Treasury Reference Model

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Treasury Reference Model

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Bill Allan

The World Bank
Washington, D.C.
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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.
ACKNOWLEDGMENTS

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 systems\(^2\) 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.

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\(^1\) 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

High Level Functional Design: Definition of Legal and Institutional Framework and Inter-linkages between MOF and other agencies

Detailed Functional Design: Budget execution processes, Chart of Accounts, Information Flows, Reporting Requirements

Technical Systems Design: Technical Architecture, Software requirements

Component Sizing and Hardware Specifications

Procurement: Development of the World Bank RFP for Application Software, Hardware and Services, Tendering, Evaluation and Contract Award

Software Fill Gap analysis
Application software
Parametrization and Customization

Systems integration and implementation

Development of detailed operating manuals, procedures and instructions

Change management and end user training

Pilot Systems Implementation

Replication

12-18 months

12-18 months

24-36 months
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).
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.

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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

Information Systems Architecture for Government Fiscal Management

Ministry of Finance
- Treasury
- Central Office
- Regional Units
- Govt. Spending Agencies
- Revenue Collection Agencies
- Taxes
- Customs
- Paying/Receiving Banks
- Audit Organization

Central Bank
- Debt Management
- Economic Policy
- Budget Management
- Cash Management

Policy Management

Macro Systems for Macro Economic Forecasting

Budget Guidelines

Systems for Macro Economic Forecasting

Revenue Estimates

Budget Proposals; old & new programs

Investment

Current

Payment to Supplier's A/C
Receipts Deposit to TSA

Approved Agency Budget

Agency Budget Preparation Systems

Central Bank Systems (TSA)

Income Bank Arrangements

Vendors

Feedback from Audit

Central Bank

Transactions for Government Systems to Auditing

Assist in Financial Reporting

Revenue Administration

Civil Service Management

Auditing

Cash Management

Debt Management

Revenue Administration

Civil Service Management

Auditing

Management

Governance

Management

Governance

Management

Governance

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.
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.
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

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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. 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 I 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

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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.
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**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
</table>
| 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

MOF Loads Budget Appropriations (initial, revised and supplementary)

Line Ministries enter consolidated cash requirements for year for all subordinate spending units.

Treasury makes apportionments for line ministries and line ministries make allotments for subordinate spending units.

Treasury makes Warrant allocations to ministries and ministries make sub warrant allocations for subordinate units.

Spending Units register commitments/enter purchase order and contracts data after checking for budget availability.

System passes commitments data to Accounts payable module and Treasury authorizes payments from TSA after checking funds availability/prior commitment.

System records receipts information provided by the Banks.

Develop revenue and expenditure forecasts/monitor cash balances/ determine warrant amounts/borrowing requirements.

Debt Management Department enters debt commitments, debt servicing expenditure and loan/ aid receipt transactions.

Fiscal Reporting

Develop Overall Fiscal Reports.

Central Bank TSA

Fiscal Reports to MOF

Payment orders

Payments

Vendor/ Govt. Creditors Banks

Tax Payers Bank

Donors/ Aid Giving agencies

Revenue Collection Agencies

Cash Management

Cash forecasts

Debt Management

Borrowing requirements

Fiscal reports

Revenue forecasts

Donors/ Aid Giving agencies

Fiscal Reporting

Develop Overall Fiscal Reports.
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 uses 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 float\(^9\) 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

Case 1: Treasury is Responsible for Payment Processing; Central Bank responsible for banking operations

Expenditure transactions from Treasury to TSA Bank; Reports to Treasury on payments and receipts

Payments to Suppliers Accounts; Government Receipts

Case 2: Ministries and SUs are directly responsible for Payment Processing; Central Bank responsible for banking operations

Expenditure transactions from Ministries to TSA Bank; Reports to Ministries on payments and receipts

Payments to Suppliers Accounts; Government Receipts
**Figure 11. Degree of Centralization of Responsibilities for Expenditure Control and Accounting for Different Organization Models for the Treasury**

<table>
<thead>
<tr>
<th>Spending Unit Based</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Responsibility for Expenditure Control</strong></td>
</tr>
<tr>
<td>Parent Ministry</td>
</tr>
<tr>
<td>Regional/Treasury Office</td>
</tr>
<tr>
<td>Spacing Unit</td>
</tr>
<tr>
<td>Treasury HQ</td>
</tr>
<tr>
<td>TSA Bank</td>
</tr>
<tr>
<td>Periodic reports</td>
</tr>
<tr>
<td><strong>Responsibility for Accounting</strong></td>
</tr>
<tr>
<td>Parent Ministry</td>
</tr>
<tr>
<td>Expenditure Unit</td>
</tr>
<tr>
<td>Treasury HQ</td>
</tr>
<tr>
<td>Periodic reports</td>
</tr>
<tr>
<td><strong>Centralized</strong></td>
</tr>
<tr>
<td>Parent Ministry</td>
</tr>
<tr>
<td>Expenditure/Spending Unit</td>
</tr>
<tr>
<td>TSA Bank</td>
</tr>
<tr>
<td>Periodic reports</td>
</tr>
<tr>
<td><strong>Decentralized</strong></td>
</tr>
<tr>
<td>Parent Ministry</td>
</tr>
<tr>
<td>Expenditure/Spending Unit</td>
</tr>
<tr>
<td>TSA Bank</td>
</tr>
<tr>
<td>Periodic reports</td>
</tr>
</tbody>
</table>

**Cases:**

**Case 1a:** Expenditure transactions are sent by the spending units to their parent ministries or organizations which, after checking them, send them to either a central treasury office or a branch office. Spending units implement primary expenditure controls. However, Treasury implements a second check and ensures that expenditures are in accordance with budget appropriations and spending/cash limits.

**Case 2a:** Expenditure transactions are sent by the spending units to the parent ministries which then send them on to the TSA bank directly without routing them through the parent ministry or a Treasury office. Expenditure controls are the sole responsibility of the Ministry/Spending unit. Treasury has no direct control. However, the TSA bank can be asked by the Treasury to implement spending unit wise expenditure limits on an overall (not by spending category) basis.

**Case 2b:** Expenditure transactions are sent by the Spending Units to the TSA Bank directly without routing them through the parent ministry or a Treasury office. Expenditure Controls are the sole responsibility of the Spending unit. Treasury has no direct control.
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 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:

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

*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.

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

**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.

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

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**

<table>
<thead>
<tr>
<th>Element of Code</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity of roles and responsibilities</strong></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
<td>The legal framework may have to be reviewed and modified to ensure effective treasury operations.</td>
</tr>
<tr>
<td><strong>Public availability of information</strong></td>
<td></td>
</tr>
<tr>
<td>2.1.4 The central government should regularly publish information on the level and composition of its debt and financial assets.</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>2.2.1 Specific commitments should be made to the publication of fiscal information (e.g., in a budget law).</td>
<td>A desirable element of institutional reform that will enhance the effectiveness of the treasury system</td>
</tr>
<tr>
<td>2.2.2 Advance release date schedules for fiscal reporting to the public should be announced</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>Open budget preparation, execution, and reporting</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>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.</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>3.3.1 A comprehensive, integrated accounting system should be established. It should provide a reliable basis for assessing payments arrears.</td>
<td>An institutional reform that will enhance the effectiveness of the treasury system.</td>
</tr>
<tr>
<td>3.3.2 Procedures for procurement and employment should be standardized and accessible to all interested parties.</td>
<td>An institutional reform that will enhance the effectiveness of the treasury system.</td>
</tr>
<tr>
<td>3.3.3 Budget execution should be internally audited, and audit procedures should be open to review.</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>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.</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
<tr>
<td>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.</td>
<td>A benchmark to be achieved by the treasury system.</td>
</tr>
</tbody>
</table>
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. An 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 databases.

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, GFMIS, 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

Legend of symbols

- Functional process
- Information flow
- Database/data store
- 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 throughout 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 database 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.
**MOF/ Budget Department**

- Consolidate across Ministries
- Results of periodic budget reviews
  - Approved Budget
  - Supplementary Budget

**Spending Ministries**

- Consolidate across Spending Units
- Review against approved budget, resource availability
- Review Budget requests
  - Prepare final request for Supplementary budget
  - Receive approvals, update/access updated budget, inform SUs

**Spending Units**

- Review requirements against budget
  - Identify Shortfalls
  - Prepare request for Supplementary budget
  - Receive approvals, compare with request; update/access database

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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.
Commitment of Funds: 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 standpoint 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.
Commitment of Funds: 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 are promoted, new staff are added or staff reductions occur.
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 records at the Treasury and the Spending Unit.
3. Payments and Receipts Management. 1. Verification of Goods and Services Receipts and Payments: Case-1a: Spending units route their transactions through their parent ministries which after examination sends them on for payment to treasury, which sends a payment order to the bank where the TSA is held. This is an extension of case 1 with the difference that the spending unit does not communicate directly with the Treasury but send their verification and payment transactions to the parent ministry which in turn processes them through an appropriate branch of the Treasury.
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 receipt 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: 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.
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 form 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 reconciliation purposes.
5. Debt and Aid Management: 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.
5. Debt and Aid Management: 3. Grant receipts: The Debt management department and/or the spending ministry receives information from donor agencies about grants given to government. The ministry forwards 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.
### 5. Debt and Aid Management: 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. 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 progress 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

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

### Management of Budget Authority

**Budget Apportionment, Allotments, and Warrant Allocations**

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

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>From which department are the budget adjustments data received?</td>
<td></td>
</tr>
</tbody>
</table>
| 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

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under what conditions are supplementary budgets processed?</td>
<td></td>
</tr>
<tr>
<td>Who has final authority for supplementary budget authorizations?</td>
<td></td>
</tr>
</tbody>
</table>
| Are supplementary budget authorizations received as a new approved budget in its entirety or are only the changes received? | a. Yes   
| b. No                                                                      |          |
| 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

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Who is responsible for the review, validation and approval of the procurement request at each level?</td>
<td></td>
</tr>
<tr>
<td>How are requests and approvals (to and from line ministry / spending agency) transmitted?</td>
<td>a. Electronically</td>
</tr>
<tr>
<td></td>
<td>b. Manually by paper</td>
</tr>
<tr>
<td></td>
<td>c. Both</td>
</tr>
<tr>
<td>How many procurement requests are generated during a year, per month.</td>
<td></td>
</tr>
<tr>
<td>How many resulted in the issue of a purchase order/ contract signature?</td>
<td></td>
</tr>
<tr>
<td>Is there a vendor database? How is stored and accessed?</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Is the budget and available funds up-to-date and readily available for viewing?</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Are existing commitments reviewed before approving new requests; and are those approvals based on the line ministry's / spending agency’s expenditure plans?</td>
<td></td>
</tr>
<tr>
<td>How are procurement requests tracked?</td>
<td></td>
</tr>
<tr>
<td>What happens if estimated amounts transmitted by the line ministry / spending agency do not match with estimated amounts captured during the approval process?</td>
<td></td>
</tr>
<tr>
<td>What types of adjustments, if any, can be made to the procurement request?</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>How often are updates to commitments performed? Is there a centralized accounting of commitments?</td>
<td>a. Daily batch</td>
</tr>
<tr>
<td></td>
<td>b. Real-time</td>
</tr>
<tr>
<td></td>
<td>c. Other</td>
</tr>
<tr>
<td>Are procurement guidelines up-to-date and readily available to all staff?</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Do the following databases exist – master contracts, existing and potential vendors? Are they integrated?</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Once the PO / contract is sent to the vendor, how is it tracked?</td>
<td></td>
</tr>
<tr>
<td>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?</td>
<td>a. Yes</td>
</tr>
<tr>
<td></td>
<td>b. No</td>
</tr>
<tr>
<td>Who ensures that the proper procurement methods are followed?</td>
<td></td>
</tr>
<tr>
<td>What is average cycle time for a PO to be issued?</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer Options</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>How is PO performance recorded and tracked? How detailed is this information? Where is the data stored?</td>
<td></td>
</tr>
<tr>
<td>Who is primarily responsible for the draft, approval and issuance of the PO?</td>
<td></td>
</tr>
<tr>
<td>What types of contract management and corresponding financial management reports are generated? Who sees these reports and how is the information used?</td>
<td></td>
</tr>
<tr>
<td>Please provide us with samples of pro forma POs (include pro forma).</td>
<td></td>
</tr>
<tr>
<td>What would trigger a rejection of a PO?</td>
<td></td>
</tr>
</tbody>
</table>
| Who is primarily responsible for determining the validity of an amendment or cancellation of a PO / contract? For final approval of the change / cancellation? | a. Yes  
b. No |
| Is there an interface between the receiving system and a procurement system? Is it able to flag discrepancies between existing procurement and actual receipts? |                    |
| 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 the 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**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are position requirements identified, classified and cataloged? Where is this data stored?</td>
<td></td>
</tr>
<tr>
<td>How is HR cost data determined? Is this kept up-to-date?</td>
<td></td>
</tr>
</tbody>
</table>
| 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? | a. Daily batch  
  b. Real-time  
  c. Other |
| How often are updates to HR commitments performed? Is there a centralized accounting of HR commitments? |                                                                          |

**Changes to the Payroll and Benefits Structure**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
</table>
| How are changes to pay and benefit structures transmitted to the budget department?             | a. Electronically  
  b. Manually by paper  
  c. Both |
<p>| 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? |          |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
</table>
| 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**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
</table>
| 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**

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