for each and every employee paid by the payroll system. The data should be stored and updated whenever there is a change in the employee's personal status.

Record pay history data

The system should record the details of payments and deductions data for each employee separately for each pay period. In particular, the following should be recorded:

The system should during each pay run, record the salaries, allowances and benefits paid to each employee using relevant codes.

Payroll Processing

Enter variations

The system should provide facilities to allow authorized users to enter variations that affect the payroll processing separately for each employee or collectively for groups of employees depending on specific needs. In particular, the system should allow authorized users to:

Enter parameters, rates and formula for calculation of various types of payments (basic salary, leave salary, sick allowance etc.) using different methods stipulated by the prevailing legislative Acts.

Change the amounts for basic salary, allowances, benefits and deductions; The system should refer to the pay scale reference data and ensure that the new amount is within the limits approved for this Classification. The effective date of employee's basic salary, allowances, benefits and deductions should be updated in employee details accordingly.

Adjust the basic salary, allowances, benefits and deductions already paid for previous pay periods. For example, increase/decrease in salary, allowances and benefits backdated to previous pay periods.

Adjust the basic salary, allowances, benefits and deductions for current and future pay periods.

Pay new allowances, and benefits to employees.

Add new deductions for inclusion in the processing of employee's pay.

For all cases involving deductions the system should not allow any changes that would result in a negative net pay. Negative pay is the situation where the sum of deductions exceeds the sum of payments. Such a situation should be reported by the system as a Payroll Exception Report, marked as UNPAID and submitted to the responsible payroll Clerk for action.

Change the method of payment for employees. In the case of changing payment method to 'bank transfer', the system should allow the change only when bank details are provided. In the case of changing payment method to 'card account', the system should allow the change only when account details are provided.

Change personal details of an employee.

Add new employees into the database.

Remove from the database, employees who should no longer be on the payroll.

However, the system should not allow removing an employee if any salary payment records related to the employee exist in the database. In this case, records should be retained as accessible on-line for three years after they are no longer current, and then archived for the statutory time.

Pay advance salary to employee

Suspend or terminate an employee's allowances, benefits and deductions.

Change the status of an employee (Active, Inactive, Leave, Terminate etc.).

The system should have data capture documents for the purpose of capturing all the above variations. The system should also have the facility to accept variations.

Change the cost codes (sub-warrant/sub-sub-warrant number and budget classification) for basic salary, allowances, benefits and deductions. The system should refer to the co-existing commitment accounting system and ensure that the new cost code is in the system.

The effective date for change(s) in employee's basic salary, allowances, benefits and deductions should be updated in employee details accordingly.

Payroll frequency

The system shall allow the processing of payroll twice a month on the dates defined in the Payroll calendar. Should there be a need to change the payroll calendar to allow processing more than two pay runs a month, the system should allow changing the details in the Payroll calendar to allow the processing as required.

Payroll pre-inspection by treasury

The relevant Treasury official of the payroll processing center should be able to review all the changes made to payroll information, at a system reference level and also at the level of each employee prior to running the payroll. The system must enable the Treasurer to retrieve details of all the changes that have been processed within the system since the last time that the payroll was run. This information must show each change that took place, when it was done and the associated username under which the change was carried out. This retrieval should be either on-screen or in hard copy form and will include, for example, creation, alteration and removal of allowance codes, creation or alteration of employee records (for example, amendment of job-title). The changes

retrieved should cover the period from the last time that the payroll was run up to the date of enquiry. This information should be automatically purged after review.

Scope of payroll run

It must be possible for the Payroll Administrator to run a payroll run confined to a single State Institution, a subdivision of a State Institution or a single employee.

The system should calculate the allowances and benefits payable during each pay period, with reference to the payroll calendar data stored in the system. For example: the user keys in 04 for payroll month, 2001 for payroll year and 01 for pay run number. the system should interpret the digits and process the first payroll for the month of April, 2001.

Calculate allowances, benefits, and deductions

The system should select employees recorded with “Active” status in the database and calculate allowances, benefits and deductions according to the pre-determined rates. For employees on leave, the system should take into account the type of leave and then process payments and any special allowances accordingly.

The system should determine the types of allowances and benefits payable to an employee as defined in the employee's data.

For each allowance or benefit type, the system with reference to payroll calendar data, should determine whether it is payable during the current pay run.

The system should then include all allowances and benefits defined in the database as payable during the current pay run at the pre-determined percentages and calculate the total amount payable to each employee. For the determination of the amount of each allowance/benefit, the system should refer to the relevant allowance/benefit record for the employee, that has not exceeded its end date.

The system should make provision to determine the various types of deductions and percentage rates for each employee for inclusion in the current pay run.

The system should then compute the total amount payable to each employee and the total amount of deductions due from each employee.

Taxation

If it is envisaged that payroll will be processed twice a month on the 15th and 25th of each month the tax calculation can be made in the second pay run. During the second pay run of each month the system should include all taxable allowances and benefits paid during the previous pay run together with the payments made during the current pay period in the computation of taxable income for the period. The system should calculate the tax amount for each employee based on the tax rates and computation basis data stored in the database.

Terminated employees

The system must detect in advance those employees who have a contract agreement end-date which will occur before the next payrun and provide an alert message to the relevant payroll clerk so that termination payments can be processed in time for payment on or before his last day of work. It must accordingly pro-rate and correctly calculate his payments and deductions as they occur on his date of leaving. Records of these terminated employees must be retained on-line for three years before being archived.

Compute contributions to pension fund, social taxes, etc.

The system should also compute the amounts due for compulsory contributions to cumulative Pension fund, Social Tax and ensure that funds are adequate under relevant cost codes.

Ensure funds availability: budgetary accounts

During the payroll process, the system should aggregate the payments due to employees, by corresponding cost code (a combination of sub-warrant/sub-sub-warrant and budget classification).

Upon completion of the calculation of payments due, the system should check the payroll figures against funds availability data in the co-existing Commitment Accounting system to ensure that the payroll expenditure for the current period is within the limits of available funds for each cost code.

If the system identifies a cost code that does not have adequate funds to finance the payments due to employees whose salaries are paid from the affected cost code, the system should display appropriate message(s) on the screen. The system should produce hard copy Rejection reports detailing the cost codes that do not have adequate funds, the amount of funds required for payroll, the amount of funds available and the details of employees whose salaries are paid from the reported cost codes.

The system should provide the Payroll Administrator/System Administrator with the following options:

- to liaise with the concerned State Institution(s) for obtaining additional sub-warrant/sub-sub-warrant and to ensure that the reported cost codes have adequate funds; or

- to choose not to action the payments of the affected employees from the current payroll and complete the actioning of payments for employees whose cost codes have adequate funds; or

- to override the funds checking and proceed to further steps in payroll processing regardless of the status of funds. This option should be controlled by a password and available to Payroll Administrator/System Administrator only. The system should have a facility to activate or deactivate the option whenever required.

Check data consistency

The system should provide facilities to check the data consistency of the Payroll system. In particular, the system should check that:

the budget classification codes used by the payroll system exist in the associated commitment accounting system and the accounts payable system.

the sub-warrant and sub-sub-warrant numbers used by the payroll system exist in the commitment accounting system and the accounts payable system.

the payee or beneficiary codes used by the payroll system exist in the commitment accounting system and accounts payable system.

the pay amount for each employee is within the approved range for his/her job classification working rank defined in the pay scale data.

the codes used for allowances, benefits and deductions are valid and consistent with those defined in the payroll reference data tables.

the organization code assigned to each employee is valid.

the location code assigned to each employee is valid.

If any of the tests fail, the system should prompt appropriate message on the screen and produce a hard copy report for the System Administrator to take necessary remedial actions.

It is desirable that the system perform the data consistency check prior to each payroll and report to the payroll administrator by means of screen-displayed and hard copy reports on the test result. If the test fails due to missing of some essential payroll related data, the system should not allow the user to continue the payroll processing. In such case, the user shall rectify the situation by feeding the necessary information into the system and restart the processing from the beginning.

Effects of a payroll run on other areas of treasury system

When a payroll run has been completed its effects will extend to other areas of the Treasury System (TS). The TS will provide for the following:

Check funds availability under each payroll cost code and create a rejection report to the person responsible for Payroll of any cost codes which do not have sufficient funds available to meet the payroll expenditure;

Payroll payments will be made as commitments, each commitment resulting from payroll must have an appropriate commitment number, transaction record index number etc. which denote its origin from the payroll.

Ensure the appropriate level of integration with the accounts payable module so that details of employees do not have to be entered into the system twice in order to pay them by means of the accounts payable module.

Update funds balances within accounts payable by corresponding debit of funds;

Produce a report listing the commitment details of the payroll expenditure including transaction record index number, commitment number, date, payroll period, name and code number of State Institution, budget classification code, sub-warrant/sub-sub-warrant number, amount of funds committed and balance of funds under each cost code after commitment.

The Payroll System must transfer information to associated Commitment Accounting System to perform the related accounting entries as follows:

Post a computer generated journal entry debiting the appropriate budget classification codes with actual totals of salaries, bonus, premium etc. and crediting the 'Payroll Control Account'.

Post a computer generated journal entry debiting the appropriate budget classification codes with payments for employer's contribution to Social Tax and crediting 'Payroll Control Account'.

The Commitment Accounting System shall then transfer the data to Accounts Payable System for executing payment orders by debiting the Payroll Control Account and crediting the Cash Control Account.

Upon completion of the processing of payment orders, the balance in the Payroll Control Account shall be Zero.

End of the Year

The system should provide facilities to perform the following at the end of the fiscal year:

The system should provide facilities to produce the following hard copy reports:

- Expenditure analysis report
 - by spending unit
 - by subordinated spending unit
 - by budget classification
 - by vendor
 - by contract
- Vendor business history for the year for each vendor; A reconciliation report analyzed by spending unit providing financial and statistical information such as: number of payment requests lodged and total amount, number of payment requests processed and total amount, number of payment orders cancelled and total amount, number of payment requests pending and total amount etc.
- A reconciliation statement for each bank account highlighting the variances.

The system should provide facilities to mark the completed payment orders for the current year and store the records with appropriate identifiers for future references.

The system should provide features to purge invoices and related records which are no longer needed for on-line review purposes. The system should maintain summary information for purged records. The system should produce a complete audit trail report after completion of the purge process.

Vendor details and vendor business history data should be retained in the system for a minimum of three years.

The system should carry over the balances in the control accounts, procedural accounts, chargeable services accounts, sponsor and charity assistance accounts and deposit accounts to the new year database.

The system should allow the concurrent processing of two years' accounts during the month of January of the year.

Adjustments in the completed year's database should be allowed concurrently with the operation of the new year's database.

Functional Process - 3. Payments and Receipts Management, (b) Receipts Management

3. Receipts: Government receipts are paid through payment orders issued by the payee on his Bank. The Bank transfers the payment to the Treasury single Account at the Central bank. The Treasury monitors the deposits of Government receipts through daily statements received from the Bank. The Treasury implements any revenue sharing arrangements that are in place between the central government and the sub national governments etc. and posts the detailed revenue category wise figures in the General Ledger and informs the relevant SU or revenue collection department of the receipts.

Functional Systems Requirements

Establishing Reference Data

The system must have facilities to establish the reference data for shared use by the associated functions of the system in order to avoid reentering the data.

Revenue budget classification codes

The system should have facilities to import the revenue classification codes data generated and distributed by Central Treasury. The sharing method will be by either electronic transmission or magnetic medium in the case of network breakdowns and the system must be compatible to both methods.

The system should also provide the user with facilities to enter revenue budget classification codes together with appropriate description for each segment as shown in the following example:

<u>Segment</u>	<u>Code</u>	<u>Description</u>
Category	1	Tax Revenues
Class	01	Income Tax on profit, income and capital gains
Sub-class	1	Income Tax on legal entities
Specific	01	Income Tax on resident legal entities

The start and end dates for effectiveness shall be the dates of beginning and end of the current fiscal year by default. The user shall have an option to alter the effective dates of budget classification code assigned by the system.

The system should allow the user to copy and modify the details of revenue classification codes selectively or in bulk from the previous year's database to the current. The entries and modifications made to the revenue classification codes and descriptions must be audit-trailed.

Financial data

The system should allow the user to enter the Approved revenue collection plans for Central and local budgets for each revenue classification. Plan figures for each revenue classification shall be entered at two levels viz. Plan for the year and monthly plan.

Monthly plan

Upon entering the annual plan for Central and Local budgets for each revenue classification the system should by default evenly distribute the plan over twelve months with the option for the user to override the default monthly plan figures if necessary.

Revenue sharing rates

The system should allow the user to establish revenue sharing rates in terms of percentage for each revenue budget classification code.

Sharing rates should be defaulted to 100% for Central budget and 0% for Local budget for which the user shall decide and make alterations where necessary.

The entries and modifications made to the data described above must be audit-trailed. The system should have facilities to import the revenue estimates and revenue sharing rates data from external systems.

Revisions of revenue plans

The system should allow the user to revise the annual and monthly revenue plans during the course of the current fiscal year. The monthly revenue plan figures should be reflected by the change in the annual plan and the user should have an option to override the computer-determined monthly plan figures.

The entries and modifications made to the data must be audit-trailed.

Revisions of revenue sharing rates

The system should allow the user to revise the Central and local revenue sharing rates during the course of the current fiscal year.

Details of local governments

The system should allow the user to define the details of the local authorities established under the Regional Administrations which are entitled to revenue shares.

Collectors

The system should allow the user to define the particulars of officers appointed as Collectors.

The system should also allow the modification of the particulars of collectors who already exist in the system and the deletion of Collectors who are no longer responsible for the collection of revenues

Revenue sending banks

The system should allow the user to enter the particulars of the revenue sending banks in the system. In particular, bank number, name of the bank and address of the bank should be recorded.

The system should also allow the modification and deletion of bank details. The system prior to deleting a bank should ensure that there are no other records in the system referenced to that bank.

The system should have facilities to import the establishment data of revenue sending banks from external systems.

Control accounts

The system should allow the user to establish revenue-related control accounts in the system or the facilities to make the revenue-related control accounts accessible by the user for posting of revenue collections. The required control accounts are :

- Cash Control Account¹¹
- Shared Revenue (Receipts) Account
- Shared Revenue (Refund) Account
- Revenue Inter-settlement Account with Local budgets
- Regional Revenues deposited in Treasury Single Account
- Incorrect Receipts Account
- TSA Control Account

The system should allow the user to define the Account Number, Sub-account Number, their descriptions and the account balance.

¹¹ This account is for common use with the associated Accounts Payable system to which both systems will access and post.

Treasury office identifiers

The system should have facilities to maintain numeric identifiers for subordinate treasury offices to avoid entry of lengthy names for posting, recording and analysis of revenue data. The other addressing details of each office viz. name, address and contact numbers must be recorded in the system.

Receipts Processing

The Revenue Management Module must provide features to input revenue collection data gathered from two different data sources:

- Revenue receipts through inter-bank and intra-bank transfers.
- Revenue receipts from collections at revenue collection centers.

The system must have facilities to allow data input through a batch file, electronic file transfer from external systems and inter-active on-line data entry screens.

A. National Currency Revenues Received by Bank Transfers

Revenue sending banks collect state revenue from tax payers, transmit daily to Regional Treasury the electronic version of payment orders and transfer the collected revenue to the bank account of the Regional Treasury. The system should provide facilities to collect electronic payment order data from various revenue sending banks, import into the system, process revenue sharing and update relevant accounts as explained below.

Importing electronic payment order data

The system should have facilities to receive the electronic payment order data in a form of a file transmitted by Revenue sending banks directly. The system must provide features to determine the source of transmission of payment order data (Payment system or direct transmission by the bank). The file should contain all essential data of the payment order to facilitate the accurate posting, analysis and reporting of revenue collection data in the system. Frequency of transmission shall be daily.

Printing electronic payment orders

The system should provide facilities to print the imported electronic payments for the user-specified date: individually; or in a list showing the details of the payment order sorted and organized in separate columns.

The system should have facilities to export the electronic payment order data to external systems.

Posting imported payment order data

The process of posting the imported payment order data should be seamless and transparent to the user.

The system should calculate and post the total amount of collected revenue in the accounts as follows:

Cash Control Account	<i>Debit</i>
Shared Revenue – Receipt Account	<i>Credit</i>

Mark the file with appropriate identifier as “Posted and awaiting sharing”. The system should reject any further attempt to post the file having the mark “Posted and awaiting sharing” in order to prevent double posting.

Produce a listing of all payment orders posted against revenue classification “Unclassified receipts” for referral to appropriate Tax office for clarification and necessary corrections. For the convenience in the distribution, a separate report should be produced for each Tax office.

Reconciliation

The system should produce the following reports for reconciliation:

- i) a summary report of electronic payment orders for the user-supplied date sorted in the order of Revenue sending bank.
- ii) a detailed report of all payment orders having recipient’s bank details that are different from those of the Regional Treasury bank account.

Revenue sharing

Sharing revenue receipts between central and local budgets

The system should share the revenues between Central and Local budgets for the date supplied by the user according to the current sharing rates defined in the system.

The system must produce the report on revenue sharing between Central and Local budgets, that details the revenue shares under each revenue classification.

If requested by the user the system must produce the detailed list of revenue shares for each payment order.

Reporting revenue sharing information

The system should allow the user to produce multiple copies of:

- Daily Revenue collection report (Analysis by Revenue classification),
- Year-to-date Revenue collection report (Analysis by Revenue Classification) ,
- Daily Revenue Collection report (Analysis by District), and,
- Year-to-date Revenue Collection Report (Analysis by District),

for distribution to concerned organizations in the Region.

The system should have facilities for production of the Daily Revenue Collection reports at District treasury offices either on-line or data transmission by Regional Treasury.

The system should allow the user to reproduce the daily revenue collection reports for any user-specified date as and when needed.

Repayment of incorrect receipts

The system should have facilities to generate a payment order for repayment of incorrect receipt to the payer. The system should then prepare a payment order for re-payment of the incorrectly received amount (the amount recorded on the relevant record under Incorrect Receipts account) to the payer and display the details on the screen for user verification. Upon confirmation by the user, the system shall transfer the payment order to the Accounts Payable system for transmission to the servicing bank.

B. National Currency Revenues Received in Cash

National currency cash revenues are collected by a Collector of Public Monies who issues official receipts to payers, banks the collections and prepares Collector Statements for reporting to Treasury office.

The system should have facilities to enter details of Collector Statements for posting to relevant Revenue Ledger Accounts.

Enter collector statement details

The system should allow the user to enter details of Collector Statements in particular, Collector Number, revenue classification code, date of collection, details of payer, receipt number, and amount collected.

During the data entry process the system should perform the following data validation checks:

- that the collector number is valid;
- that the revenue classification code is valid; and
- that the date is valid.

The system should then update the relevant revenue collection details with the data entered by the user. The method of collection should be “CASH” **by default**.

Reconciliation

The system should have facilities to produce a report detailing the cash receipts for checking and to ensure that the collected revenues have been banked.

The system should allow the user to post the total of revenues to Cash Control account for which the account number will be provided at the time of implementation.

The system should allow the user to post the total of all revenues awaiting posting for the specified day or selected revenue records by Collector Number for the specified day. The system should mark the posted revenue records indicating the status “Posted and awaiting sharing” and exclude them from subsequent selections for posting.

In the case of posting revenue records selected by Collector Number the system should allow the user to select more than one collector and post the total revenue collectively for all selected collectors.

The posting process should result in the following accounting entries:

Cash Control Account	<i>Debit</i>
Shared Revenue – Receipt Account	<i>Credit</i>

Upon completion of the posting process the system should produce a Posting summary statement analyzed by Collector and revenue classification.

C. Foreign Currency Revenues Received by Bank Transfers

The central bank will convert the foreign currency revenues to local currency according to the prevailing exchange rate of the date of receipt and deposit the national currency equivalent to the Treasury Single Account.

The central bank will then report the receipts of foreign currency revenues to Central Treasury who will then advise the concerned Regional Treasury of the details.

Recording revenue receipts advised by central treasury

The system should allow the user to post the revenue receipts to the following accounts:

Regional revenues deposited in Treasury Single Account	<i>Debit</i>
Shared Revenue – Receipt Account	<i>Credit</i>

Miscellaneous

Accounting journals

The system should have facilities to process Journal entries for adjustments, transfers and corrections of errors of the revenue transactions already posted.

Data import and export facilities

The system should have features to import and update the system with revenue data generated from external information systems. In particular, the system must be capable of importing and updating the system with:

- Electronic payment order data transmitted by Revenue Receiving Banks (revenue sending banks), Regional clearing houses etc.
- revenue classification and estimates data generated and transmitted by Central Treasury or other external systems;
- the data for the revenue plan, transferred from Regional tax inspectorates; and

The system should also have features to export data to external systems, in particular:

- daily revenue analysis data to subordinate District Treasuries where facilities are available;
- tax revenue collection details to corresponding Regional Tax office;
- daily revenue data aggregated by revenue classification to Central Treasury system; and
- from District treasury offices to District financial departments where facilities are available.

Archive and purge revenue data

The system should have user-friendly data security features to backup and restore the data to and from a magnetic medium (i.e. tape or diskette).

The system should have facilities to remove records that are no longer necessary in order to conserve disk space. Prior to removing the records the system should prompt to archive those records onto magnetic tape or any secondary storage device. The system must also have facilities to restore the archive records back into the system when necessary. The Archive and Purge function should be controlled by a security password and must be available to the System Administrator only.

Ideally the “off-lining” of older records should be seamless and transparent to the user; i.e. managed by the system (which automatically requests for a tape cartridge to be loaded). The only perception by the end-user will be a response time-penalty; i.e. the user does not need to know how data is stored.

Year-end data rollover

The system should have facilities to check the completeness of postings to each account at the end of the fiscal year, and produce necessary reports and create new set of accounts for the forthcoming year.

The system should allow the transfer of essential reference data such as revenue classifications, balances in the control accounts, establishment data of local governments, tax inspectorates etc. from one year to another to avoid re-entering the same data.

The system should maintain a complete data for at least two fiscal years accounts i.e. current year and previous year. Until such time the system administrator has decided that the postings to the previous year accounts are complete the system should allow processing two sets of accounts (previous year and current year) concurrently. The system administrator after completion of the postings to previous year accounts will give instruction to the system to close such accounts. After the previous year accounts have been closed the data in the previous year accounts must be available in the system for viewing and reporting only. Changes in the previous year’s accounts should not be allowed.

Audit trail

All user attempts for access to the system must be recorded in the Audit Trail. Each entry in the audit trail must contain the following information as a minimum:

- the date and time when the attempt was made;
- the identification number of the workstation through which the attempt was made;
- the login name of the user who made an attempt;
- the name of the function or program through which the attempt was made;
- the mode of attempt (i.e. add, delete, modify, view)
- the affected changes in the data; and
- the status of the attempt.

The system should allow the user to view and print the audit trail selected on a date basis. The system should also allow the user to purge the audit trail records that are outdated. Purging audit trail records should be controlled by a super user password.

Functional Process - 4. Cash Management

1. Expenditure and revenue forecasting, 2. Cash monitoring, 3. Borrowing strategy:
The cash management department receives expenditure and revenue forecasts from the spending ministries and from the debt management department on debt servicing expenditures. The revenue collection agencies prepare revenue forecasts. The Cash management department examines this data with respect to the accounting data booked in the TGL, the Debt management database and the cash balances in the TSA and its component sub- accounts. This enables it to determine the liquidity position of the government and shortfalls/ surpluses. This information form the basis of the MOF determining the borrowing requirements and the spending limits and warrants for spending ministries and units.

Functional Requirements

The System should provide the facility for registering the expenditure and revenue forecasts as work files in the database of the Treasury. The forecasts may be entered either as individual records, if the statements are paper-based; or in batch mode, if the statements are received on electronic media. The system should provide for retention of the work files till the closing of the annual accounts for the financial year.

Enter Monthly Expenditure Plan

The system should allow the user to enter the monthly Expenditure Plan data for each expenditure budget classification. In particular the system should allow the user to enter the planned commitments (funds requirement) and planned cash expenditure (cash requirement) for 12 months against each expenditure budget classification.

For each ministry or institution the user shall enter the budget classification code and the monthly funds requirement and monthly cash requirement for 12 months for each budget classification.

Monthly funds requirement and cash requirement for certain budget classifications which are designated for overseas transactions such as loan repayments, financing overseas missions etc. will be recorded in Local currency amount calculated according to the prevailing exchange rate at the time of budget compilation. In order to allow future adjustments to reflect the exchange rate fluctuations the system should have features to record the base exchange rate and foreign currency equivalent of monthly funds and cash requirements for those budget classifications.

In the case of recording Expenditure Plan for a budget classification that involves overseas transactions in more than one kind of foreign currency, the system should separately record the monthly funds and cash requirements for the different kinds of currencies involved. The amounts should be recorded in local currency equivalent according to the prevailing exchange rate at the time of budget compilation.

In the case of a particular budget classification requiring funds and cash in both local and foreign currencies, the system should record the local currency requirement and foreign currency requirement separately. The foreign currency component(s) should be recorded in local currency equivalent(s) according to the prevailing exchange rate(s) at the time of budget compilation.

The system should have features to import the monthly Expenditure Plan data generated from other systems (online, batch file or spreadsheet).

This facility and the recorded Expenditure Plan data should be commonly available to Cash management and Treasury Ledger systems.

Revise monthly expenditure plan

The system should allow the user to revise the monthly Expenditure Plan as and when required. Details of each revision should be recorded in the system as historical data for reference purposes.

The user shall supply the budget classification code and the financing Bank Account Identifier for which revision is required and the system should allow the user to alter the monthly funds requirement or monthly cash requirement figures. The system should ensure that neither the total of funds requirement nor the total of cash requirement for 12 months exceeds the current annual budget for the relevant budget classification recorded in the Treasury Ledger system.

In the case of revising the foreign currency component of the Expenditure Plan the system should have features to allow the user to revise the prevailing exchange rate, the amounts in foreign currency and local currency equivalent for funds and cash requirement for each month.

Enter revenue plans/forecasts

The system should allow the user to enter the following monthly revenue forecasts for each revenue classification:

- monthly revenue forecast from each Regional treasury
- monthly revenue plan from the Department of Fiscal Policy
- monthly revenue forecast from Central Treasury

For each revenue classification the user shall enter the revenue classification code and the monthly forecast for 12 months for each budget classification.

By default the system should assign the Identifier for Treasury Single Account as controlling bank account for all revenue classifications with the option for the user to alter the Bank Account Identifier where necessary.

In the case of revenue classifications designated for receipts from overseas agencies (such as grants and borrowings) the amounts for monthly forecasts should be recorded in both foreign currency and local currency equivalent. The foreign currency component(s) should be recorded in local currency equivalent(s) according to the prevailing exchange rate(s) at the time of budget compilation. The exchange rate used for conversion shall also be recorded.

The system should have features to import the monthly revenue forecast data generated from other systems (online, batch file or spreadsheet).

This facility and the recorded revenue forecast data should be commonly available to Cash management and Treasury Ledger systems.

Revise Revenue Plans/Forecasts

The system should allow the user to revise the monthly revenue plan/forecasts as and when required. Details of each revision should be recorded in the system as historical data for reference purposes.

The user shall supply the revenue classification code and the controlling Bank Account Identifier for which revision is required and the system should allow the user to alter the monthly forecast figures. The system should ensure that the total of revenue forecasts for 12 months does not exceed the Central share of the current revenue estimate for the relevant revenue classification recorded in the Treasury Ledger system.

In the case of revising the foreign currency component of the monthly revenue forecast the system should have features to allow the user to revise the exchange rate, the amounts in foreign currency and local currency equivalent for each month.

The system should record the details of the revisions made for each revenue classification in the revenue forecast data as described under section 1.2. The revision date shall be supplied by the user. The system should extract the highest revision number pertaining to the effected revenue classification recorded in the database, increment it by 1 and record the resultant value as Revision Number for the current revision.

Maintain Debt Management Data

The system should have features to maintain the data of all Central government borrowings including the details of loan information, draw down schedule, repayment schedule, interest payment schedule, budget classifications for recording the loan receipts, repayments and interest payments and amounts involved in both foreign currency and local currency equivalent.

Normally loan receipts and repayments span over years for which the complete details shall be recorded in the external Debt Management system and the Cash Management system should record only those information that are relevant to the current fiscal year.

The entry of debt management data should be done only once for each loan either at the beginning of the fiscal year for the continuing loans or upon finalization of schedules for newly acquired loans. The system should also allow the user to revise the loan draw down schedule, repayment schedule and interest payment schedule as and when required during the course of the fiscal year.

The system must have features to allow the user to enter the details and to import the data generated from external debt management system or spreadsheets.

Enter bank account control data

The system should have features to allow the user to enter control information of bank accounts where the government financial resources that belong to the budget are kept.

Initially, the user shall enter only the Bank Account Identification Number, Bank Number, Bank Name, Bank Address, Bank Account Number and Beginning of the year Balance. This set of data shall be carried forward from year to year. The value for Bank Account Identification Number should be the corresponding ledger account number in the Treasury Ledger system against which the detail postings of the bank account are made. The value for Bank Account Description should be the name of the account such as "Treasury Single Account", "Special Project Account" etc. The remaining data elements viz. Progressive Balance and Daily Transaction summary data shall be updated daily as explained in the succeeding section.

Update banking data

The system should have facilities to update the banking data (i.e. Daily Transaction Summary data) for each bank account by the relevant data extracted from the Treasury Ledger System.

It is desirable to update the banking data on a daily basis, but the system should also allow the user to do the updating for a range of days in the case of delays in the data posting to Treasury Ledger. In such case, the system should have facilities to ensure that the dates for which updating has been completed are not included in the current update process. This is required to prevent from incorrectly posting the banking data for the same day more than once. The system should allow the user to reverse the postings already made for the day in case of transmission error.

Reconciliation of bank balances

The system should have facilities to reconcile the daily balance of each bank account maintained in the Cash Management system and produce Reconciliation statements.

For each bank account, the user shall supply the Bank Account Identification number and the date for which reconciliation is required.

The system should allow the user to enter the details of the Daily bank statement in particular, the opening balance, the closing balance, the details of deposits and withdrawals reported on the bank statement. In the case of reconciling the Treasury Single Account the user shall enter the deposits and withdrawals analyzed by Regional Treasury for detail reconciliation with the postings in the regional Cash Control accounts in the Treasury Ledger system.

The user shall also be allowed to enter other differentiating figures which are not available in the Treasury Ledger system such as:- “debits/credits in bank not in ledger”, “bank fees” etc.

The reconciliation data should be stored in the system temporarily until the user is satisfied with and confirmed the results. Upon user’s confirmation the system should update the Bank Account Control data by setting the Reconciliation completion status for the day to “YES”.

The system should allow the user to print the reconciliation statement as and when needed.

For reconciliation purposes, the system should have features to receive and import daily bank statement data transmitted from the Central Bank. The system should also have features to import bank statement data from a tape or a diskette.

Year end rollover

The system should have facilities to close off the records and create new set of records for the new year. The system should create a new database for the new year and copy the balances of all bank accounts to the new database.

The system should have facilities to copy the expenditure plan and revenue forecasts data from the old database to the new database at the discretion of the user.

The system should have facilities to retain the expenditure plan and actual, revenue forecasts and actual and bank account summary data for a minimum of five years.

Interface with other systems

The system must have on-line interface with the Treasury Ledger system to allow the exchange of data and the use of the same set of control information. Data required by the two systems shall be entered only once and must be available on-line to both systems.

The system must have both on-line and batch interface with the external Debt Management systems running in the Ministry of Finance and the Central bank.

The system must be capable of importing financial plan and revenue forecasts data generated from other external systems and spreadsheet packages.

Functional Process - 5. Debt & Aid Management

1. Debt recording and servicing: The debt management department receives the loan agreements from the donor/ lending agencies and registers the loan details in the system, including the disbursement and debt servicing schedules. The debt management department also records commitments related to debt servicing. On receipt of debt service bills, the department verifies receipts and payments due against the debt portfolio and forwards it the bills to the Treasury for payment. The Treasury processes these payment requests in a similar manner to that for other payment requests. On conclusion of the transaction the paying bank sends a list of payments to the treasury which in turn sends the list of debt related payments to the debt management department. These are used for re-conciliation purposes.

2. Loan receipts: The Debt management department and/or the spending ministry receives information from donor agencies about loans given to government. The Debt Management Department registers the loan agreement and the schedule of tranche releases for the loan. The money is deposited by the donor in the TSA Bank. Receipts are recorded by the treasury in the general ledger. Information on receipts is passed on by Treasury to the Debt management department which in turn passes it on to the concerned ministry/ spending unit.

3. Grant receipts: The Debt management department and/or the spending ministry receives information from donor agencies about grants given to government. The ministry forward the grant agreement to the Debt management department. The DMD registers the grant agreement and the schedule of tranche releases for the grant. The money is deposited by the donor in the TSA Bank. Receipts are recorded by the treasury in the general ledger. Information on receipts is passed on by Treasury to the Debt management department which in turn passes it on to the concerned ministry/ spending unit.

4. Issue securities. If the Cash management department finds that the cash requirements for a given period are more than the available cash balances in the TSA and associated accounts it asks the Debt management department to issue securities. The debt management department decides on the nature of securities to be issued and instructs the Central Bank to issue the required securities. Receipts on account of the sale of the securities are deposited in the TSA and the Central bank advises the MOF accordingly.

5. Recording guarantees as contingent liabilities and processing payments against guarantees. The debt management department will register guarantees given by government. These will be treated as contingent liabilities. The DMD will receive information from the beneficiary of the guarantee at the time the guarantee is initiated. At end of the guarantee period, the beneficiary will inform the DMD about liquidating the contingent liability. In the case of a call for payment against the guarantee the beneficiary will send a payment request to the DMD which, after verifying the existence of the liability, will request treasury to make the payment. Administer payroll and employee benefits.

Functional Requirements

The specifications described below are for a comprehensive system that covers loans, aid on-lending and guarantees. No distinction is made between external and domestic loans, as the system should be able to handle both.

The functional requirements can be divided into two parts: (a) the basic requirements for a debt management system that is able to record data regarding loan, aid and guarantee agreements; and (b) the interface of the debt management system with the various modules of the accounting system in particular the accounts receivable and payable modules.

Recording of Basic Loan/ Aid and Guarantee Data

The Debt Management System should provide for the registration of the following information (as a minimum) from the loan agreements:

- Loan number given to the loan by the borrower (unique number for each loan).
- Loan number given to the loan by the lender.
- Lender's legal name.
- Name of the borrower. For direct loans it is the Ministry of Finance. For guarantees and on-lent loans it will be the name of the enterprise receiving the loan.
- Particulars of the lender
- Particulars of the borrower
- Date when the loan agreement was signed.
- Date when the loan agreement became effective.
- Original loan amount and currency.
- Rate in domestic currency should be entered. The system calculates the amount in domestic currency.
- Loan purpose or project name.
- Type of direct loan/grant:
 - Budget loan
 - On-lending loan
 - Guarantee
 - Grant.
- Loan purpose by economic classification.
- Loan classification by term: (long, medium, or short- term).
- Tranche identifier.
- Currency in which the tranche is accounted. All amounts under the tranche should be converted to the tranche currency for reporting purposes.
- If loan conversion to a currency pool used, the system should accept a user-specified pool name.
- The disbursement period.
- Date of the loan tranche status change.
 - Date: Date of the loan tranche amount change.
 - Commitments: Original loan amount allocated for the tranche

- Additions: Additions to the loan amount allocated to the tranche
- Cancellations: If there are any cancellations of the loan amount allocated for the tranche, they must be entered there.
- Type of payment: Whether principal and interest or only interest.
- Charge: Type of initial charge such as commissions etc.
- Pool: User should be able to choose whether the data conversion to pool units should be used for pool
- Loans or the calculations should be based on amounts in the tranche currency.
- Type of calculation: The system should provide different types of calculations for each kind of fee.
- Waivers and moratoria
- Purpose code: Code of the category set by lender for loan.
- Purpose: Purpose of the allocated amount.
- Amount: Amount allocated.
- Special account: Account available for disbursements and payments of the tranche.
- Description: A facility for entering the description of the tranche terms.

Disbursements are amounts paid from a lender's tranche to a borrower. These amounts are used to calculate un-disbursed and outstanding amounts. For both borrowing and on-lending disbursements, the data to be entered is the same. Disbursements for on-lent loans and guarantees disbursed by the external lender to the end-user could be directly entered only for the on-lending side. The system could account for them in the same manner under either borrowing or on-lending.

The system should provide for the registration of the following details about disbursements (as a minimum):

- Date: Date when the disbursement becomes effective.
- Currency: Disbursement currency. May be different from tranche currency.
- Disbursement outstanding: Disbursement amount that will form principal outstanding balance.
- Disbursement received: Disbursement amount that is actually received, to be used to calculate the balance of accounts.
- Exchange rate tranche currency /disbursement currency: Exchange rate used to convert the disbursement from disbursement currency to tranche currency.
- Exchange rate tranche currency /pool currency: Exchange rate used to convert the disbursement from tranche currency to currency pool units.
- Exchange rate domestic currency /tranche currency: Exchange rate used to convert the disbursement from tranche currency to domestic currency.
- Direct payment: Applies only to on-lent loans. This should be marked if the disbursement is accounted for in the same manner for direct loan and on-lent balances.
- Special account: Account to which the disbursement was disbursed for borrowing category or the account used for disbursement in the on-lending category.
- Interest rate: Interest rate used to calculate interest. Applicable only if corresponding interest calculation models are used.

- Request no.: Number of disbursement request application sent to the lender.
- Request date: Date of disbursement request application sent to the lender.
- Receiver: The organization to receive the disbursement according to the disbursement request application.
- Purpose: The purpose of the disbursement according to the categories set by the lender.
- Record type: Explains whether the disbursement record is an actual disbursement or a balance, e.g., from a restructured loan.

Obligations are amounts due to the lender. There should be a facility for recording the actual billing information. There should be a facility for entering the forecasted payment schedules automatically or for entering them manually. Borrowing and on-lending obligations, could be treated the same way. For guarantees, the obligations to the lender could be recorded only on the borrowing side. The borrower's obligations to the government, such as penalties, guaranty fee, etc. could be recorded on the on-lending side. The following details regarding obligations should be provided for as a minimum:

- Period: Payment period used to calculate charges.
- Due date: Date when payment is due.
- Principal: Principal amount to be paid.
- Interest: Interest to be paid.
- Exchange rate tranche currency /pool currency: Exchange rate used to convert payments from tranche currency to currency pool units.
- Invoice: Billing information.
- Other fees: A table where all fees can be recorded. Fee amount and name must be entered for each record.
- Repayment currency: If the obligation is required in a currency different than tranche currency, the currency may be specified here.
- Exchange rate payment currency/tranche currency: Exchange rate used to convert the obligation from the tranche currency to the payment currency.

Payments: Payments are amounts paid to the lender, which must be related to the corresponding obligations. The system should provide for several payment records related to the same obligation record. The following details about payments must be recorded in the system as a minimum:

- Due date: A reference to an obligation record.
- Payment value date: Date when the payment was made.
- Amount: Amount paid.
- Type: Paid/ rescheduled/written-off.
- Payment order: Payment order information, such as payment order date and number.
- Bank account: Account used for the payment in the borrowing category or account to which the payment was made in the on-lending category.

Aid

The DMS should have the capability of validating and registering aid agreements. This facility could be the same as for the loan agreements and if the aid is forthcoming in tranches the system should be able to record the proposed tranches.

The DMS should have the facility of entering such memorandum items and retrieving them for reporting on the consolidated aid received by the government.

The DMS should have the facility of preparing annual forecasts of inflow of aid funds based on the aid agreements registered in the system. The system should be able to interface with the budget systems to record these budget proposals.

The DMS should have the facility of preparing annual forecasts of movement of government funds resulting from transactions pertaining to on-lending. The system should be able to interface with the budget systems to record these budget proposals.

Guarantees

The DMS should provide the facility of entering government guarantee agreements as contingent liabilities. The system should track such transactions separately.

The DMS should provide the facility for registering the information on the closure of the guarantee.

The DMS should have the facility of preparing annual forecasts of outflow of government funds resulting from the servicing of likely defaults of guaranteed payments. The system should be able to interface with the budget systems to record these budget proposals.

The software should have the capability of generating such user-defined reports and also for responding to ad-hoc queries raised by the user.

DMS should have the facility for reporting on:

- Debt sustainability analysis.
- Status of aid allotment.
- Strategic framework for borrowing.
- Reserves and exchange risk management.
- Statistical compilations such as overall effect on balance of payments etc.

Loans Given by Government

The DMS should have the facility for validating & registering the data pertaining to loans given by the government.

Interface with the Accounting Systems Modules

The DMS should be able to transfer information to the accounts receivable system regarding the disbursement schedules of loans.

The DMS should have the capability of entering the information about the disbursed tranches in the receipts management system.

The DMS should have the capability to interface with the accounts payables system and reconcile/ post the information of payments pertaining to debt servicing and repayment of loans.

The DMS should be able to record the actual billing information either from paper-based documents or from electronic files sent by the lender. The DMS should have the facility of calculating billing information and comparing it with the actual billing information received from the lender. It should also have the capability of generating forecasted payment schedules automatically or entering these manually. It should have the facility of interfacing with the Accounts payable module to submit the RFPs electronically and to transfer information about the forecasted payment schedules.

The DMS should have the capability of relating the amounts paid to the obligations recorded. It should be able to interface with the accounting system to retrieve the information about the payments made to the lender from the TSA. It should also be able to register the information about arrears in the accounting system.

The DMS should have the capability of setting up special accounts for loans. It should be able to interface with the Accounting system and retrieve information about the movement of funds in these special accounts which should be sub-accounts within the Treasury Single Account.

The DMS should be able to interact with the ACCOUNTING SYSTEM to transfer details about the disbursement schedule of monetary aid received from the donors.

The DMS should have the capability to enter information about the disbursed tranches in the database and register the effect of the delays in disbursements. It should be able to interface with the ACCOUNTING SYSTEM to retrieve information about the actual payment of the tranche into the TSA.

The DMS should interact with the fixed asset module of the ACCOUNTING SYSTEM to reconcile the acquisition/ creation of assets out of aid money, as reported by the beneficiary budget entity, with the aid recorded in the DMS.

The DMS should interface with the ACCOUNTING SYSTEM to retrieve the actual payment of the guaranteed amount and automatically liquidate the corresponding contingent liability.

The DMS should have the facility of automatically generating the requisite invoices for payment of loan tranches for loans given by government. The system should also be able to interact with the ACCOUNTING SYSTEM to transfer the RFPs electronically.

The DMS should interface with the ACCOUNTING SYSTEM to receive information about the actual disbursement of loans and should be able to register the payments into the loan accounts of the loanee.

DMS should have the capability of generating the invoices in accordance with the repayment dates in the loan agreement. The system should interface with the ACCOUNTING SYSTEM to register the corresponding receivables.

The DMS should provide a facility for entering the repayment advice received through the bank. It should also have the capability of posting these repayment details in the individual loan ledgers.

The DMS should be able to interface with the ACCOUNTING SYSTEM to retrieve the information on receipts pertaining to repayment of debt and should print reconciliation reports.

The DMS should provide the relevant report writer facilities. It should also provide facilities for retrieving user-specified information from the database whenever required.

Functional Process - 6. Budget Review and Fiscal Reporting

The Treasury System is used to produce periodic fiscal reports that give a consolidated picture of all receipts and expenditures and progress against budget targets. For these reports to be comprehensive, all items of receipts and expenditure need to be captured. The Government Chart of Accounts is the basis of the fiscal reporting process. These include the Fund, organizational, functional and economic classifications structure of the budget and the classification of account groups, assets and liabilities. As line ministries and spending agencies carry out their work programs, expenses and receipts are posted to the GL by the Treasury system by budget object. Ministry systems record physical on programs and projects. This information is forwarded to the MOF. The Treasury General ledger records receipts of various types of tax revenues, loan/ aid receipts, and debt servicing expenses. On the basis of this data the MOF can prepare overall fiscal reports that compare actual expenses and receipts with the budget estimates. These reports provide a status report and recommendations and action plans for corrective action during the course of the year. These could include revisions to spending limits, warrants, etc.

Functional Systems Specifications

Overall Fiscal Reports

The system must be capable of producing reports of the type given below as a minimum:

Financial status of the central government's budget—Year-to-date

This report shows the financial status of the overall Budget as of the date specified by the user.

Section 1. Progressive Revenue and Expenditure movement

Revenue: Year-to-date totals of revenue as of the reporting date and as of the preceding working day and the total for the reporting date for each Region.

Expenditure: Year-to-date totals of expenditure as of the reporting date and as of the preceding working day and the total for the reporting date for each Region.

Variance: The difference between year-to-date total of revenue as of the reporting date and year-to-date total of Central expenditure as of the reporting date must be shown.

Section 2. Selected revenues and expenditures that require continuous monitoring

The user shall specify the classifications of revenue and expenditure of which the treasury management want to continuously monitor the progress. The system should report under appropriate columns the year-to-date totals as of the reporting date and as of the preceding working day and the total for the reporting date for each of such revenues and expenditures classified by classification codes and descriptions.

Section 3. Receipts that are directly deposited into treasury single account

This section should show the progressive movements of receipts that are directly deposited into Treasury Single Account. In particular, year-to-date totals of such loans as of the reporting date and as of the preceding working day and the totals for the reporting date must be shown separately for medium, long term loans and short term loans.

Section 4. Availability of government's financial resources and statistical data

This section should show the following:

Availability of government's financial resources

- Cash balance in the Treasury Single Account as of the beginning of the reporting year
- Cash balance in the Treasury Single Account as of the reporting date
- Total of unspent warrants as of the reporting date
- Year-to-date total of Treasury Warrants
- Total of Treasury warrants issued during the reporting month before the reporting date
- Total of Treasury warrants issued during the reporting date
- Availability of free financial resources which is the difference between the cash balance in the Treasury Single Account as of the reporting date and the Total of unspent warrants as of the reporting date.

Statistical information

- Daily average of central government's shares of tax revenues recorded during the current five working day period
- Forecasted central government's shares of tax revenue for the remaining part of the reporting month
- Daily average of all central government's revenues recorded during the current five working day period
- Forecast of all central government's revenues for the remaining part of the reporting month
- Forecasted expenditure for the reporting month.

Financial status of the budget – progressive within present five working day period

This report should be produced at the end of each five working day period and should show movement of revenues, expenditure and cash resources during the reporting period. The report should contain four sections in which:

- Periodic movements of revenue and expenditure in each Region from the beginning of the reporting period,
- Spotlight on the selected revenues and expenditures that require continuous monitoring,
- Periodic totals of receipts that are directly deposited into Treasury Single account, and
- Availability of government's financial resources and statistical data required for managing cash resources and expenditure for the remaining period in the reporting month.

Monthly expenditure summary

This is a standard report showing Year-to-date expenditure information aggregated by budget classification codes and grouped in the order of spending unit, functional group, program, sub-program and specific of economic classification. The following financial data for each budget classification code shall be shown on the report with relevant group totals:

- ◆ Current plan for the year
- ◆ Year-to-date current financial plan
- ◆ Progressive total of treasury (financial) warrants
 - Year-to-date authorization
 - Authorization for the current month
 - Year-to-date recovery
 - Year-to-date offset
 - Year-to-date total
- ◆ Expenditure
 - Year-to-date payments
 - Payments for the current month
- ◆ Outstanding commitments
- ◆ Balance of unspent limits

“Year-to-date payments” of this report includes payments for the current month and offset totals.

“Outstanding commitments” include the difference between total commitments and paid commitments of spending units.

Monthly summary of state revenues

This report should show the monthly collection of the State Revenue by each revenue classification code and comparison with the plans. The report should show the following data for each revenue classification:

- ◆ Current plan for the year
 - Central budget
 - Local budget
 - Total
- ◆ Year-to-date revised plan
- ◆ Executed for current month
 - Central budget
 - Local budget
 - Total
- ◆ Year-to-date execution
 - Central budget
 - Local budget
 - Total
- ◆ Variance

Monthly revenue summary

This report should show the monthly collection of, by each revenue classification and comparison with the estimates. The report should show the following data for each revenue classification:

- ◆ Annual amount
 - Approved plan
 - Revised plan
 - Year-to-date current plan
- ◆ Executed for current period
 - Total Collection
 - Total Refunds
 - Total minus refunds
- ◆ Year-to-date execution
 - Total Collection
 - Total Refunds
 - Total minus refunds
- ◆ Variance

Comparison of current year revenues with previous year revenues

This report should show the comparison of Net Revenue (Collections minus Refunds) under each revenue classification for a user-specified month in the current year with the

same month in the previous year. The system should be capable of producing the report for:

- Receipts to Central budget;
- Receipts to Local budget; and
- Receipts to State budget (Central and Local combined).

In the case of comparison with revenue classification which is different from that used in the previous year for the same type of revenue, the system should use the built-in mapping facilities to determine the pair of corresponding codes and produce the comparison information.

Statement of government financial operations

On the basis of Expenditure Summary and Central Revenue Summary reports, the Monthly Statement of Government Financial Operations should be prepared. The report shall consist of 4 parts:

Part 1. Receipts

The analysis of revenue receipts by category, showing the receipts during the reporting month and Year-to-date totals compared with annual plan.

Receipts should be aggregated according to the scheme described below:

- Tax Revenue
- Non-tax revenue
- Revenues from Capital transactions
- Received official transfers (Grants)
- Repayment of credits from budget

Part 2. Payments and crediting

Expenditure

The analysis of expenditure by economic category showing payments during the reporting month and Year-to-date totals compared with annual plan.

Payments shall be aggregated according to the scheme described below:

Report item

- Salaries and wages
- Employer's contribution
- Purchase of goods and other services
- Utilities, transport and communication
- Other current services
- Services provided within state order
- Interest payments
- Subsidies and transfers
- Acquisition of assets
- Construction and renovation
- Purchasing of goods

- Purchasing of land
- Capital transfers

Lending

The total of lending for reporting period and Year-to-date total, compared to annual plan shown.

Part 3. Budget surplus/Deficit

This is the difference between the totals for Part 1 and those for Part 2.

Part 4. Financing

Ways of financing the budget deficit should be shown in this Part. In general total amounts received from sale of treasury bills, bonds and loans (domestic and foreign), grants received in cash etc. and the movement of cash resources should be reported.

The data should be aggregated according to the scheme described below:

Report item

- Domestic Borrowing
 - Central Bank
 - Bonds and securities
 - Other banks
 - Other domestic borrowing
- Foreign Borrowing
 - International financial institutions
 - International development organizations
 - Foreign states
 - Foreign commercial banks
 - Other foreign borrowing
- Repayment of state debts
- Increase / decrease in balance in treasury single account (TSA)
 - During reporting month difference between the beginning-of-month balance and the end-of-month balance in TSA.
 - Year-to-date difference between the beginning-of-year balance and the end-of-current-month balance in TSA.

Monthly budget payments by functional classification

This report shows the functional analysis of Central level aggregates of budget, payments and commitments information for each functional group, and sub-function with relevant sub-totals.

Reports Related to Management of Budget Authority, Commitments & Payments

List of expenditure budget classification codes

The report should list all budget classifications in use by the system together with appropriate descriptions. Budget classifications should be sorted and grouped in the order of relevant program, sub-program and institution.

Warrant listing

The report should list the details of funds allocated by each Treasury warrant. The Warrant number will be specified by the user.

Sub-warrant listing

The report should list the details of funds allocation under each sub-warrant.

Sub-sub-warrant listing

The report should list the details of funds allocation under each sub-sub-warrant.

Monthly funds movement

The report should show the details of funds allocated and committed under each expenditure budget classification code during the period before the reporting month, current month and year-to-date totals. A separate report shall be produced for each spending unit. Funds allocation under each expenditure budget classification should be analyzed by type of sub-warrant or sub-sub-warrant (Authorized, Recovered or Offset).

Periodic commitment details

The report should show the details of commitments made during the period specified by the user. The user shall supply the spending unit code, the start date and end date of the period to be reported and the system should produce a list of commitments made by the spending unit during the user-specified period.

Commitment summary year-to-date

The report should show the summary of funds allocation, year-to-date commitments made, outstanding commitments and funds balance under each expenditure budget classification code.

Periodic Commitment Summary

The report should show the year-to-date total of funds allocation, total of funds committed during the reporting period and balance of funds for each budget classification under each sub-warrant or sub-sub-warrant. A separate report shall be produced for each spending unit code. The user shall supply the spending unit code and the start date and end date of the period for which the report is required.

Outstanding commitments details

The report should show the details of all outstanding commitments as of the date of report grouped by each expenditure budget classification code.

Outstanding commitments summary

The report should show the totals of commitments, payments, outstanding commitments for each budget classification code. The report should be sorted in the order of expenditure budget classification codes and should show sub-totals for each expenditure sub-program, program and institution. At the end of the report the totals for the region should be shown.

Outstanding accounts payable summary

The report should show the total amount of planned commitments, accepted commitments, outstanding commitments for each expenditure budget classification code. A separate report should be produced for each spending unit.

Funds position analysis by budget classification

The report should show the progressive allocation of funds, commitments and funds balance for each budget classification. Allocation of funds should be analyzed by type of sub-warrant (Authorized, Recovered and Offset).

Funds distribution analysis of sub-warrants

The report should show the reconciliation of funds allocation by each sub-warrant with further allocation of funds by sub-sub-warrants and balance of funds under each expenditure budget classification code. A separate report shall be produced for each sub-warrant of which the code and serial number will be supplied by the user.

Funds distribution analysis of treasury warrants

The report should show the reconciliation of funds allocation by each Treasury warrant with further allocation of funds by sub-warrants and balance of funds under each expenditure budget classification code. A separate report shall be produced for each Treasury warrant of which the number and serial number will be supplied by the user.

Commitments and expenditure analysis by spending unit

The report should show the comparison of total funds allocation, payments, commitments and balance of funds for each spending unit.

Commitments and expenditure analysis by expenditure budget classification codes

The report should show the comparison of total funds allocation, payments, commitments and balance of funds for each budget classification.

Vendor name and address listing

The report should show the name and address and details of each vendor in the system. The user shall specify the number of a vendor or a range of vendor numbers for reporting.

Vendor business history details

The report should show the details of transactions recorded against each vendor. The user shall specify the number of a vendor or a range of vendor numbers for reporting.

Details of contract register

The report should show the details of each contract recorded in the contract register. The registered contracts should be shown in the order of Contract registration certificate number.

Details of contracted expenses requiring funds

The report should show the funds requirement for "Yearly" type expenses recorded in the contract register in the order of contract registration certificate number. A separate report should be produced for each Budget Organization.

Contract details

The report should show the details of funding, payment and outstanding obligations of each contract.

Summary of contract execution

The report should show the summary of contracts executed by each spending unit.

Free balance of financial plan for the year

The report should show the free balance of the financial plan for the year under each budget classification code and sub-warrant / sub-sub-warrant as of the reporting date. For each budget classification code the financial plan for the year, the list of registered contracted expenditures for which funds have been reserved, the details of sub-warrants / sub-sub-warrants issued year-to-date. A separate report should be produced for each spending unit.

Outstanding contractual obligations

The report should show the list of outstanding contractual obligations of each spending unit.

Audit trail

The system should keep track of all changes made in the system in the system audit tracing and be able to print the audit trail report as and when required. The system should allow printing the audit trail report for the entire period or for the user-selected date(s).

Payroll Reports

Payroll report

This report should list payment and deduction details of all employees grouped in the order of employing State Institution and cost code.

The report should show on a separate line for each employee, columns with appropriate headings for Name, Id. No., details of allowances, benefits, deductions, total pay, total deduction and net pay etc. At the end of each group and sub-group there should be sub-totals for each column as well as the calculation of Employer's contributions to Pension fund, and Social Tax.

It should show details for each employee right down to individual allowances, bonuses and deductions.

Employee status report

The report should detail the list of all employees who are, for whatever reason, not paid in the current payroll. Normally, the list should contain all employees whose employment status is not "Active". It must include all employees affected by Rejection reports (lack of funds available), Exception Reports (negative pay) and "UNPAID" due to withholding by the Treasurer. The list of employees should be grouped in the order of Location (Disbursement Centre), employing State Institution and cost code.

Payroll rejection report

The system should produce a report detailing the cost codes that do not have adequate funds to meet the payroll expenditure for employees whose salaries are paid against those cost codes.

The contents of the report should be grouped in the order of employing State Institution, sub-warrant/sub-sub-warrant number and budget classification showing appropriate sub-totals and position of funds at the end of each group and sub-group.

Payroll exception report

This is of similar format to the Rejection Report and details employee identification numbers, with their employing institutions, of persons whose pay has been calculated to be a negative amount in this run (ie. Deductions exceed payments). It also provides details of how the negative pay is arrived at.

Bank deposit details

This is a set of separate reports, for cash payments, card account deposit details and deposit account details, and all in the same format, listing the details of employees, their bank details (such as bank code, account number etc.) and amounts for those employees whose preferred method of payment is 'by direct bank deposit'. This report shall be produced separately for each bank and will be forwarded to the bank(s) of the employee(s) together with one payment order for each bank. The amount of each payment order should be the total of payments made to the employees who have their accounts with the concerned bank.

Pay sheet

This report is used by Paymasters at disbursement centers to distribute cash payments and obtain employee signature as confirmation of receipt. Employees paid out of Chargeable Services Accounts must have an asterisk marked alongside their Employee Identification Number in the printout.

Statement of employee's earnings

This report shall be produced at the end of each year for each employee for tax clearance and tax audit purposes. The report details the following:

- State Institution name and address
- Employee's name and address
- Employee Identification Number
- Employee's Tax Payer Registration Number
- Year of the statement
- Period of Employment
- Total salaries earned during the year
- Total of taxable allowances and bonuses earned during the year
- Total gross earnings for the year
- Total tax withheld for the year

Employee listing

This is a type of report, of which the form in the attachment is an example that lists the details of employees such as Employee identification number, Name, Designation, Education, Employer's name and address etc.

The system should allow the user to select the employees by various types of criteria such as selection by age, by education, by employing organization, by employee identification number range, by salary range etc.

The system should also allow the user to tailor the layout of the report by selecting the data to be reported based on the requirement of the enquiry.

Pay and allowance by pay period

This report lists the summary of salaries, allowances and other benefits paid to employees within the State Institution for each month during the period specified by the user for report coverage. *For example:* January 95 to March 96. The system should produce a report for a State Institution or selected State Institutions as specified by the user.

Deductions by pay period

This report, similarly to 'Pay and Allowance by Pay Period' report details the summary of different types of deductions deducted from payroll for each State Institution for each month during the period specified by the user for report coverage.

Employee pay history - summary

This report is the summary of an employee's salaries, allowances and deductions for each month during the period specified by the user for report coverage.

Listing of allowances and bonuses

This report details the codes and descriptions of allowances and benefits defined in the payroll system.

Listing of deductions

This report details the codes and descriptions of deductions defined in the payroll system.

Listing of disbursement centers

This report details the codes, Names and Addresses of Pay Disbursement Centers defined in the payroll system.

Listing of cost codes

This report details the sub-warrant/sub-sub-warrant number and budget classification codes used in the payroll system for cost coding and the name and address of the state institutions.

Listing of positions

This type of report lists the job positions established in the payroll database. The system should produce the report for a State Institution or selected State Institutions selected job positions as specified by the user.

Reports Related to Receipts Management

Revenue classification listing

The report should list the valid revenue classification codes together with appropriate descriptions, initial and current plan amounts for the year for State, Central and Local revenues.

Details of local governments

The report should list the details of each local authority established under the Region

Listing of collectors

The report should list the details of each Collector of Public Monies appointed in the Region.

Listing of revenue sending banks

The report should list the details of each Revenue Sending bank.

Listing of control accounts

The report should list the details of each revenue-related control account showing the opening balance at the beginning of the year, the entries made to the account and the current balance. The system should allow the user to produce either summary or detailed report.

Listing of districts

The report should list the details of each District.

Progressive revenue collection report

The report should show the revenue collection up to the user-specified date analyzed by revenue classification showing appropriate group totals.

Monthly analysis of revenue

The report should show the totals of collections, refunds, journals and net revenue for each revenue classification.

Monthly allocation of revenue shares

The report should show the details of the sharing of revenues between Central and Local budgets for each revenue classification during the user-specified month.

Monthly comparison of revenue plan and actual receipts

The report should show the comparison of plan and actual receipts for each revenue classification including appropriate sub-totals.

Daily revenue collection report (analysis by revenue classification)

The report should show the daily totals of receipts, refunds and net receipts of State government revenue for each revenue classification with appropriate sub-totals. The report should show the information for all revenue classification codes for all Districts established in the system. Revenue classification codes that do not have transactions for the reporting day should not be shown on the report. The same reporting method should

be applied to Districts that are not entitled to shares of any revenue classification for the day.

Year-to-date revenue collection report (analysis by revenue classification)

The report should show the year-to-date totals of receipts, refunds and net receipts of State revenue, with appropriate sub-totals. The report should show the information for all revenue classification codes for all Districts established in the system. Revenue classification codes that do not have transactions since the beginning of the year should not be shown on the report. The same reporting method should be applied to Districts that are not entitled to shares of any revenue classification for the reporting period.

Daily revenue collection report (analysis by district)

The report should show the daily totals of collection and sharing of revenues for each District with appropriate sub-totals. The report should show the information for all revenue classification codes for all Districts established in the system. Revenue classification codes that do not have transactions for the reporting day should not be shown on the report. The same reporting method should be applied to Districts that are not entitled to shares of any revenue classification Year-to-date as of the reporting day.

Year-to-date revenue collection report (analysis by district)

The report should show the year-to-date totals of collection and sharing of revenues for each District with appropriate sub-totals. The report should show the information for all revenue classification codes for all Districts established in the system. Revenue classification codes that do not have transactions since the beginning of the year should not be shown on the report. The same reporting method should be applied to Districts that are not entitled to shares of any revenue classification for the period.

Daily revenue sharing worksheet

The report should show the revenue sharing information for the user specified day. For each revenue classification, the total, the sharing rates, the Central share and local shares (separately for Districts and Regions) of revenues must be shown.

Details of daily revenues collected by banks

The report should show the details of revenues collected by each Revenue Receiving Bank analyzed by revenue classification.

Summary of daily revenues collected by banks

The report should show the summary of daily revenues grouped by revenue classification and analyzed by Banks.

Collector statement details

The report should show the revenue collections selected by the user-specified Collector number and Collector statement number.

Summary of daily revenues collected by collectors

The report should show the revenues collected by collectors for the user-specified date analyzed by revenue classification and sub-total for each revenue classification.

Daily revenue collection summary

The report should show the total of revenues collected on the user-specified day by each bank and collector.

Journal listing

The report should show the details of each journal entry posted to the Revenue Management System. In particular, journal number, date, codes and descriptions of accounts, the amounts of debits and credits, the narration, totals for debit and credit entries.

Analysis of daily local budget revenue shares

The report should show the total amount of sharable revenues collected for the day, the Central share, the local share and the distribution of revenue shares to various local governments within the Region

Daily local budget revenue sharing report

The report should show the daily revenue shares, deductions due from revenue refunds and net amounts due to each local government analyzed by revenue classification.

List of payment orders

The report should show the details of payment orders received on the date specified by the user. The reported payment orders shall be sorted in the order of Local government, Revenue classification and bank number. Sub-totals for each bank, revenue classification and local government and the Daily total should be shown.

Daily revenue refunds

The report should show the details of revenue refunds processed on the user-specified date sorted in the order of revenue classification. Sub-totals for each revenue classification, and the day total should be shown.

Daily inter-classification transfer of revenues

The report should show the details of revenues transferred from one classification to another on the user-specified day.

Daily transfer of revenues among tax offices

The report should show the details of revenues transferred on each day from one tax inspectorate to another. The system should allow reprinting of the report for the user-specified date

List of revenue classifications sharable between central and local budgets

The report should list the revenue classifications representing State taxes that are sharable between Central and Local budgets according to the presidential decree on Central budget. The report should also show the description and the sharing rate of Central share for each revenue classification.

List of revenue classifications for sharing of state taxes to district and city authorities

The report should be produced separately for each local government and should list the revenue classifications representing State taxes, and the share percentage for each revenue classification.

List of local budget revenue classifications

The report should list the revenue classifications with relevant descriptions that are dedicated to local budget.

List of central budget revenue classifications

The report should list the revenue classifications.

List of revenue classifications for which revenues are shared manually

The report should list the revenue classifications with relevant descriptions for which the revenues are distributed manually.

List of incorrect revenue payment orders

The report should show the list of incorrect payment orders with the payer's bank details, recipient's bank details (bank code and bank account number), that do not correspond to the bank details of Regional Treasury, amount, payment order number and bank reference.

Revenue receipts summary report

This report should show the analysis of state and Central revenue receipts by revenue classification for the user-specified day. For each revenue classification, the total receipts of state and Central revenues for the day and the year-to-date total receipts of the same must be reported. Relevant sub-totals for each revenue category, class and sub-class and the grand total for all revenues must be shown. The required data shall be provided by Treasury Ledger system.

Revenue receipts detail report

This report should show the analysis of state and Central revenue receipts at two levels, firstly by revenue classification and secondly by Region under each revenue classification for the user-specified day. For each region under each revenue classification, the total receipts of state and Central revenues for the day and year-to-date total receipts of the same must be reported. Relevant sub-totals for each revenue specific, sub-class, class and category and the grand total for all revenues must be shown. The required data shall be provided by Treasury Ledger system.

Report Related to Cash Management

Monthly revenue forecasts

This report should detail the annual estimate, and the monthly forecasts for each month for each revenue classification with sub-totals for each revenue sub-class, class and category.

Monthly funds requirements summary

This report should show the monthly forecasted funds requirement by each ministry or institution.

Monthly funds requirement detail

This report should show the monthly forecasted funds requirement by each budget classification for each ministry / institution.

Monthly cash requirement summary

This report should show the monthly forecasted cash requirement by each ministry / institution.

Monthly cash requirement detail

This report should show the monthly forecasted cash requirement by each budget classification for each ministry / institution.

Forecasted financial position for the month

This report should be produced at the beginning of each month showing the comparison of forecasted monthly receipts of treasury committee and expenditures. Receipts should be aggregated by revenue category and expenditures should be aggregated by economic category.

Forecasted cash availability for the month

This report should be produced at the beginning of each month showing the balance of cash available in the account, summary of revenues forecasted for the month by treasury committee, projected loan receipts, projected cash expenditure for the month and the anticipated availability of cash for spending during the month. A separate report should be produced for each bank account viz. Treasury Single Account, Special Project Account etc.. Each report should show the forecasts of dedicated receipts which shall flow into the account and payments projected to be made out from the account.

Summary of bank transactions for the month

This report should show the balance at the beginning of the month, summary of daily deposits and withdrawals and the closing balance at the end of the month in each bank account.

Summary of bank transactions for the year

This report should show the balance at the beginning of the year, totals of deposits and withdrawals for each month and the closing balance at the end of the year in each bank account.

Bank transaction details for the month

This report should show the details of balances and transactions posted to each bank account during the user-specified month.

Unspent expenditure limits summary report

This report should show the unspent expenditure limits (warrants) accumulated under each economic classification, Year-to-date totals of allocated warrants, cash expenditures,

outstanding commitments, funds utilization and the balance of unspent warrants for each economic classification must be reported. Grand total for all economic classifications must be shown at the end of the report.

Unspent expenditure limits detail report

This report should show the unspent expenditure limits (warrants) accumulated by each budget institution, analyzed by economic specific. For each economic specific year-to-date total of allocated warrants, cash expenditures, outstanding commitments, funds utilization and the balance of unspent warrants must be shown. Sub-total for each budget institution and the grand total for all institutions must be reported.

Daily progressive budget withdrawal reports

This report should show the actual receipts of budget withdrawal amount for each day of the month by selected Regions/city.

Year-to-date actual receipts of budget withdrawal reports

This report is a year-to-date report and should show the tax receipts, non-tax receipts, revenue from capital transactions, receipts from revenue code 107101 and actual receipts of budget withdrawal by selected Regions/city.

Reports Related to Debt Management

DMS should be able to produce the following reports:

- Comprehensive information about individual loans/ guarantees/ on-lending and investments.
- Summaries of debt stock by currencies, lenders and other characteristics.
- Tables showing disbursements, payments due and payments made.
- Calculations of debt service.
- Tables on annual borrowing ceilings for the budget.
- Tables for balance of payment accounts.
- The impact of new borrowing.
- Sensitivity testing for interest and exchange rates.
- Calculation of concessionality and loan present value.
- Calculations of debt indicators and ratios.
- Reserves risk management.
- Summaries of external debt.
- Transaction details. Billing information.
- Short-term and long-term debt forecasting.

General Specifications

The system should have facilities to perform the functions described below:

Beginning of the Year Procedures

Define accounting calendar

The system should allow the user to define the accounting calendar for the current fiscal year by entering the Accounting period number, start date and end date for each accounting period. In general the system should allow the definition of accounting calendar by month, by quarter, by week or by any user-defined period.

The system should ensure that the start date for each accounting period (with the exception of the first period of the year) is consecutive to the end date for the preceding period without any day/period omitted or overlapped.

Upon confirmation of the accounting periods and dates by the user the system shall create an additional period beyond the end date for the last period in the year with an open end date. This period will be used for posting adjustments after the accounts have been closed at the end of the year.

It should be possible to create, add, delete or modify the chart of accounts and it should be possible to restrict this facility to the authorized organizational levels.

Entries to posting level codes should automatically be rolled up to summary levels.

Data Aggregation from Regional Systems

The system should have features to collect the aggregated revenue and expenditure data from the Treasury system running in Regions. The following information should be collected daily as a minimum from Regions:

Identification data

- Date, batch number, regional identifier, accounting period, transmission date

Transaction data

The data should include budgetary receipts, budgetary payments, receipts and payments from accounts of funds from chargeable services, deposit accounts, postings to procedural control accounts for the day aggregated by budget classification codes or account number with relevant totals and record counts. For each budget classification or account the following data are required as a minimum:

- posting date,
- budget classification code or account number,

- total debits for the day,
- total credits for the day,
- year-to-date commitments, and
- appropriate hash controls to ensure data integrity.

Control data for each section (central/ local)

- Debit total, credit total, record count and appropriate hash controls to ensure data integrity.
- The system should ensure that the debit total agrees to the credit total.

Post regional accounting data

The system should have features to update the Central and local ledger accounts with the data collected from Regions.

Data integrity checking

Prior to the posting of data to relevant ledger accounts the system should check the integrity and validity of data contained in each batch. In particular, the system should ensure that:

Data Posting to Ledger Accounts

The system should update the appropriate ledger accounts with data from relevant sections in the batch that passed the data integrity checking

For each expenditure account the system should compare the resultant Running Balance (Total debits — Total credits) with the Year-to-date total of Warrants. Any expenditure account detected by the system whose Running total exceeds the Year-to-date Total of Warrants, the system shall produce the report at the end of the posting process.

The value for “Year-to-date Commitments” should be the Year-to-date Commitments amount of the corresponding record.

For each expenditure account code the system should compare the Year-to-date Commitments figure with the Year-to-date total of Warrants. Any expenditure account detected by the system whose Year-to-date Commitments exceeds the Year-to-date Total of Warrants shall be reported at the end of the posting process.

Finally, the system should update the relevant Batch control record with appropriate values for Status of Batch, Date Posted, Total debits and credits posted to Central budget accounts and Total debits and credits posted to Local budget accounts.

Accounting journals

The system should have facilities to process Accounting Journals.

Daily trial balance

The accounts in the Treasury Ledger must be closed on a daily basis. The progressive debit and credit balances in all ledger accounts must be totaled every day and a Daily

Trial Balance must be produced by the system to confirm that the debit entries match the credit entries.

Balances in the Cash Control Accounts of all Regions and the Central Treasury should be added up as part of the Daily Trial Balance to determine the current balance in the Treasury Single Account for reconciliation with the daily Statement from personal account provided by the central Bank .

The system must be capable of re-producing the Trial Balances for the previous days for which the user shall supply the date(s).

Monthly on the basis of data posted to the system and reflected in the Balance and extra balance accounts accounting book, user shall print the Balance of budget execution by accounts. Besides, the balance should show the amounts of extra balance accounts. Extra balance accounts of the Treasury include the government reserve, repayable credits, and loans, deposits to the Government, etc.

Reconciliation of Daily Postings to Treasury Single Account

The system should have facilities to prepare a statement reconciling the daily cash movements in Cash Control Accounts in the Treasury Single Account against the figures reported on the Daily Account Statement provided by the Central Bank .

The system should provide Manual and Automatic facilities for reconciliation of account postings.

The system should have facilities to receive the Daily Account Statement data transmitted by the Central bank, automatically import the data into the Reconciliation facility and produce a Reconciliation Statement. The format of Central bank Daily Account Statement and required controls including hash control or checksum digits shall be discussed during the software customization.

End-of-Year Closing of Accounts

It may require some time to finalize the revenue and expenditure accounts of the former year after the end of the fiscal year, concurrently with the operations of the current year's accounts. The system should therefore establish necessary accounts for the new year as will be determined by the user and allow keeping the accounts for the two years active until such time the system administrator confirms that the accounts for the former year have been finalized and should be closed.

After the accounts for the former year have been closed, the system should not allow the user to post any entry into the accounts. The user should be allowed only to make inquiries or produce reports on the former year's accounts.

Create new database

The system shall establish a new set of data for processing of the new year's accounts separately from the current year's accounts.

The system should allow the user to carry forward the following data to the new year's database:

- Codes of budget classification (functional, institutional, economic), including description,
- Chart of Accounts, including description,
- Balances of Cash Control Accounts,
- Balances of Procedural accounts,
- All necessary spending unit data,
- The table defining the linkage between account numbers of Chart of Accounts and functional, institutional and economic classification,
- Table of transfer from budget classification codes of the previous years to the current year.

The system should reset the values of approved plan, revised plan, current plan, and Year-to-date total of warrants for each expenditure account to Zero.

The system should clear the values in Revision History data for each expenditure account and revenue account.

The values of each data element in Warrants, Accounting Journal and Monthly Financial data shall be cleared.

Close off previous year's accounts

Upon completion of the necessary year-end adjustments to revenue and expenditure accounts, the system should allow the user to perform the following:

- Post a journal entry to transfer the balances in revenue account by budget classification codes to the credit side of State Consolidated Fund and the balances in expenditure account under various classifications to the debit side of State Consolidated Fund;
- Carry-forward the resultant balance of State Consolidated Fund to the new year's accounts;
- Aggregate the revenue collection and refund under each revenue budget classification code by each month and record the monthly totals in the previous year's accounts;
- Produce year-end reports; and
- Lock the database from further postings or changes.

If the user wishes to purge the detail transaction data in order to conserve disk space, the system should allow purging the records only after the database has been locked as described in 4.

The system should ensure that the data has been summarized to a higher level before purging any detailed data record.

The system should also ensure that a complete archive of the database is taken before the purging process. The system should allow the user to restore the purged data when necessary.

Miscellaneous

Data Import and Export Facilities

The system should have features to import financial data generated from external systems such as Cash Management system and Commitment Accounting systems running at Regions, ministries and institutions.

The system should also have features to export data from the Treasury Ledger organized in a user-defined layout to external systems.

The system must also have features to receive banking data transmitted by the Central Bank and import the data into the system for reconciliation purposes.

Interface with Other Systems

The system must have on-line interface to the associated Cash Management System that runs on the same hardware. The two systems must share the same reference data, e.g. Monthly Financial Plan. The data required by the two systems must be entered only once and must be available to both systems.

Backward Mapping of Account Codes

There may be cases where:

- an account code or budget classification code used in the past years has been replaced by a new code in the current year; or
- an account code or budget classification used in the past years has been split into two or more codes; or
- account codes or budget classification codes used in the past years have been merged.
- Codes of accounts or budget classifications of the previous years have been excluded and other cases.

In such cases, the system must have facilities to map the account codes and budget classification codes of the current year with the corresponding codes of former years.

The system should be able to handle different currencies and convert amounts from these currencies to local currencies and vice versa.

Security Features

The system should support the following security features:

- The system must allow for the definition and maintenance of a unique identifier for each user at a location.
- Access to the system must require at least two separate identification components such as user code and password.
- User access to the system and to each function within a module must be controllable.
 - The system should allow for different categories of security:
 - For systems administrators with unrestricted access.
 - For update access.
 - For delete access.
 - For inquiry only.
 - A combination of the above.
- The system should provide transaction level access control within a certain functions.
- The system should log all unsuccessful user access attempts.
- In case of three consecutive unsuccessful user accesses from the same workstation, the system should disable the workstation.
- The time in which a user is logged off a user session in case there is no activity at the workstation should be parameter driven at the global level.
- Only users with system administrator access control should have the privileges to change a user's access control.
- The frequency with which user access control codes are changed should be parameter driven.
- Remote users should have a separate access control code for logging on to the server.
- Electronic files transferred between nodes of the system network should be encrypted on transmission and decrypted on receipt.

Recovery and Data Integrity

- The application software must ensure data integrity in the event of a hardware or software failure.
- The application must allow for recovery of processing after a hardware or software failure.
- The system should provide control features such as input and update counts, batch totals, update audit listings, error report generation etc.

DATA ARCHITECTURE- DATA ENTITIES CREATED BY TREASURY FUNCTIONAL PROCESSES

<i>Functional Process</i>	<i>Data Entities Created</i>	<i>Definition</i>
<p>1. Management of Budget Authority:</p> <p>1. Apportionment and Allotment: After approval of the annual budget by Parliament it is loaded into the system by the Budget Department of the MOF. The approved budget for spending ministries is then broken down to the detailed level of economic classifications and is apportioned over time (quarters and months) and is registered in the system by the MOF and communicated to the spending ministries. The spending ministries, in turn, register the detailed budget for their subordinate spending units and communicate the allotments to the spending units. These are the spending limits for the spending ministries and spending units by quarter/ month for the fiscal year. Spending limits may be varied during the course of the year in accordance with the results of monthly or quarterly reviews of budget performance. For example changes may be caused by variations in the revenue forecasts, commitment and expenditure patterns, etc.</p>	<p>Approved budget</p> <p>Apportionments</p> <p>Allotments – spending limits</p>	<p>Description of approved programs and projects to be executed by line agencies during the year and amount of funds voted.</p> <p>The approved budget, for ministries, broken down to the detailed level of economic classifications and apportioned over time, i.e. by quarters or months.</p> <p>The approved budget for spending units, broken down to the detailed level of economic classifications and by quarters or months.</p>
<p>1. Management of Budget Authority:</p> <p>2. Warrant allocation: Each year, financial plans detailing projected outlays and receipts are developed by spending units and ministries. As the year progresses, sector agencies prepare periodic requests for funds by economic category, which are also captured. The MOF then issues warrants to ministries for each category of spending. From these amounts the ministries issue sub- warrants for their spending units and advise the appropriate spending units. These processes take place periodically through out the year. The warrant and sub warrant amounts need to be within the amounts specified in the spending limits for these organizational units. Warrant amounts are determined in the light of the results of periodic budget reviews, revised revenue forecasts and cash balances.</p>	<p>Financial plans/cash requirements forecasts</p> <p>Periodic cash Requirements</p> <p>Warrant/ sub-warrant allocations</p>	<p>Line agencies' and spending units projections of expenditure and requirements of cash, based on known and anticipated commitments for both recurrent and capital expenditures for planned programs and projects.</p> <p>Line agencies' and spending units periodic (monthly) requests for cash projections based on approved financial plans.</p> <p>Periodic release of funds by the MOF through the Treasury to Line Ministries and by the Line Ministries to subordinate spending units by type of expenditure. Warrants and sub-warrants give the spending agency</p>

<i>Functional Process</i>	<i>Data Entities Created</i>	<i>Definition</i>
		and the Treasury the authority to process payment requests up to this amount.
<p>1. Management of Budget Authority:</p> <p>3. Budget transfers/ virements: Normally the Budget Law permits the MOF, the spending ministries and the spending units to shift the approved budget between organizational and object classifications within restrictions set by the relevant laws. Shortfalls identified by spending units in one or more economic categories may be met from excesses in other economic categories in their budget. For this, a budget transfer request needs to be processed. For some items and within certain thresholds, spending units may have the financial powers to make the transfer themselves. For these cases, they will update the budget data base in the system. For cases which are beyond their financial powers, they will request the parent ministry or MOF to process the transfer, depending on the type of transfer. If approved, the Ministry / MOF will process the transfer and update the data base. The spending unit will be informed of the decision on the request.</p>	Budget transfers/ virements	Permission to the spending ministries/ spending units issued by the competent authority to shift the approved budget between organizational and object classifications within restrictions set by the relevant laws.
<p>1. Management of Budget Authority:</p> <p>4. Supplementary budgets: During the course of the year revisions to the approved budget may be carried out by the Parliament. These revisions are carried out in accordance with the procedures for finalizing the original budgets. The process of preparing supplementary budgets covers the preparation, routing and approvals of requests for a supplementary budget. Supplementary budgets are normally presented to the Parliament for approval at mid year</p>	Supplementary budget authorizations	Revisions to the approved budget normally carried out by the Parliament at mid year, to meet shortfalls in budget allocations.
<p>2. Commitment of Funds:</p> <p>1. Procurement of goods and services. (Spending units process transactions directly through regional treasury offices.) As the year progresses, spending units process requests for goods and services. After verifying the appropriateness of the expenditure and availability of budget and spending limit, the spending unit will process the procurement request according to prescribed procedures and place a purchase order on a vendor for the procurement of goods and services. The vendor should be registered in the database of vendors.</p>	<p>Procurement requests</p> <p>Purchase orders</p>	<p>Request for procurement of goods and services made by staff in line agencies. The request needs to be authorized by line agency managers after determining validity of request and availability of budget allocations and spending limits.</p> <p>Order for the purchase of goods and services issued by line agency or central supply organization specifying goods and services required and time</p>

<i>Functional Process</i>	<i>Data Entities Created</i>	<i>Definition</i>
<p>The spending unit will then register a commitment in the system and block the corresponding amount from the available budget and spending limit. The commitment transaction is forwarded to the parent ministry and the MOF-Treasury regional office that will process the payment against this commitment.</p> <p>Alternatively: (Case 2: Spending units route their transactions to the spending ministries which then process send them through the relevant treasury office. Treasury does not have a regional network).</p>	Commitment transactions	<p>of delivery.</p> <p>Transaction setting aside funds as a result of approval of specific requests for procurement of goods and services and issuance of corresponding purchase order</p>
<p>2. Commitment of Funds:</p> <p>2. Creation of a new staff position and recruitment to this position. The Spending agency prepares the position description and requests the Line ministry for approval. The Line ministry reviews from a requirements stand point and forwards the request to the MOF. The MOF approves after reviewing against budget availability. After the position has been created, the spending unit may carry out recruitment to this position in consultation with the parent ministry. After recruitment, the personnel data base and the commitment amount relating to monthly salary and benefits for the spending unit need to be updated.</p>	Staff position	<p>Specifications of an appointment in government. Positions are specified in terms of position titles, job descriptions, grade level for the position, giving the range of starting and ending salaries that an incumbent will receive.</p>
<p>2. Commitment of Funds:</p> <p>3. Payroll commitments. The spending Unit calculates the payroll commitments on the basis of staff on board and the authorized pay and allowances for staff. These are checked against budget availability and then advised to the spending agency and the MOF. Salary commitments may be advised only once a year on an estimated basis and adjusted as necessary during the year. Changes would be necessary if the pay and allowance structures change, staff on board are promoted, new staff are added or staff reductions occur</p>	Payroll commitments	<p>Estimated monthly payroll costs for a spending unit based on the numbers and grade levels of staff on board, and the financial allowances and benefits allowed to them.</p>
<p>3. Payments and Receipts Management:</p> <p>1. Verifications of goods and services receipt and payments. Case 1: Spending units route their transactions through the relevant Treasury office which, after examination, sends a payment order to the bank where the TSA is held. The process starts with the receipt of goods and services. These need to be validated against the purchase order and a verification of receipts report is generated and entered into the system. On receipt, the invoice from the vendor</p>	<p>Goods receiving report/certificate of completion of services</p> <p>Bills/ invoices</p>	<p>Certificate of receipt of goods/delivery of services required prior to release of payment</p> <p>Request for payment made by vendor to line agency for goods and services procured by that agency against a purchase order</p>

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is checked against the receipts report, the purchase order and the payment approval process commences. The requests for payment are examined with reference to the available budget (spending limits, warrants) and the existence of a prior commitment. After approval, the request is sent to the cash management section and scheduled for payment. The list of completed payments received from the TSA Bank (normally the Central Bank) is used for reconciliation of records at the Treasury and the Spending Unit.	<p>Payment order</p> <p>Payments</p> <p>Check</p> <p>Accounts payable ledgers</p>	<p>Authorization for payment against a bill or invoice made by line agency finance officials or treasury/MOF officials after determining availability of funds</p> <p>Amounts of funds written off to expenditure for accepted commitments on the basis of approved payment documents.</p> <p>Financial instrument authorizing recipient to draw money from line agency account with the treasury or authorized servicing bank</p> <p>Record of payment and payable transactions carried out over the fiscal year</p>
<p>3. Payments and Receipts Management:</p> <p>2. Payroll payments. The Spending Unit computes the salary of the employees on its rolls. This involves, updating the data base for three types of change.(a) Changes to the employee's data that would impact the salary. This includes changes such as promotions, addition of new allowances etc.. (b) Changes to the employees general data such as transfers, change of address, account number etc. and, (c) Changes that would impact the employee salary only in the current month. After these updates, the spending unit computes the payroll. This is validated against the authorized position list for the spending unit. The request for payment is then forwarded to the Treasury for approval and payment. The Treasury approves this request after checking the available budget (spending limits, warrants) and the authorized position list. The request is then sent to the cash management section and a payment order is sent to the TSA Bank to deposit the appropriate amount in the employee's Bank account. In case employees do not have bank accounts, the TSA bank may make the cash available to the spending unit for the payment of salaries. Authorize expenditures</p>	<p>Personnel data base</p> <p>Payments related to payroll</p> <p>Payroll and benefits</p> <p>Pension data</p> <p>Payments related to pension</p>	<p>Master data for each employee in a government agency</p> <p>Payroll payments made to civil service employees</p> <p>Payroll and benefits data for each employee. These figures are computed by the payroll and benefits processing program.</p> <p>Pension details for amounts paid out to pensioners.</p> <p>Pension payments made to government pensioners</p>
<p>3. Payments and Receipts Management.</p> <p>3. Receipts. Government receipts are paid through payment orders issued by the payee on his Bank. The Bank transfers the payment to</p>	Tax revenue receipts	Receipts of government tax revenues paid into the treasury

<i>Functional Process</i>	<i>Data Entities Created</i>	<i>Definition</i>
the Treasury single Account at the Central bank. The Treasury monitors the deposits of Government receipts through daily statements received from the Bank. The Treasury implements any revenue sharing arrangements that are in place between the central government and the sub national governments etc. and posts the detailed revenue category wise figures in the General Ledger and informs the relevant SU or revenue collection department of the receipts.	Non-tax revenue receipts Revenue sharing rules Accounts receivable ledgers	Receipts of government non-tax revenues paid into the treasury Rules for sharing revenues between the center and sub- national levels of government Record of receipts/receivable transactions carried out over the year
4. Cash Management: 1. Expenditure and revenue forecasting, 2. cash monitoring, 3. Borrowing strategy. The cash management department receives expenditure and revenue forecasts from the spending ministries and from the debt management department on debt servicing expenditures. The revenue collection agencies prepare revenue forecasts. The Cash management department examines this data with respect to the accounting data booked in the TGL, the Debt management database and the cash balances in the TSA and its component sub- accounts. This enables it to determine the liquidity position of the government and shortfalls/ surpluses. This information form the basis of the MOF determining the borrowing requirements and the spending limits and warrants for spending ministries and units.	Expenditure Forecasts Revenue Forecasts Cash balances	Estimates of cash requirements made by spending units at the start of the year and revised periodically specifying the amount of money required at specific times of the year for each major category of economic expenditure such as salaries, goods & services procurements, etc. Estimates of inflow of tax and non tax receipts for year made by the revenue collection departments. Revenue forecasts are made at the start of the year and revised periodically on the basis of actual out turns. Balances in the Treasury single account and or designated bank accounts. Cash balances are effected by expenditure / receipt transaction that would impact the TSA/ designated account.

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<p>5. Debt & Aid Management:</p> <p>1. Debt recording and servicing: The debt management department receives the loan agreements from the donor/ lending agencies and registers the loan details in the system, including the disbursement and debt servicing schedules. The debt management department also records commitments related to debt servicing. On receipt of debt service bills, the department verifies receipts and payments due against the debt portfolio and forwards it the bills to the Treasury for payment. The Treasury processes these payment requests in a similar manner to that for other payment requests. On conclusion of the transaction the paying bank sends a list of payments to the treasury which in turn sends the list of debt related payments to the debt management department. These are used for re-conciliation purposes.</p>	<p>Debt portfolio</p> <p>Debt service payments</p> <p>Grants and other payments</p>	<p>Details pertaining to each debt instrument held by the Government</p> <p>Debt service payments made for government borrowings</p> <p>Payments related to grants, subsidies, etc.</p>
<p>5. Debt and Aid Management:</p> <p>2. Loan receipts: The Debt management department and/or the spending ministry receives information from donor agencies about loans given to government. The Debt Management Department registers the loan agreement and the schedule of tranche releases for the loan. The money is deposited by the donor in the TSA Bank. Receipts are recorded by the treasury in the general ledger. Information on receipts is passed on by Treasury to the Debt management department which in turn passes it on to the concerned ministry/ spending unit.</p>	<p>Loan Receipts</p>	<p>Receipts of government loan proceeds/ grants paid into the treasury</p>
<p>5. Debt and Aid Management:</p> <p>3. Grant receipts: The Debt management department and/or the spending ministry receives information from donor agencies about grants given to government. The ministry forward the grant agreement to the Debt management department. The DMD registers the grant agreement and the schedule of tranche releases for the grant. The money is deposited by the donor in the TSA Bank. Receipts are recorded by the treasury in the general ledger. Information on receipts is passed on by Treasury to the Debt management department which in turn passes it on to the concerned ministry/ spending unit.</p>	<p>Grant receipts</p>	<p>Receipts of government loan proceeds/ grants paid into the treasury</p>

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<p>5. Debt and Aid Management:</p> <p>4. Issue securities. If the Cash management department finds that the cash requirements for a given period are more than the available cash balances in the TSA and associated accounts it asks the Debt management department to issue securities. The debt management department decides on the nature of securities to be issued and instructs the Central Bank to issue the required securities. Receipts on account of the sale of the securities are deposited in the TSA and the Central bank advises the MOF accordingly.</p>	<p>Securities</p> <p>Securities portfolio</p>	<p>Financial instruments, like Treasury bills etc., issued by the government to raise financial resources to finance temporary or longer term deficits.</p> <p>Portfolio of all securities held by government</p>
<p>5. Debt and Aid Management:</p> <p>5. Recording guarantees as contingent liabilities and processing payments against guarantees. The debt management department will register guarantees given by government. These will be treated as contingent liabilities. The DMD will receive information from the beneficiary of the guarantee at the time the guarantee is initiated. At end of the guarantee period, the beneficiary will inform the DMD about liquidating the contingent liability. In the case of a call for payment against the guarantee the beneficiary will send a payment request to the DMD which, after verifying the existence of the liability, will request treasury to make the payment.</p>	<p>Guarantees</p>	<p>Instrument that defines the amount, date and conditions related to the contingent liability created by the guarantee.</p>
<p>6. Budget review and fiscal reporting:</p> <p>The Treasury System is used to produce periodic fiscal reports that give a consolidated picture of all receipts and expenditures and progress against budget targets. For these reports to be comprehensive, all items of receipts and expenditure need to be captured. The Government Chart of Accounts is the basis of the fiscal reporting process. These include the Fund, organizational, functional and economic classifications structure of the budget and the classification of account groups, assets and liabilities. As line ministries and spending agencies carry out their work programs, expenses and receipts are posted to the GL by the Treasury system by budget object. Ministry systems record physical on programs and projects. This information is forwarded to the MOF. The Treasury General ledger records receipts of various types of tax revenues, loan/ aid receipts, and debt servicing expenses. On the basis of this data the MOF can prepare</p>	<p>Expenditure reviews</p> <p>Fiscal reports</p> <p>Budget ledgers</p>	<p>Periodic reviews of actual expenditures, analysis of variations with budgetary estimates, and comparison of financial and physical progress; consisting of overall budget reviews and agency reviews of programs and projects</p> <p>Periodic reports to monitor overall flow of appropriations and inflows of revenues over the course of the year, highlighting major deviations from planned budget program and suggesting corrective measures</p> <p>Record of transactions showing amount of budget authorizations and funds allocated for programs and projects and all changes to authorizations/funds allocations as a result of budget transfers or additional</p>

<i>Functional Process</i>	<i>Data Entities Created</i>	<i>Definition</i>
overall fiscal reports that compare actual expenses and receipts with the budget estimates. These reports provide a status report and recommendations and action plans for corrective action during the course of the year. These could include revisions to spending limits, warrants, etc.	General ledgers	<p>fund allocations via supplementary authorizations, with the authority and dates of various changes and totals of expense and commitment transactions against budget categories</p> <p>Record of financial transactions classified according to chart of accounts</p>

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