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Prepared by:

KPMG Peat Marwick
Policy Economics Group
2001 M Street, NW
Washington, DC 20036

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PREFACE

This document presents the final report on the reforms carried out by El Salvador's Integrated Financial Management project. This project was conducted by the Policy Economics Group of KPMG Peat Marwick under a contract with the U.S. Agency for International Development (Contract No. 519-0349-C-00-3074-00).

Dr. Daniel Wisecarver acted as Project Director. He was assisted by the following resident advisors: in Treasury operations by Mr. Francisco Silva; in Government Accounting by Mr. Henry Alarcon; in Budgeting Operations by Mr. Juan Carlos Vinelli; in information Systems by Mr. John MaGowan; in legal matters by the Salvadoran lawyer Dr. Rogelio Chávez; in public debt by Mrs. Eduardo Quant and Mr. Oscar Olórtgui.

At different stages of the project, the Washington based staff collaborated in the development of the project. They were: Dr. Dana Weist who assisted in budgeting and public debt management; Mr. José Larios assisted in the development of the public debt management system and training on financial topics; and Mr. Eduardo Maldonado on information systems.

Throughout the course of the project, the project team received both direction and support from three different Ministers and Vice-Ministers of Finance, namely, Mr. Edwin Sagrera and Eduardo Montenegro; Ricardo Montenegro and Pablo Córdova; and Manuel Enrique Hinds and Roberto Sorto Fletes. The project also received support from the several Directors and Deputy Directors of Treasury, Government Accounting, Fiscal Policy and Debt and Public Credit, and Budgeting.

The report is organized into six chapters covering all the main areas of project activities: Chapter I presents the reforms in budgeting; Chapter II details the activities in government accounting; Chapter III presents our work in treasury operations; Chapter IV explains the development of the Integrated Financial Management Law; Chapter V explains the activities in debt management; and Chapter VI details our approach to computerization.

BUDGETING

Introduction and Background

Technical assistance in the public budget area started on March 25, 1993 and was carried out by resident budgeting advisor Mr. Juan Carlos Vinelli. The work in this area included aspects related to the legal, conceptual and methodological issues regarding government budgeting in El Salvador. The activities in this area were extremely successful; the Project succeeded in designing and implementing an entirely new approach to budgeting in El Salvador -- one that transformed the budget from its program budgeting basis to one based on performance.

Such a fundamental change would not have been possible without the cooperation of the Salvadoran government officials and their willingness to change. The Director of Budget provided a high degree of support to the Project, and without his active support, this project would not have accomplished what it did.

Like most Latin American countries, the methods and procedures of El Salvador's public budget reflected the budget reform implemented in the decade of the 1960's. The central idea of this reform was to transform the budget into an instrument for economic and social planning and economic development. Thus the public budget's structure, methods and procedures were to be determined by the goals and objectives of development plans.

The technical framework of the 1960's budget reform was based on the concept of "budgeting by programs". This concept was accompanied by technical assistance provided mainly for budget preparation. Despite 30 years of implementation, the 1960's budget reform did not modify the procedures and mechanisms used in the budgeting process. Changes in budgeting occurred only at a very formal level, and the structural deficiencies typical of outdated public budgets were not affected by the reform. These shortfalls were rooted in:

- limited nexus between the planning and budget processes;
- insufficient training and practical education for budgeting staff;
- improvement only in budget formulation and limited effort devoted to the other stages of the budget process;
- almost no modernization of other components of the administration of human, material and financial resources.

Because of the considerations mentioned above, the budget maintained a "formal" structure of programs that was supported in the organizational charts of the institutions, but not in the development plans. The budget structure did not reflect the priorities of the Government, nor the

expected results of the main programs. The allocation of resources was limited to financial aspects and the process of negotiation was a highly politicized, repetitive cycle.

Traditionally, budget execution was based on a series of procedures and formalities that hindered its implementation. The process of budget monitoring and evaluation was limited to general issues related to cash-flow management, and there was no budget analysis at the global, institutional and executing agencies' level. Other characteristics of the budget process at the beginning of the Project are listed below:

- Its legal framework was antiquated, dating from 1968, and its excessive regulation was frequently obsolete.
- The organization and functions of the Budget Directorate were guided by the different stages in the budget process; as a result, the information flows, analysis and budget process were fragmented.
- The budget process contained no macroeconomic foundation for estimating revenues, expenditures and general operations, and estimates were limited to the study of historical trends of the different revenue and expenditure items.
- There was no "budget policy" to regulate the process and to specify priorities, indicators and goals to make the budget what it should be: "a tool for the economic policy of the Government."
- Finally, budget formulation was conducted manually, and focused on an analysis of full-time equivalents (i.e., numbers of employees) that consumed the majority of the time of the technical staff of the Budget Directorate. There did not exist an information system to facilitate the work of the Budget Directorate.

Work Plan

The Project work plan in this area had two components: one that was short-term and was aimed to address day to day issues in the operation of the budget office, and the second focused on institutional issues and included long-term reforms of the Budget Directorate and other public sector entities. The institutional component also included the actions necessary to coordinate budgeting activities with the Integrated Financial Management Systems of Treasury, Accounting, Public Credit, and Public Auditing. The main activities under the plan were to:

- design and implement a new structure and methodology for the public budget to improve the allocation of resources;
- modernize the different stages of the budget process to improve public sector management such that the focus is oriented toward results and the effective administration of resources;

- create a methodology to gather budget-related information through computerized systems in order to improve the decision-making process at different stages of the budget process;
- create the legal framework necessary to institutionalize the changes in the budget process;
- restructure the organization and functions of the General Budget Directorate as the ruling entity of the budget system; and
- formulate and execute the hands-on training and educational plans.

Project Activities

Conceptual, Methodological and Structural Aspects of the Public Budget

According to the workplan described above and approved by Ministry counterparts, the budgeting component included the following activities:

New outlines of budget concepts and methods. This activity encompassed tasks ranging from the conceptual analysis of existing budget methods and techniques and the reformulation of its principles, elements, mechanisms and procedures to introduce an efficient and viable budget process. The activity was accomplished according to the workplan. In October 1993, the new authorities of the Budget Directorate and the Integrated Financial Management (IFM) Project received a new conceptual framework for the public budget. This new framework was based on a performance approach by management areas. The technical document produced for this process served as the basis for the 1996 budget process.

New structure of the public sector budget. This new structure included the identification of budget components that correspond to every management area for the public sector. Accordingly, the new budget reflects an integrated management, estimates costs, names responsible units, and contains both sectoral and institutional scopes. Proposed structures by area of management for all of the institutions that form the national public sector were formulated and implemented in the 1996 Budget.

Reformulation of the methodological elements and procedures of the budget system. This activity included the design and implementation of the different methodological and procedural elements of the budget systems, such as: the budget classification system, and manuals for the procedures and other methodological elements of the budget process. Manuals, classifiers, templates and instructions to be applied in the budget process were developed under this activity. These activities were coordinated with the Directorates of Accounting, Treasury, Fiscal Policy and Public Financing, as well as the Court of Accounts of the Republic.

Concerning the technical instruments for budget formulation, basic regulations were designed for preparing budgets by different central government agencies and for de-centralized autonomous institutions. This process was important because the concept of budget by areas of management decentralizes the budget process to different line agencies and autonomous institutions.

Budget Policy and Administration

These activities included the modernization of the technical, methodological and procedural tools that are used in the formulation, execution, monitoring and analysis stages of the budget process.

New elements and mechanisms were developed for the budget formulation process. As the first activity of this component, systems and models of budget revenue and expenditure projections were reviewed and reformulated in order to accommodate the projection of different revenue and expenditure scenarios. A system of resource allocation using different models of budgeting in the public sector entities was also developed. Computer-based models to estimate budget revenues and expenditures and proposals to allocate resources following multi-annual approaches were designed, implemented and installed.

The progress achieved in this area focused predominantly on budget formulation. Instructions and documents were prepared to guide the budget formulation process. First, instructions were prepared for formulating the Government's general budget and special budgets that will replace the existing guidelines. These instructions included the following items.

- Coding of the budget by management areas; the new coding system reduced the budget code from 24 digits to 17, and included more information. These new codes were also installed in the computerized module of the budget formulation system.
- Guidance on formats for preparing budgets for the Central Government, decentralized institutions and non-financial public entities. This task developed instructions for using the new budget formats that integrate physical outputs and financial resource within a results-oriented framework.
- Guidelines for formulating the annual workplan. These methodological guidelines to formulate the annual workplan correspond to the new budget structure and enforce uniformity in every line agency's budget in identifying the physical outputs (i.e. performance) that it strives to achieve.
- Procedures to measure the production of goods and services by budget management. This area considers the basic aspects that guide the implementation of the system to measure the production of goods and services at the different levels of budget management.

Second, new classifiers of revenues and expenditures were created based on the conceptual framework that comprehensively registers all revenue sources and financial uses of the public sector. These classifiers were formulated according to the principles of universality, revenue-expenditure integration and transparency in the source and destiny of variables.

Due to different cyclical events, the Ministry of Finance agreed to postpone the implementation of the Budget Reform Process for 1996. As a result, fiscal year 1995 was considered a "transition" year in the reform process to simplify the structure and the implementation of the new budgetary process.

A training program for the budgeting staff in the public sector was prepared to implement the budget by management areas in 1996. These workshops created awareness of the changes at the policy level, provided training courses for instructors, and trained the universe of 2,045 users involved in the budget process. This training plan was supported by USAID.

We also worked in the formulation of budget policy for fiscal years 1995 and 1996. This work strengthened the economic and fiscal base of the preparation of the budget.

Regarding modernization of budget execution, a first draft outlining the basis for the Programming Manual of Budget Execution (PMBE) was prepared. This document was submitted to the authorities of the Budget and Treasury Directorates for their review, and was applied to budget execution in 1996.

Reform of the Public Budgeting Legal Framework

These activities were intended to prepare a new legal framework for the budget in the context of the reform of the Integrated Financial Management (IFM) system. This task included a review of the legal regulations that guide the budget process in order to determine their practical enforcement in light of the evolution of public administration. Also, legal regulations regarding the financial administration systems were analyzed to determine their influence on budgeting practices, as well as areas requiring coordination.

A document comparing the existing General Budget Law with the usual practices of budget administration was prepared. The relationships among the Accounting, Treasury, Public Credit and Auditing systems were analyzed in order to establish the foundation for reform of the legal framework.

Formulation of the new, draft general budget law. The new General Budget Law that was implemented reflected the changes in concepts, principles, structure and technical methods necessary to reform the budget system. It also included those aspects that were necessary to regulate the relationship among the other components of the Integrated Financial Management System and budgeting. A new, draft General Budget Law was submitted to the Ministry and adopted in whole.

Formulation of the regulation of the General Budget Law. The regulation of the General Budget Law established the body of rules that interpret and explain the principles, concepts and methods included in the General Law. The Project presented a draft regulation of the General Budget Law for approval by the corresponding legal branch.

Information on the scope of the new General Law. To enhance the understanding and interpretation of the new legal framework for the budget system, conferences and seminars were provided that dealt with the scope of the General Law and its regulations.

Integrated Financial Management (IFM) Law. Mr. Vinelli participated actively in the discussions and deliberations on the IFM Law, ensuring consistency of the new law with the reforms implemented in the budgeting area.

Restructuring the Organization and Functions of the Budget Directorate

As a consequence of the proposed changes to the structure, process and methods of the budget, it was necessary to restructure the organizational and functional structure of the Budget Directorate, to accommodate the new goals and objectives.

The products of this activity were the formulation of a new organizational structure and a set of regulations for every element of the Budget Directorate, and an implementation plan for restructuring the Budget Directorate. This plan included the human, physical and financial resources necessary to establish a new Budget Directorate. This new organizational structure and functions were incorporated into the 1995 Budget for the Ministry of Finance, and it was approved by the Legislative Assembly.

Budget Formulation for 1996

The budget process for 1996 was the first budget exercise using the methodology for budgeting by management areas. The following activities were key to the success of this process:

- review and “calibration” of the technical instruments used in budget formulation;
- planning, organization and development of the training plan for all agencies in the public sector (this activity continued until May 1995); and
- internal training provided to officials of the Budget Directorate to improve their capacity to support the government’s agencies.

Information System for Budget Formulation

The functional budget consultant (Mr. Vinelli) assisted in the development of the information system for budget formulation. This activity was necessary to ensure that key budgeting process were incorporated correctly in the information system. As a result of the

coordinated work between the functional and technical specialists, the budget formulation process of was completed in 1996 with a simple and easy to apply information system. This module must be further developed in the future to assure that the system will be capable of linking physical outputs with financial resources.

The activities in this area are presented in more detail in the Computerization chapter.

Training

Throughout the project, several training sessions were prepared that were targetted to different levels of officials and institutions. A summary of these training events and their relationship with the activities of the workplan is presented below:

- presentations to authorities of the Ministry of Finance regarding the workplan and the different technical proposals;
- conferences on the various budget reforms for General Directorates involved in the Integrated Financial Management system;
- presentations to the Ministries of Education, Health, Public Works, Agriculture, Finance and the National Administration of Telecommunications (ANTEL) concerning the workplan of the budget reform, and the coordination of it with their institutions' technical proposals;
- seminars with officials of "pilot" ministries to coordinate the process of budget formulation;
- conferences in different forums regarding the budget reform in El Salvador (Economic and Social Cabinet, USAID, FEPADE, Finance and Budget Commision of the National Assembly, etc.);
- courses for officials of the Budget Directorate on the conceptual and methodological framework of the budget by areas of management;
- applied workshops to present the new structure and methodology of the budget by areas of management to officials of the Budget Directorate;
- development of the Training Plan for public sector officials on the formulation of the 1996 budget.

Recommendations

As an instrument to enhance the decision-making process for public sector institutions, the budget can be viewed as a "soft" technology that assumes a normative set of applications of

financial matters in human organizations. Because the budget is applied to individuals, it inherently reflects the social conditions of the country. It must therefore be analyzed according to criteria that differ from other technical applications. Hence, this technological process cannot be seen as a mechanical straight line of successive, automatic steps, but rather as a complex task that incorporates risk, human interactions, and an intense and changing dynamic. These conditions imply that the budget process may not yield exact results; rather, over time, its progress and deepening of acceptance are determined by the factors mentioned above.

On the other hand, the public budget has two integral goals: to be an instrument that improves the efficiency and effectiveness of the government administration, and to be an instrument for economic and social development policies. Thus, technological change is more than a set of standards and procedures, but also a proposal for a bureaucratic and cultural change subject both to internal organizational realities and to the external socio-political environment. In the future, El Salvador will continue on the path to integral and progressive improvements in the management of the public sector. Some of the main considerations for this future process are the following:

- Formulation of the Guidelines for the IFM Law. Once the IFM Law is approved, guidelines will have to be formulated in the following 180 days. For this to be effective, this work will have to take place with all the advisors of the IFM Project. This activity will require an entire semester.
- Design of the Procedures for Monitoring and Evaluating Budgetary Results (MEBR). This activity represents the stepping stone for the adequate implementation of the budget by management area. In the future, budgets will have to be justified based on the evolution of the annual management results and not based on annual increments. Therefore, the design of the budget by management areas will have to follow similar steps to those of budget formulation: namely, field work, bibliographic research, proposal formulation and consistency tests.
- Design of Standards for Budget Execution. This task includes the regulations that all entities of the public sector must follow in the management of their allocated resources to obtain the results expected by the executing agencies. These standards will replace the specific regulations that rule the activities and control of the budget execution. These new standards will form part of a manual on budget execution for approval by the authorities of the Ministry of Finance. These standards must be coordinated with the Accounting and Treasury Subsystems for adequate integration.
- Design of Technical Manuals for the Budget Directorate. These manuals will apply the BEP and MEBR in developing management reports for the technical staff of the Budget Directorate and the authorities of the Budget Directorate and the Ministry of Finance.

- Conduct Research and Continually Improve the Quality of Work at the Budget Directorate. It is critical to have the capacity to reflect and analyze the shortcomings in the existing system. The application of new technologies to government structures is not easy. The relationship between technological design and administrative implementation is not a one-way and linear process; elements of the socio-economic context (such as the defects in the design of sectoral policies or the scarcity of financial resources), could create an environment that could impede the full implementation of the reformed budget system. Hence, evaluations of budgetary change must consider elements that often are not present when a technological change is designed (e.g., modifications in administrative decision points, institutional characteristics, the behavior and training of the staff, and the administrative culture). All of these factors must be addressed in comprehensive budget reform.
- Training as a Means to Consolidate the Reform. The classical phrase "resistance to change" is always wielded as the great constraint to technological innovation. Thus, the application of a plan of "intensive and extensive training" to transmit in a simple way, the management and conception of standards, methods and procedures of the budget change is necessary. Another important factor in the achievement of reform goals is that the methodological concepts and new designs of sub-systems are sufficient: these systems must operate in the best of conditions, otherwise the Ministry will only have manuals to fill libraries. Accordingly, the work of technical cooperation must have as a strategy that the advisors work closely with their national counterparts through the training, and above all, with the leaders of the national public sector through technical meetings and training seminars.
- Knowledge of Other Countries' Experiences to Minimize Mistakes. Presently, El Salvador has a conceptual framework that is clear and that represents a watershed in financial management. However, this framework should not be viewed as a closed process, but one that is open to evaluation of similar experiences from other countries that will allow the technological enrichment of the Salvadoran experience. The goal of this kind of training is to verify common experiences and to detect "mistakes" in implementation to avoid their repetition.

TREASURY OPERATIONS

Introduction and Background

Mr. Francisco Silva served as the Project Treasury Advisor beginning in March 1993. During the course of the Project, treasury operations in the Ministry of Finance of El Salvador were analyzed from several perspectives: legal, organizational structure, tax collections, and payment procedures.

Legal Framework

The following documents were reviewed in the areas that pertain to treasury operations: the Constitution of the Republic, the Treasury Law and its regulations, the general laws of the budgeting process, the law of the Court of Accounts of the Republic, Decree Number 302 dated July 30th of 1992 which relates to the Document to Advance Public Funds, the Fiscal Code, the Organic Law of Governmental Accounting, the Internal Rules of the Executive Branch, and other rules and regulations which are closely related to Treasury activities. This analysis was performed to provide a general understanding of the problems and shortcomings of the laws affecting treasury operations in El Salvador.

This review yielded the following conclusions:

- Several legal limitations and restrictions existed in the application of the law due to the obsolescence of the laws themselves (most of these laws were written approximately 50 years ago.)
- Processes in the control and management of public funds were antiquated.
- All of the payments made by the public sector which are related to the nation's General Budget, are made by the Treasury Department instead of the government institutions which purchase goods and contract services. This situation limits the efficiency of operations. This centralization of operations is inconsistent with the objectives of an Integrated Financial Management (IFM) System.
- Due to the proliferation of legal norms and mandates that emanated from the various laws and codes, coordination among the different Ministry departments responsible for governmental financial operations was seriously limited.

Organizational Structure of the Directorate of Treasury

- Field work in the Directorate revealed that, due to the obsolescence of the Treasury law enacted in 1937, the Treasury Directorate lacked a formal administrative organization.
- The Treasury Directorate existed without a strict definition of policies and procedures, and therefore frequently accommodated the policies and criteria of every administration that came into power. This arbitrariness occurred without modifying laws, but rather by stretching the legal limits of the existing laws.
- The recovery of unpaid obligations, which are under the jurisdiction of the Collections Division, were impeded by the lack of legal basis to perform these activities. The Internal Revenue Service office is the institution legally responsible for performing this activity. The draft law of the General Financial Law of the State was revised to resolve this weakness.
- Because the Ministry of Finance did not have a unit that dealt with Organization and Methods, functions were frequently duplicated by the different administrative units associated with the Treasury process. Essentially, administrative units carried out functions that were not consistent with their institutional and administrative nature.
- Coordination with the Central Reserve Bank was non-existent. For example, on May 1991, a new law for the Central Bank was approved. This law modified -- in a tacit manner -- several articles of the Treasury law. As a consequence of these changes, the actual administrative work of the Treasury was been altered to accommodate the Central Bank law changes.

Collections

- Technically qualified support personnel existed in the General Direction of the Treasury to support the Revenue Collection Division in the collection of indirect taxes.
- The Banks were satisfied with the workings of the POS system, the technical support and the personnel of the Treasury Directorate Direction.
- Technical personnel in the area of computerization systems were lacking, and the information support in the Directorate was temporary.
- Equipment and spare parts to provide maintenance for the revenue collection system, servicing financial institutions (Banks) were lacking.

Payment Procedures

Despite efforts to simplify the process of budget execution, the Treasury Department has ample opportunities for improvement. The budget execution process did not fulfill the provisions contemplated in Decree 302 and instruction No. 4016-A. The following mandates have not been fulfilled:

- The budget was executed in two ways: with the DAFP (Document for the Advancement of Public Funds) and without the DAFP. This dual execution has precluded the uniform administration of Treasury operations and complicated the accounting for treasury operations.
- There were no auxiliary financial units in the different government institutions as stated in the Organic Law of Government Accounting. The lack of auxiliary units in the different government institutions impeded the creation of Auxiliary Payment Units to decentralize government payments.
- The many current accounts under the jurisdiction of the Treasury Directorate impeded the rational use of public funds.

It should be noted that the evaluation carried out in the preliminary stages of the IFM Project, was presented to the higher authorities of the Treasury Directorate. Based on this evaluation, the general work plan was developed to begin the process of the modernization of the Treasury Directorate within the context of the Integrated Financial Management project. This specific workplan for the Treasury area was approved by the Treasury Directorate and integrated within the general plan of the IFM project.

Project Activities

Generally speaking, all of the activities planned to fulfill the goals and objectives of the IFM project were successfully carried out. The activities carried out were the following:

- reform of laws and regulations;
- preparation of a Manual for the formulation of treasury projections, and training courses;
- design and installation of the cash flow systems;
- elaboration of the cash budget; and
- restructuring of the Treasury Directorate.

These activities were completely fulfilled with the completion of the document "Manual for the Formulation of Treasury Projections" (Cash Flows). This document served as the basis for

the development of a 30-hour seminar which was provided to 50 high-level officials of the Treasury Directorate.

Legal Reform

Mr. Silva analyzed the legal and procedural framework related to Notes of the Public Treasury. This study allowed the Treasury Directorate (for the first time), to use this type of short-run financing to cover temporary deficiencies in cash of the Public Treasury, and thus, to substitute the financing that was previously obtained from the Central Bank with the so-called "Advance Payments for Treasury".

At the request of the General Director of Treasury, Mr. Silva analyzed the effect of the reforms introduced in the General Law of the Central Bank, on the administration and management of the Treasury Directorate.

Development of a Cash Budget

The cash budget (Treasury projections) for 1995 was formulated and approved, based on the model proposed by the consultant. This tool was well received by the authorities of the Ministry and other officials of the Ministry of Finance and the Central Bank who analyzed the cash flow budget.

Development of Accounting and Internal Control Systems

The Treasury Advisor also provided technical support in the introduction of the Public Treasury Accounting System. This activity provided technical support in the preparation and design of a new legal framework for the government accounting law, particularly in Title VI of the Government's General Financial Management Draft Law.

The Treasury Advisor evaluated the internal control system related to the processes of tax collection and government payments. This study served as the basis for the design and development of a computer program to automatize payment operations of the Treasury Directorate. Mr. Salvador Rivera was in charge of the computerization component of the project. This program was approved by the highest authorities of the Treasury Directorate, and can be modified in the future to absorb the decentralization of payments made directly by different public sector institutions. The activities in this area are presented in more detail in the Computerization chapter.

Design of Treasury Subsystem

Mr. Silva devoted considerable effort to the design of a new treasury sub-system. The main characteristic of the treasury subsystem, as part of the Integrated Financial Management System, is the decentralization of payments, and the creation of the Unified Current Account of the public treasury. Hence, implementation required the approval by the Legislative Branch is required.

Because the Treasury Subsystem of the Project is directly related to the Process of Execution of the General Budget, the Advisor prepared and presented to the General Budget Directorate, a proposed design for the Treasury subsystem.

The Resident Treasury Advisor also participated in working meetings with officers of the Central Reserve Bank, Court of Accounts and SETEFE, on behalf of the Treasury Directorate to study and propose standards for the shift of official current accounts from the Central Bank to the banks of the banking system, according to the modifications introduced by the General Law of the Central Bank, in May 1994.

Administrative Restructuring of Treasury Directorate

The Treasury Advisor also assisted in the administrative restructuring of the Treasury Directorate according to the new law. Although the new legal framework for the Integrated Financial Management System (IFMS) was not in force at that time, the Treasury Directorate had already considered the need to simplify the administrative processes within treasury operations. A program of institutional strengthening based mainly on the training of public employees in modern administrative techniques was begun during the last quarter of 1993.

Training and Seminar Participation

Based on the principles of the IFM Project and taking into consideration the principles of the Government's General Financial Draft Law, a Seminar on Strategic Planning with practical applications for the Treasury Directorate was developed and delivered to officials of the Treasury Directorate. These officials included the General Director and Subdirector. The purpose of this seminar was to identify the institution's mission and to define goals and strategic actions by areas of management to be carried out during 1995 and 1996.

Mr. Silva participated in meetings with the officials of USAID/El Salvador, FEPADE and the Training Center of the Ministry of Finance, concerning the training needs of the staff, in accordance with the parameters specified in the IFMS, in general, and with the Treasury Subsystem in particular.

In addition, the Treasury Advisor participated in various seminars at the request of officials of the Treasury Directorate:

- participated in two conferences on "The Modernization of the Court of Accounts," sponsored by the Court of Accounts of the Republic and the Institute of Latin American Studies;
- participated in a Seminar on Strategic Planning sponsored by the Ministry of Finance, at the request of the Minister and Vice Minister of Finance;

- participated in the Seminar "Excellence in the Service to Taxpayers and Users," sponsored by the Treasury Directorate;
- participated in the Seminar "Organizational Development," sponsored by the Treasury Directorate;
- participated in the VIII International Conference on "New Events on Government Financial Management," which took place in Miami in April 1994, sponsored by Firma and USAID/El Salvador.

Development of Strategic Plan

A multidisciplinary committee named by the authorities of the Ministry was in charge of reviewing the strategic plan, and the Resident Treasury Advisor was responsible for general coordination of this plan. The plan was approved by the General Director of Treasury on December 1994. The benefits of the strategic plan for the IFMS in general, and particularly, for the Subsystem of Treasury, are stated below:

- It allowed for the design and approval of the new organizational structure for the Treasury Directorate with a vision of future and reflecting the postulates of the Government's General Financial Law.
- It allowed the Directorate to face change with more success and effectiveness.
- It facilitated the direction and coordination of the activities in the Directorate by informing officials and employees of the Treasury Directorate of the spirit and content of the IFMS.
- It facilitated the administrative functions of the Treasury Directorate.
- It improved the participation and communication among all officials and employees of the institution.
- It sought the integration of all Administration Units of the Treasury Directorate with the rest of General Directorates involved with the IFMS.

Accordingly, a Draft of the Functional Regulations of the Treasury Directorate was prepared in line with the basic organizational structure described above. This work was performed by the Treasury Advisor with the support of the staff from the different administration units, and much of the work (over 70 percent) was completed during the Project. The draft was been submitted for review and approval of the Treasury Subdirectorate and Directorate.

With this important tool, the specific functions and responsibilities of every administrative unit that forms the organizational structure of the Treasury Directorate were established, and reflect

the attributes that the Government's General Financial Law grant to the Treasury Directorate as the ruling entity of the Subsystem of the Treasury.

Other Project Activities

At the request of the General Director of the Treasury, Mr. Silva prepared the Plan of Activities that must be carried out in order to meet the goal of implementing the Treasury subsystem, as specified in the IFMS project. This report was prepared to respond a request from the Ministry of Planning and Coordination of Economic and Social Development, which is the coordinating entity of the Program for the Modernization of the Government.

Mr. Silva actively participated in working meetings with the Director of the AFI Project, with the General Contralor assigned by the Ministry of Finance, with the rest of advisors, and with the responsible officials of supervision and control of USAID/El Salvador on matters related to the Integrated Financial Management System (IFMS).

He analyzed the document "Evaluation of the Needs of Training in the Public Sector of El Salvador - AFI Project", prepared by Empresa World Learning Inc., under contract of USAID/El Salvador.

Recommendations

To ensure the continued success of the project, it is important to establish from the start measurable indicators of the progress of every area of the project. These benchmarks facilitate the evaluation and progress of the goals and objectives of the project. It is important to distinguish technical goals from goals related to changes in institutional behavior. Similarly, it is important to define the interrelationships among the subsystems that form part of the IFMS in light of the process of implementing technical and administrative changes in the existing organizational structures.

The organizational structures of the Ministry of Finance, as well as those of the Primary Units, are sources of administrative authority and frequently of political power. Once they are affected in some way by the reform, they could well become resistant to change, with the corresponding negative effects on the execution and implementation of the project. Therefore, it is necessary to establish from the beginning the rules of the game and the scope of the project, in order to keep the necessary equilibrium between the introduction of legal and technical reforms and the change in operational procedures in public institutions.

One of the lessons learned through the development of the IFM Project was the importance of coordinating the functional recommendations with the work in developing information systems applications in Budget, Treasury, Accounting, and Public Credit Subsystems. To achieve this coordination, it is necessary for the following to exist among all entities involved with IFMS: the clear and precise knowledge of the concept and vision of the content and spirit of the Government's General Financial Law, the relationship of the component subsystems of IFMS, and the role that the Institutional Financial Units will have on the enforcement of the new law.

The higher authorities of the Executive Branch in the Ministry of Finance must also take the necessary steps to submit the proposed reforms to the Legislative Branch in order to obtain the approval of the GGFL as soon as possible. Only after this legal hurdle has been overcome, will the implementation of the Treasury subsystem and the process of execution of the general budget of the Republic within the context of the IFM Project will truly begin.

GOVERNMENT ACCOUNTING

Introduction and Background

The modernization of government accounting began with a project sponsored by the International Monetary Fund (IMF). Project activities in accounting concentrated on the development of a legal framework, an accounting technical framework, and a computer systems component as well as component that included training. The IFM Project activities in this area were carried out by Resident Accounting Advisor Mr. Henry Alarcon.

Legal Reform

In order to promote the development of the legal framework needed for the implementation of the new accounting functions, Decree No. 120 of December 1991 "Legal Charter of Government Accounting and its Bylaws No. 15", was presented to, and approved by the National Legislative Assembly. This legal charter was complemented with instructions and rulings, issued by the Accounting Directorate, based on the functions bestowed by its legal charter. In order to avoid the creation of a legal body that regulated the financial actions of the Government, it was decided to incorporate the accounting law into the text of the draft law. Hence, once the Integrated Financial Management Law becomes effective, the Government Accounting Law will disappear as an individual legal tool, to become part of the regulations of the system.

Accounting

In the accounting area, the IMF project created a manual for the government accounting system, that included the following: legal rules and principles, general standards and technical procedures. To provide continuity with the IMF program, the philosophical base of the accounting system had been developed. However, this process did not include all of the relevant issues within government accounting, for example, issues like capital equipment depreciation, updating resources and appropriations, guidelines for the presentation of consolidated financial reports, guidelines concerning the protection of data and equipment, and guidelines related to the closing of fiscal years. The lack of progress in these areas was due to the restructuring of the Accounting Directorate, since the key personnel in charge of these functions were reassigned to the area of supervision of executing units.

Computer System

Regarding the implementation of the accounting system developed through the IMF program, approximately 80 percent of the government intitutions had already adopted the new accounting system, accepted the manual, and granted authorization to operate directly on their basic information. However, the implementation process had the following weaknesses:

- it lacked information concerning economic data of projects and programs from the extraordinary and special budgets;
- it excluded autonomous institutions in the implementation process; and
- it did not accurately determine the Central Government's actual revenues and outlays.

However, it is important to point out that the Directorate of Accounting had spent considerable time and resources to improve the technical capacities of its staff. Other aspects that need to be supported in order to ensure the success of the modernization process in this area, include: evaluation of institutional accounting reports in order to design and/or choose the appropriate software in this area; design of new accounting methods; and definition of new procedures within the institution, to accommodate the introduction of new technical developments.

Project Activities

The terms of reference agreed to as part of the consulting services of the Integrated Financial Management Project in the area of government accounting included the following goals (which focused primarily on providing continuity to the project started by the International Monetary Fund, and on incorporating new tasks and suggestions of the Directorate of Accounting).

In order to implement the newly designed accounting system, the Directorate was reorganized in such a way as to allow the personnel that had participated in the International Monetary Fund funded project to support the different areas within the Directorate. The net result of this situation was that the IFM Project did not have a permanent or clear technical counterpart. In light of this situation, the work plan was reformed in such a way as to allow the execution of the goals of the project.

Rules and Regulations

One of the first activities carried out by Mr. Alarcon was the review of existing rules and regulations governing the accounting area and the preparation of proposals for improvement. Specifically, Mr. Alarcon:

- prepared standards and procedures to develop the theoretical framework to support the new accounting system;
- developed guidelines to regulate the accounting function within the public sector. Within this task, accounting standards were developed for the depreciation of non-perishable goods and for the re-valorization of assets and liabilities;
- analyzed and discussed of Resolution 59/93 on Government Accounting that focused on officially adopting the technical procedures and accounting principles developed for the Directorate;

- analyzed and discussed a pre-resolution that incorporates a new accounting manual, new standards of internal accounting control. These measures would replace ruling 004/89 of the Court of Accounts of the Republic;
- defined new accounting guidelines for the administration of the Value-Added Tax (VAT). These guidelines would have to be approved by the Legal Office of the Internal Revenue Directorate;
- analyzed and redefined the conceptual framework used to capitalize goods through external financing, to record properties acquired through donations. Under both cases, the property's realization value and mortgage were included.

Implementation of New Accounting System in Decentralized Institutions

Mr. Alarcon assisted the Directorate's staff in understanding and implementing the new accounting system in decentralized government institutions. In order to carry out these activities, presentations were given to staff of the National Institute of Pension Funds for Public Employees (INPEP) and to the Institute of Social Security of the Armed Forces (IPSFA). As part of the presentations, a version of their respective budget manuals was taken for approval of the Directorate of Accounting.

INPEP also received assistance on the issue related to the enforcement of information flows and procedures on institutional operations, in order to facilitate the record of transactions under the new accounting system. Assistance to the technical staff of the Accounting Directorate in areas such as integrated financial administration, information systems and flows, technical aspects of the implantation of the accounting system; was also provided.

Impact of the Change of Budget Classifiers on Government Accounting

Changes in the structure of the national budget affected the tasks to be carried out within the Directorate of Accounting. To coordinate and harmonize the activities and concepts of the consultants in the budget and accounting areas, weekly meetings were scheduled in order to agree on the changes that were to occur in the areas of formulation and execution of the accounting system and the subsystems of the line agencies. The goals of this joint task group was to agree on the conceptual framework behind the new budget classifier and the new accounting system, their methodology and implementation. The analysis of the new budget structure allowed for the clarification of concepts.

The main issues centered on the incorporation of new budget accounts that were to replace already existing accounts in the "old" accounting system (subclass). Technical proposals were made to replace similar accounting concepts already established with the objective of avoiding repetitions and unjustified associations.

An important aspect also related to the proposal to modify the coding structure of the new budget classifiers based on the structure currently used by the Directorate of Accounting. It was thought that this approach would minimize the use of converters, and would avoid the preparation of a new program. To complete this phase of the work, a report was prepared by the staff for the Directorate of Accounting including recommendations on harmonizing the structure of the different classifiers.

As a result of this analysis, an "account plan" was developed, in which the new budget concepts were to be included and some accounts eliminated from the accounting system based on new budget concepts. In addition, the comparative analysis of the classifiers was extended to the level of subaccount, where an association of 90 percent was achieved, with the purpose of having the security of including all specific objects in the proposed budget.

Design of the Manual Procedures for the Supervisory Function of Accounting

This activity included the preparation of an instruction manual, basic programs on account supervision, questionnaires for the evaluation of internal control, instructions for the development and implementation of the different tasks, and training.

The activities to be developed in the Supervision Unit were presented to the Directorate, suggesting the inclusion of the basic training required for the Directorate's staff. A list of training areas was annexed to the main training plan. New visual aids were prepared for the training of the supervisory staff, with the purpose of facilitating the use of educational tools for the staff that was interested in becoming instructors. In addition, reading material was also prepared for the participants.

Initial training. The "Seminar on Training for Supervisors of Government Accounting" was delivered in five modules, including: government internal control, where the consultant was responsible for the module on supervision and control. The training on Government Internal Control and Supervision and Control was included to train the staff of the Supervision Unit on the techniques and procedures of government auditing. This training enabled them to perform their function more efficiently.

The training of the supervisory staff of the Accounting Directorate was covered between September 12 and October 8. The training provided a technical-practical orientation, to raise the interest of the participants in the use of the techniques and procedures necessary to carry out the supervision of accounting operations.

Design of the Manual

The design of the Manual of Procedures for Accounting Supervision included the following issues:

- an introduction, in which the goal and objectives of the supervisory function as well as its legal basis were pointed out;
- accounting supervision, which includes the conceptual framework, goals, characteristics, development stages, and main functions;
- auditing standards applicable to supervision, taking as a base the standards that regulate government auditing;
- internal control, conceptual framework, technical standards, responsibility for its application, importance of the supervisor, mistakes and irregularities, sources of information for its evaluation, methodology of evaluation, relationship with electronic data processing and results of the evaluation;
- programs, procedures, techniques and tests. This area included the conceptual framework, work programs, procedures, techniques and tests applicable to supervision, the risks involved and relative importance of tests are described;
- paperwork and other reports, which include their importance, preparation, conservation and custody, rank and reference order, and also current or analysis files, general and permanent;
- planning of the supervision tasks that are developed from the conceptual framework to include their goals, the timing of execution, the responsibility, the basic elements and stages to execute during the process;
- execution of the field work, starting with the rules to carry it out, the test by group of accounts, the use of procedures, the elaboration of explaining notes, and the complementary financial analysis.

Concerning the procedures for the design of the manual, a Directorate's official was assigned to revise the contents of the manual. The manual covered the supervision of every type of accounts and of financial statements. Thus the document was prepared taking into account all of the relevant accounting principles and practices, the different aspects to be considered in the evaluation of internal control, guidelines for the elaboration of questionnaires, goals of the review process, and general procedures.

The groups considered in the design are the following: availability, advancement of funds, monetary debtors, temporary and permanent investments, investments in loans and financial debtors, intangible and non-recoverable investments, investments in stocks, investments in goods of use, investments in projects and programs, deposits on other accounts, money creditors, debt on securities and external and internal financing, financial creditors, state assets, management income and expenditures.

Finally, the working documents were prepared; these documents, with their respective instructions, allow the development of the procedures of the manual on accounting supervision. The material was presented between October 1994 and January 1995 through partial deliveries to the Accounting Directorate for its revision. Modifications were made based on the assessment of the higher authorities of the Directorate.

On February 1995, the Government Accounting Directorate, with the Subdirectorate and Chiefs of the Supervision and Normative Units, discussed with the content of the design of the manual of procedures for accounting supervision with Mr. Alarcon. The contents of the manual were agreed upon and the final version was presented to the Directorate in March.

Evaluation of Institutional Accounting Units

The Directorate requested that the Accounting Advisor evaluate the problems of the Accounting Units to register the economic facts of projects and to set up measures towards facilitating their capacity to create and maintain records. Similarly, the Directorate was interested in evaluating the institutions that were operating in test mode and that had not completed the process of implementation of the system.

As an initial measure collected the rulings that impose the obligation to register projects. The institutions that were not incorporated in the extraordinary budget were detected and a work program that included visits in the future was prepared and approved.

The evaluation relative to the registry of projects and programs was advanced in the following institutions: Ministries of Finance, Labor, Public Health, Education, Foreign Affairs and Planning; Ombudsman for Human Rights, Legislative Branch, Supreme Court of Justice, Court of Accounts, Supreme Election Court, Ministries of Economics, Agriculture. Furthermore, proceedings to evaluate reports and constructive recommendations aimed at facilitating the registry of economic facts of projects in the institutional accounting were advanced.

With the purpose of attending a second request made by the Directorate, a work program was prepared and submitted, with the purpose of determining the causes by which the institutions under study had not completed the process of implementation of the accounting system. In this regard there was no order to proceed to the execution.

Integrated Financial Management Law

Mr. Alarcon was an important member of the team of functional specialist contributing to the development of the Integrated Financial Management Law. In this regard, he:

- prepared the draft law of the integrated financial management system;

- analyzed and discussed the philosophical framework of the new law of government accounting, with the purpose of formulating the Title V on this subsystem, to be considered within the Integrated Financial Management Draft Law; and
- recommended general guidelines for the system, and of the subsystems of the Integrated Financial Management Draft Law.

Training

In addition to the training on supervisory functions described above, Mr. Alarcon provided training on the new accounting system. In this area, a seminar in general accounting was given specifically directed toward the officials trained in the traditional system of the Directorate of Accounting. The analysis, discussion and recommendations on the contents of the courses of government accounting were taken into account, and included in the new accounting system.

Information Systems

Mr. Alarcon collaborated in the design, testing and improvement of the program developed for the government accounting system. The activities in this area will be presented in more detail in the Computerization chapter.

Other Activities

Throughout the project, Mr. Alarcon also assisted, at the request of the Directorate, in several activities not planned at the beginning of the Project. Some of the most notable tasks included:

- prepared strategies and policies to be developed within the system of government accounting, and its implementation within the integrated financial management system;
- analyzed and evaluated the methodology used to create historical records of the government accounting system; and
- evaluated the accounting system of the line agencies from a “centralized” point of view. A report with the results of the evaluation were presented to the Accounting Directorate. The report included a list of the weaknesses found in the system and suggestions to modify it.

Recommendations

Despite the fact that the government accounting system has had a successful design and implementation, short, medium and long-run actions are required to consolidate its structure. This process will allow to retain the Ministry of Finance the vital information necessary for management control.

The following areas should be considered for future developments:

- ensuring compatibility of the new budget classifiers with the system of government accounting. It is necessary to conclude phase II relative to the restructuration of the standards on accounts, grouping of data and treatment of accounts, and to develop Phase III, to start changes in the information systems and training on the new structure of the account catalogue.
- implementing the manual of procedures for accounting supervision. This activity is directed toward the practical application in the field of the tools included in the manual, and referred specifically to the specific training for the use of such manual.
- developing a template for an analytical managerial report. This task requires an empirical study to define and structure of the necessary data base, formulas, indicators and relationships, to form an analytic methodology of economic and financial variables. In addition to the definition of formats and instructions for the installation of information systems and a model of a report accompanied by the instructions for the analysis.
- evaluating causes by which the institutions that are in a test period, have not completed the process of implementation of the system. This activity is required in order to establish the degree of difficulty presented to make compatible the institutional accounting system with the government's. The purpose of this exercise is to develop the necessary alternative procedures that will permit the integrity of the national accounting system.
- evaluating the accounting reports with the purpose of optimizing their respective software. This action is addressed towards determining the quality of the information produced, with the purpose of proposing the adjustments that would be necessary to introduce in the contents of the salidas of data for the benefit of both the users and the system in itself.
- providing technical accounting design and definition of procedures to develop software of consolidation, applicable to the different institutions, according to the rulings of Article 16 of the general law of government accounting. Actions such as the selection of model institutions at the central and decentralized level will be needed, analyses of the main transactions at local and regional levels, determination of the present

conditions of computational operation, and feasibility of the adequacy of this resource and the available human resources, design of models, discussion and required adjustments, training to officials, implementation and supervision.

- implementing the system of government accounting in municipalities

INTEGRATED FINANCIAL MANAGEMENT LAW (SAFI LAW)

Introduction

Leading the legal drafting effort of the project was Dr. Rogelio Chávez. Dr. Chávez is a distinguished Salvadoran attorney and former President of the Supreme Court of El Salvador, and he is a widely acknowledged authority on all aspects of the Salvadoran legal system.

The reforms embedded in this project created the need not just to re-organize the different institutions affected by these changes, but also required a change in legal framework that governed the actions of the different institutions affected by the project, namely, the Directorates of Treasury, Government Accounting, Budget, and Debt and Public Credit.

There were several attempts at drafting a SAFI law, because there were different concepts of what integrated financial management was all about in the context of El Salvador. Each of the relevant Directors had his/her own idea as to what the concept and the the goals of the integration should be. This situation was not surprising, given that each director had been working towards integration from the viewpoint of their own general area. One of the first actions of the project was to meet with all of the relevant directors and consultants and move all of the people involved towards an agreement.

Project Activities

During the second quarter of 1994, the Project Director pieced together a general draft of what could be the comprehensive law for public sector financial management in El Salvador. Working with draft versions from Dr. Rogelio Chávez, the different consultants and the relevant directors revised and completed the draft version which was prepared and distributed on March 25, 1994. This version of SAFI generated numerous comments. Written comments were received from the Budget Directorate and the Treasury Directorate, followed by extensive verbal comments from then Minister of Finance, Mr. Edwin Sagraera.

Parallel to these developments, the Central Bank and the Ministry of Planning had drafted their own version of the SAFI law. These two insitutions were interested in having an input in this issue, given that at the time El Salvador's government was under international pressure to unify the budget. Drafting of their own version of the law was an attempt to influence the outcome of events, in order to maintain a leading role in the area of public financial management.

By September 1994, the legal advisors of the Ministers of Finance and Planning had agreed on the draft SAFI law. By mid-October, an "almost final" version had been prepared and distributed, the only remaining discussions were whether to include a date for ending the extraordinary budget and how to modify the Central Bank's role in public financial management. One of the difficult points of the draft law was the decision to include or not the government accounting law within the SAFI law. After many meetings, it was decided to do so, and the the

Project Director asked resident advisors Silva, Vinelli and Alarcón to prepare relevant articles for including government accounting within the SAFI law.

Between October 1994 and January 1995 the draft law was presented to the Minister of Planning and the President of the Central Bank. There were many discussions regarding the role of the Ministry of Planning in the budgetary process. In January, with a new Minister of Finance, the role of the Ministry of Planning was removed from the law thus enabling the Ministry of Finance to be able to carry out its responsibilities in the financial management of the public sector.

The SAFI law was presented to the Legislative Assembly in the last quarter of 1995, and it was approved in the first quarter of 1996.

PUBLIC DEBT

Introduction and Background

The purpose of this component of the AFI project was to create the institutional, legal, organizational and technical framework required for a modern administration of the public debt of the Government of El Salvador (GOES).

Prior to the beginning of the project, the public debt of GOES was recorded by the staff of the Financing and Public Credit office of the Ministry of Finance. The function of this unit was: to maintain records of the different foreign loans approved by the National Assembly, and the domestic debt issued by the Central Bank and approved by the National Assembly as well. The records were kept manually and, the monitoring of the loans was executed in a passive manner, that is, the GOES trusted completely the balances and payments that the creditors reported to them every quarter, semester, or year. The Central Bank, on the other hand, has kept records of the foreign debt portfolio of the public sector and it has collaborated with the Ministry of Finance in maintaining records of the status of public debt in general.

Institutionally and organizationally the work of this office of Public Finance and Public Credit, in particular, and of the Ministry of Finance in general, was complicated by a series of developments and circumstances beyond their control. For example, the development of the *Secretaría Técnica de Financiamiento Externo* (SETEFE) that was under the jurisdiction of the Ministry of Planning, impeded the management of the external debt. Unilateral decisions concerning the acquisition of foreign loans were made by either the Ministry of Planning or an executing agency such as the Ministry of Education without consulting the Ministry of Finance (who was ultimately responsible for repaying these loans). Generally, the Ministry of Finance learned of the loan when it had to present a request for approval to the National Assembly. This situation illustrated the lack of coordination in the management of the GOES public debt, and in the spending policies of the GOES in general.

The actual management of the Public Debt of the GOES was greatly limited. As mentioned before, the staff of the Office of Public Credit and Financing kept manual records, thus no analysis was conducted of issues such as: what is the currency mix of GOES foreign debt, what is the impact of acquiring new debt in the fiscal situation of the country, what foreign loans should the Government of El Salvador re-negotiate, and so forth.

The objective of the Public Debt component of the AFI project was to begin a process of “re-engineering” of the office of Public Credit and Financing. This process included: a review of the relevant laws affecting the work of this office, and propose changes; review of the organizational structure of the office itself and recommend changes; understand the institutional relationship between the Ministry of Planning, Central Bank, and Ministry of Finance, and recommend changes; analyze the current debt situation of GOES, and present an analysis; improve the analytical capacity of the Public Credit and Financing office.

General Approach and Methodology

To accomplish this task, four short-term advisors participated in different stages and components of this effort, namely: Mr. Eduardo Quant, Mr. Oscar Olórtégui, Dr. Dana Weist, and Mr. José Larios. Mr. Quant participated in the early stages of the project, his work included the following:

- reviewed all relevant laws and regulations affecting the administrative and analytical functions associated with Public Debt;
- analyzed reports prepared by the ministries of Finance and Planning, the Central Bank, the new Salvadoran stock exchange, the Inter-American Development Bank, the World Bank and, the Congressional Budget Office;
- assisted in meetings with and interviewed officials from the Salvadoran government, the private sector, and commercial banks;
- evaluated the functions and operations of the Ministry's Directorate of Fiscal Policy and Public Finance;
- recommended relevant changes in the in organization, staffing, and functions for the future of the Ministry's Directorate of Fiscal Policy and Public Finance;
- reviewed the SIGADE module (a United Nations sponsored debt management package), the Central Bank system, and the Ministry of Finance Lotus spreadsheets procedures for the public debt database and computer modeling software.

With respect to on-the-job training efforts, Mr. Quant was responsible of the following:

- improved the accuracy and timeliness of reports from the Department of Public Credit and Financing;
- assisted the government in the on-going refinancing of two fixed-rate loans (with USAID guarantees);
- provided two seminars: "Alternative Funding for a High Fixed Rate Loan" and "Private Financing for the Economic Development of El Salvador".

Mr. Quant prepared a draft memo on strategies and policies for external debt. The document separated the recommendations into two types, those for the short-term and those for medium-term implementation. The basic recommendations were as follows:

- establish as quickly as possible the computerized system for processing data on public debt, accessing the data base in the Central Bank;

- rearrange human resources within the Directorate of Fiscal Policy and Public Finance, i.e. incorporating the resources freed by the computerization of statistical duties into the preparation of studies and policy positions;
- improve the coordination and cooperation with the Ministry of Planning and the Central Bank, through the existing vehicle of the “Debt Committee”;
- promote and develop a market for government securities, particularly in small denominations at relatively short-term (perhaps a two year maximum);
- take advantage of international markets to issue Salvadoran bonds, in light of currently low interest rates. If necessary the GOES could contract an experienced agent for such transactions;
- accelerate the process of restructuring and reducing bilateral external debt;
- improve the transparency and quality of the evaluation of the projects financed with external resources;
- design a coherent external debt policy which, among other factors, takes the debt capacity into account.

A careful review of Mr. Quant’s recommendations indicated that the project’s efforts should concentrate in those areas where it was feasible to make an impact, and where the project’s staff technical expertise could resolve pressing problems of GOES.

Almost parallel to this event, Mr. Olórtégui arrived in country in order to ascertain the availability and quality of information on public debt, and to revisit the idea of utilizing the SIGADE computer debt management system. Mr. Olórtégui had experience working with this module, and he believed that if the system were functional, it would have sped his work in El Salvador. However, although SIGADE had in fact been used at one time in the Ministry of Finance, for a variety of reasons the Ministry’s experience with the module was rather negative. Mr. Olórtégui found the government’s SIGADE version and found the data that had been entered was obsolete and very incomplete. Furthermore, SIGADE’s computer platform was incompatible with the Ministry’s computer platform standards.

Mr. Olórtégui was assisted the Government in determining the Central Government’s debt capacity. He obtained from the Ministry of Planning documentation as to the investment program, and hence foreign finance needs for the next five years. Due to lack of reliable data he was unable to complete the analysis required, however, he was able to create a guidelines and standards that were passed on to the members of the Public Credit and Financing unit, in order to carry out the analyses once the data was available. At the request of the Project Director, Mr. Olórtégui prepared a memorandum with comments on the then available draft of the new

Administrative Financial System law, with emphasis on the sections dealing with public debt. He also assisted the MOF in preparing both the first draft of the regulations that will be necessary once the law is approved, and suggestions as to the functional organization of the Public Debt Directorate that the new law would create.

Development of the Public Debt Management System

In February 1994, Dr. Dana Weist and Mr. José Larios, and local programmers took-up the task of developing the computerized system for the controlling and management of the government's public debt situation. The development of the Public Debt Management System had the following stages:

- analysis and development of the database, including training the staff on the different financial issues and the modalities of different loans by institution;
- development of prototype of Public Debt Management System;
- installation of system and training of personnel in its use;
- development of analytical module;
- creation of a manual on Public Debt Administration and the analytical module of the Public Debt system.

Analysis and Development of Database

As it was recommended by Mr. Quant, the first attempt at the development of the database was to coordinate with the Central Reserve Bank the acquisition of their database on the GOES public debt. Many meetings occurred between the Project staff, members of the Ministry of Finance, and the Central Bank in order to define the Project's data requirements, and the appropriate mechanism to transfer the database to the Ministry of Finance. After three months of futile meetings, it was obvious that in order to complete the development of the database within the time constraints of the project, the database had to be created within the Ministry.

Research was undertaken to revise and review all of the records kept by the office of Public Credit and Financing, on each of the active loans and credits of GOES. A list of all of the loans by the following parameters:

- date when the loan was acquired;
- institution;
- type of currency;
- type of interest rate;
- length of payment period;
- legal characteristics, i.e. legislative decree.

Samples of loans by each institution were analyzed with the staff, and very quickly it became obvious that the staff did not have the technical capacity to understand the financial mechanism operating throughout the debt portfolio of GOES, and although they could understand the differences between a loan of the World Bank and a loan of USAID, they could not understand in concrete the actual quantitative aspects of each loan.

As a result of that deficiency, Dr. Dana Weist and Mr. José Larios conducted a seminar on financial principles during the first quarter of 1994. The seminar developed two basic templates of sample loans: one, a loan with a fixed interest rate, and two, a loan with a variable interest rate. Both templates calculated the net present value of each loan. The purpose of the seminar was not just to explain and show the mechanics of generating payment tables for a generic loan, but also to introduce the staff to the habit of working with a computer. Traditionally, the staff had used computers only as for wordprocessing tasks. Therefore the seminar was also an introduction to “Computers in Financial and Fiscal Analysis”.

The process of creating the database for the debt management system was complicated for a numbers of reasons. First, counterparts had limited time to devote to the project, delaying the development of the database. Second, the technicians were unaccustomed to solving analytical problems, thus when they could not explain or understand an issue in a loan, they would overwrite a number over the formulas for each cell and would not explain why they did what they had done. Thus, loans had to be redone several times in order to maintain the integrity and consistency of the database. Finally, the staff did not have sufficient computers.

In order to expedite the process, the project, with the support of USAID, bought new computers, included members of the Economic Analysis Unit, and hired three students of the new Business and Economics School. By the end of January, the 1995, there had been considerable advance in the completion of the system’s database. The process of creating the database of the system was and still is fraught with many obstacles, and it is an on-going process. However, the staff has become proficient on the development and updating of the database.

Development of the Prototype of the Public Debt Management System

Parallel to the process of developing the database of the Public Debt System, Mr. John MaGowan, a resident advisor, and later Mr. Eduardo Maldonado from KPMG Washington office; with Ms. Ana María Rivera, Mr. Mauricio Cañas, Mr. Balmore Cuéllar, Mr. José Luis Pérez, and Mr. Magdiel Guardado worked in the development of the actual system of Public Debt. It is important to point out that all the persons mentioned above were involved in different processes of the development and were not all working on the project at the same time.

To develop the system, Ms. Ana María Rivera took up the task of understanding the institutional and legal context in which the function of public debt management and administration is carried out. Ms. Rivera also worked closely with Mr. José Larios and the staff of the office of Public Credit and Financing in the development and analysis of the database. Dr. Dana Weist and Mr. José Larios prepared a paper in which they explained the concepts and the

design of the Public Debt Management System. The paper was presented to, and discussed with the technicians. Based on these specifications, a prototype was presented on December 1994 to the Directorate of Fiscal Policy and Public Finance and her staff. The presentation included not only a demonstration of different aspects of the system, but also a detailed explanation of the concepts and methodology at the base of the system.

The first version of the system was installed in April 1995. Mr. Balmore Cuéllar presented the system to the staff of Public Credit and Financing, Mr. Cuéllar explained the following:

- navigated throughout the different screens in the system;
- explained how to update existing loans, and how to create a new loan;
- explained how to move from automatic mode to manual mode, where the user can update a loan manually;
- explained the different tables that the system creates; and
- explained the different ways to accomplish tasks within the logic of the system.

This was a process where the programmers involved in the building of the system were made available to the Unit of Public Credit and Financing in order to:

- correct any “bugs” in the system;
- modify existing screens and create new screens in order to satisfy the needs of the Unit’s staff;
- modify or create output tables; and
- assist the staff in the process of absorbing a new technology and a new way of doing the same work.

In order to continue with the maintenance of the system after the completion of the system, Mr. José Larios suggested to the Directorate of Fiscal Policy and Public Finance to employ a programmer to maintain the system and to make modify aspects of it, that the user and the Directorate deemed appropriate. In June, a programmer from the Ministry’s Computing Center became part of the staff of the Unit of Public Credit and Financing.

Development of the Analytical Module of the Public Debt Administration System

One of the recommendations of Mr. Quant and Mr. Olórtégui was to create a tool with the capacity to analyze the debt situation of the GOES, and the government’s capacity to acquire new debt. In order to accomplish this several steps were taken. First, Mr. José Larios gave a seminar on debt capacity analysis to the technical staff of the Directorate of Fiscal Policy and Public Credit. Second, the development of the Public Debt Management System and its database provided the necessary infrastructure to develop the technical and methodological requirements of the analytical module.

The actual development of this module occurred in the last stages of the project. The module is simple yet powerful. The baseline database is the current updated debt of GOES. The module can create new loans and simulate the impact of acquiring new debt under scenarios of:

- fixed and variable interest rates;
- one currency, a basket of currencies or “units of account”

The module calculates the payment plans of each loan, both actual and existing under conditions specified by the user, converts the every loan into US denominated currency and then converts each loan from US Dollar to Salvadoran Colones. With the information in Salvadoran Colones, the user can compare the impact of acquiring new debt, changing economic conditions on the monthly and annual cash flow situation of GOES. The module allows the user to include data on government expenditures and revenues in order to carry out the exercise described above. Similarly, a series of indicators were developed that calculate the country’s risk as it is defined by multilateral institutions and private banks.

Manual on Public Debt Administration and Analytical Module of the Public Debt System

A manual with a discussion of the concepts, the technical and methodological aspects underpinning both the management and analytical modules were generated. The manual also describe a description of every screen in the system.

Recommendations for the Future

Future work should take in consideration the following:

- Organizational: For the Directorate of Public Finance and Public Credit to fulfill its mission of analysis and monitoring of the public debt, the mechanism through which GOES acquires debt has to be redefined, in such a way that the Ministry of Finance provides an input in the decision to acquire or not debt. In other words, the institutional relations within the Ministry and between the Ministry and the executing agencies need to be modified.
- Institutional: The division of labor between the function of monitoring and managing the public debt, versus the function of analyzing the debt should be separated. In fact, the development of the system created the need for such a separation. However the analytical component is under a the Economic Analysis Unit, thus can create frictions and problems down the road between the units. It would be advisable that the analytical component of the debt management were under the same Unit. Another point regarding the analytical component. For this area to run smooth, it is necessary that the person in charge be technically component. The quality of the analysis will be enhanced if the person directing the effort is an economist with good credentials and not a bureaucrat with the “right connections”.

- Training: The personnel in charge of managing and analyzing public debt needs to build on the knowledge that they have accumulated as a result of their work in the Ministry and the seminars on technical matters they received as part of this project. It is recommended that the training is hands-on where the technological tool developed is used to illustrate concepts, work “real-world” situations under a less stressful context, and also as a way of creating the habit of using the computer as a tool.

COMPUTERIZATION

Introduction and Background

The computerization component of the AFI Project began on May 1993 with the arrival of Mr. John Magowan as the Information Systems Resident Advisor. Along with Mr. Magowan, the Programmers/Analysts Messrs. Rafael Ruiz and Alfredo Velázquez joined the AFI Project Team. Later, the computerization team expanded to a total of eight Programmers/Analysts, including: Mr. Salvador Rivera, Mr. Magdiel Guardado, Mr. Balmore Cuéllar, Ms. Ana María Rivera, Mr. Mauricio Cañas and Mr. José Luis Pérez. The local counterparts at the Ministry of Finance (MOF) were actively involved in the AFI project at the managerial, technical and administrative levels.

The computerization component of the AFI Project included multiple activities related to the development of information systems in four functional areas: (1) Budget, (2) Treasury, (3) Government Accounting, and (4) Public Debt. In addition, the Team worked extensively in developing information systems development tools and standards. The development and implementation of the new Integrated Financial Management System required the Project Team to deal not only with administrative issues of all these areas but also with organizational and policy-level issues. Most of the activities, however, correspond to those found in the typical "systems development life cycle."

Achieving the envisioned improvements in financial management required important administrative changes as well as the development of computerized information systems to support these changes. Because of the significant impact that financial management has on the implementation of a variety of government policies, these changes are still occurring, since they represent important steps in the lengthy process of modernizing and improving the public finances.

Prior to the Project, the MOF and its Computer Center had accomplished very little in the automation and use of information systems to support the financial management function, except for the Government Accounting system. In the beginning of the Project it was clear that the financial management processes suffered from delays in processing data, inadequate, or non-existent information to manage public finances, and inadequate automation for recording and processing financial information. Integration among the four functional areas was almost non-existent.

Concurrent with the Project, the MOF was in the midst of a broad modernization and reform process of its administrative, organizational and legal structures. An important part of these efforts was the MoST Project also executed by KPMG Peat Marwick. When the AFI Project began, the MoST Project was at its mid-point and both projects shared the same management. The high functional relationship between financial management and tax administration, as well as the shared management structure, created a strong interaction between these two projects to the point where it is sometimes difficult to differentiate between one and the other.

Other modernization and computerization efforts were underway at the beginning of the AFI Project that also had an impact on the accomplishments of the Project. The project to develop the new Government Accounting System with financial and technical assistance from the International Monetary Fund had particularly important consequences in the way that the AFI Project developed. The accounting project provided the opportunity to begin performing a requirements analysis for the development of an integrated financial system. Despite initial difficulties in coordinating the work of these two projects, this requirements analysis provided a fair diagnostic of: the state of affairs; the level of automation; the status of the Data Processing and Information Systems organization; the understanding of the legal framework and its limitations; etc. This initial effort was also useful in understanding the level and type of challenges to be overcome in developing and implementing information systems.

Another important element to consider at the beginning of the AFI Project was the situation at the Computer Center (CC) in the Ministry of Finance. Under the influence of the MoST Project (as well as other forces), the CC had recently gone through a complete reorganization and had adopted a new mission statement focusing on decentralization, with a strong commitment to using simpler and more flexible computer platforms, and the use of modern development tools, including PC networks, database management systems, Computer Aided System Engineering (CASE) development tools and Fourth Generation Languages (4GL).

The work in the area of computerization included the development and implementation of several software application modules and systems. At the end of the AFI Project these systems support and are an integral part of the multiple functions of the Government's financial management, including: Budget, Treasury, Accounting and Public Debt. Other tasks involved the installation and configuration of equipment, training, documentation, etc. The results of the computerization Team's completed work are now in the hands of the different Directorates of the MOF. These results include magnetic files that contain computer software programs (source code and executables) and documentation for the systems developed, including both technical and user manuals. Additional and extensive documentation was developed at the end of the Project in the form of hard-copy files and diskettes.

Other Technical Assistance Efforts

A number of computerization efforts were underway within the MOF when the AFI Project started. Several organizations were involved in these efforts and in many ways these projects interacted with and were related to the AFI Project. The following section provides a brief analysis of the scope and status of these efforts at the beginning of the project.

MoST Project: Computerized IVA system. A value-added tax (IVA) went into effect in El Salvador on 1 September 1992. A computerized IVA system was defined, designed and implemented between the months of February and September of 1992. The IVA system was designed for the Directorate of Internal Revenue and implemented in that department by the KPMG Peat Marwick MoST Project. The system provides for registration, returns processing, and

payment processing of the value added tax. The system is based on a PC-LAN and is operated and managed by local staff; it produces a variety of auditing and analytical reports.

MoST Project: Taxpayer receipts system. This system began as a MoST Project pilot computerization effort in selected branches of all commercial banks in El Salvador. The banks are responsible for receiving tax payments on behalf of the MOF and processing and accounting for these payments. Using manually-based posting and reporting systems, the process was fraught with delays and numerous reporting errors. The MoST team developed a system for using distributed microcomputer receipts machines that were placed in the bank and used to process the payments. Information on the receipts is uploaded daily to a microcomputer in the MOF that consolidates and reconciles it by bank, branch, and type of tax.

MoST Project: Customs statistics and control systems. A team of analysts and programmers of the MoST Project was assigned to the Customs Department to develop the Imports Data Processing System under the direction of Customs Department management. The system provides timely statistics on volume and composition of current imports, tariffs, and other tax collections. Also, the team designed a microcomputer-based system for the control of imports traffic and for customs valuation and evasion control.

IMF: Government Accounting System Implementation. This project was managed by a government executive committee chaired by the Vice-Minister of Finance, and a consultant from the IMF. The terms of reference for that project included: a) the reform of the Government Accounting Law, giving the Ministry of Finance the capability to implement the integration of the ordinary and extra-ordinary budgets, to reform the chart of accounts and other accounting procedures, and to make other budgeting and accounting reforms; b) the development of a Government Accounting Handbook, describing the procedures to be used in the newly defined processes; and c) the design and development of pilot computer systems as the initial step for computerization of the budgeting and accounting processes.

The computerization effort was designed in two components: (1) a microcomputer-based distributed system for use in the accounting entities; and (2) a mainframe-based application for the integration of all entity transactions and general government accounts reporting. In late 1991, GOES contracted with two local companies (CONSISA and IBM) to provide computer systems design and development services in relation to this effort. CONSISA was contracted to design and develop the software that was to be distributed and supported in a set of pilot spending entities, and IBM was given the task of designing the integration software on the Computer Center's IBM 4381.

The microcomputer-based system designed in this area was to be located in the spending agencies: ministries and other entities with government expenditure authority, where it would be used to capture information on spending commitments. The information would be structured to fit into the newly-developed integrated chart of accounts, and would be uploaded on a daily basis for consolidation, cash management and other critical reporting needs. The aim of the system was to bring the processing and analysis of financial transactions directly into the spending agencies and to provide a more timely reporting of spending agency commitments. The microcomputer-based system had been implemented in five, pilot spending agencies. However, the software for

integration and reporting on the mainframe was still incomplete although some components were in the final stages of testing.

Ministry of Planning. In addition to the efforts described above, various personal computers were being utilized in the Budget Directorate for preparation of the consolidated government budget documents, and SETEFE (Ministry of Planning) for preparing and analyzing ordinary and extraordinary budgets. However, there was no systematic integration or sharing of data, and no overall systems design framework.

Other Issues

Computerization capabilities and methodologies. Requirements for support to the CC were defined in light of the developments in the computerization planning and capabilities within the MOF and the level of computerization in the affected areas of budgeting, treasury, government accounting, and public debt.

For many years, the CC had been responsible for coding and maintaining centralized information systems based on a large mainframe IBM 4381. The applications supported by the system included government accounting, tax form processing, import statistics, and other critical applications. The problems of this centralized approach to data processing were evident: delays and backlogs in data entry and processing; lack of flexibility in applications development tools and tools for extracting and analyzing the data; delays in producing useful information products from the stored data; lack of a sense of ownership in the data by the departments and agencies who generate it, and lack of faith in the accuracy or usefulness of the information coming late from the computer center; costly "vendor lock-in" absorbing the majority of the CC's annual resources in the form of maintenance fees, software licenses and expensive mainframe hardware and technical services.

Distributed processing. The Computer Center Plan called for the eventual phasing out of the IBM mainframe. Wherever possible, new systems development would be focused in user departments, with powerful microcomputers and Local Area Networks providing the basis of user information systems. Computer center staff would be posted to these user departments for a period of time to work with the user in the design and implementation of the systems. Placing computer center staff in user departments made the Computer Center a provider of software development services.

Coordination. The Computer Center Plan called for all future systems development in the Ministry, whether they take place through the CC, or through a foreign assistance project, or private contract, to be subject to the standards developed by the CC. The CC, in turn, would be part of a Central Computerization Committee that will be chaired by the Vice-Minister of Finance, and includes representatives from all the departments in the Ministry. The Computerization Committee would become a forum for the discussion of Ministry computerization priorities and plans in the area of information systems. With advice provided from the CC management, the committee would address short-term and long-term information systems objectives. Equally important, the committee would assist in the enforcement of compatibility and standards in systems development,

and in the coordination of various service providers, including donor assistance project teams working in the area of computerization.

Computer platforms. The Computer Center plan called for the use of microcomputer-based LAN technology as the platforms for data entry in various applications within the Ministry. The plan relies heavily on database server technology that will allow access to Ministry-shared data by various software tools and database products. Applications should be implemented for user departments using distributed microcomputer multi-user environments. These application systems access shared Ministry data via one or more database servers. Thus, local databases are "owned by user departments" and Ministry-wide shared databases exist, e.g., taxpayer master file, integrated financial management database. The evolution of microcomputer database products have provided powerful yet inexpensive software development tools that operate on these LANs and provide rapid development of data entry "front-ends."

Applications development methodology. In conjunction with the Computer Center mission statement and long-term plan, the management of the Computer Center also released a software applications methodology statement. In brief, the methodology defines an eight-stage "rapid-prototyping" approach towards systems development for user departments. The rapid prototyping approach to user-centered systems development is an approach introduced by KPMG Peat Marwick in the MoST project and continued by the AFI project.

General Approach and Methodology

Recognizing the importance of deploying information technology in this project, the AFI Project Computerization Team took an approach that has proven effective in many other projects with similar environments: experience, planning, and the use of appropriate methodologies. This approach was based on important principles and lessons learned in our experiences with the planning, development and implementation of information technology. This section describes in more detail the overall approach to computerization effort of the AFI Project.

Commitment to Support Modernization

Without the cooperation of government staff and the commitment of the government authorities to support modernization, the implementation of information technology would have been very difficult, if not impossible. Overall, the MOF demonstrated support for modernization and information technology efforts, but this support was not always as strong as needed. This lack of steady support occasionally delayed the progress of the project in certain areas.

Planning and Coordination

There were many "players" involved in the development and implementation of the different components of the Financial Management System. Success in computerization always requires planning and coordination to avoid severe incompatibility problems and to provide for realistic phasing of the implementation of new systems within any organization. A well thought

through and accepted plan is extremely important. It serves as a guide for the computerization efforts and includes the standards that must be followed in all the project's phases.

Objectives and Schedules

Far too many computer projects have failed or have given the appearance of failure because they attempted to computerize "everything" in a relatively short period of time. Those with experience know that useable software cannot be developed overnight. And, even when proven "off-the-shelf" packages are used, it takes time to accurately define, design, implement, test and install the necessary enhancements and changes to these packages. Educating the users about what is possible and what is not possible had to be done early in the project. Scheduling is critical to the success of computerization. Realistic schedules are mandatory for all phases of computerization. During the AFI Project, there was a constant effort to review the schedules and the requirements.

User Involvement and User-defined Systems

There are many instances where computerized systems that were implemented were simply not what the users required. This was not the case in the AFI Project, where programmers and analyst spent a great deal of time and resources to understand the needs of the users. The experience of this project proved that the use of pilot-testing and rapid prototyping, that allows users to "test drive" the proposed computerized system prior to full implementation, are the best ways to guarantee user involvement and to produce user-defined systems that truly meet the users' requirements.

Education and Training

Training and education of users and technical staff was a major concern in the AFI Project. Most of the training was done by the AFI Computerization Team on the form of "hands-on" training, but there was also cooperation from the other functional experts and advisers. Training on computer hardware, systems software and communications was provided by local and international consultants. During the project several workshops and training courses for the different applications were organized, developed and delivered.

Documentation

Systems' documentation, both in paper form and in on-line help facilities is an essential component of all the computerization projects. All software developed within the AFI Project was documented in the form of users manual and a technical documentation. Some training materials were also developed.

Simplicity

Based on experience in other projects, simplicity played a major role in the success of the AFI Project. Every aspect of computerization was defined keeping the solutions as simple as possible. But simplicity did not sacrifice functionality; rather, it provided the features in a way that

was more accessible to the normal user. The focus on simplicity reduced the implementation time, and it will make software maintenance much easier in the future.

Institutionalization of Computerization

Undoubtedly, the ultimate goal in the AFI Project was to institutionalize the new information technology and systems that were deployed, so that they could become an integral part of the day-to-day operations of all the Ministry of Finance departments. To accomplish this, the project team had to educate the users and computer staff. Many of them worked as a part of the AFI Project Team providing a great deal of support in defining and implementing most of the computer applications.

Quality Assurance

Producing the definition of user requirements was just the first step in providing quality information technology and computerized systems. The AFI Project quality assurance included the verification that standards were followed, requirements were complete, programming standards were followed, documentation was complete, test suites had been correctly defined and applied, and configuration maintenance procedures were followed.

Scope, Goals And Objectives

The successful computerization of the Integrated Financial Management System required a strong and effective approach towards computer systems development. Computerization had to be focused on the implementation of distributed, computer-based budgeting, accounting, public debt, and treasury operations systems, which would meet the operational needs of the various users represented in these processes, and supply the timely and accurate flow of information required as the basis of successful financial management.

As stated in our original proposal “...there are many reasons why attainment of the entire scope of the Government-wide Financial Management System is not achievable over the two-year time period of the AFI Project. These include limitations in hardware resources, limitations in the numbers of trained GOES-MOF computer support staff and trained computer operators in the spending agencies, and above all, limitations in the amount of time for management and end-user training. The complete and integrated system will only be developed over a number of years, involving a number of different computerization teams, each building on the successes of its predecessors.” Yet, the essential goal of the AFI Project was to design, develop and implement a long-term information system architecture for the Integrated Financial Management System. Over the two-year period of the Project we worked in close collaboration with the CC and with key users in the MOF identifying the priority modules and elements which were achievable and critical to the long-term success of such a system. The primary goals of the AFI Project were:

- to produce reliable and auditable information for public dissemination in the area of government budgeting, debt management and expenditure control;

- to improve the timeliness of reliable information flows to allow for more streamlined treasury operations; and
- to enhance the autonomy and responsibility of spending agencies in the budgeting and expenditure control process by providing agency-level information systems which are integrated in an overall structured framework.

Specific objectives for an effective Integrated Financial Management System include:

- enforcement of budget preparation consistency across the different agencies, and promote adherence to set budget calendar and budget preparation, budget format and execution rules determined by central authority;
- maximum autonomy of decentralized spending agencies in the preparation, and control of their budget process within the framework of an integrated and timely financial management system;
- improved the timeliness of information on entity commitments to the Treasury for cash programming and provide for expenditure needs from all areas, including public debt;
- improved management and integration of external resources (grants and loans) into the budget process, including the ability to analyze long-term budgetary requirements of capital programs and projects and the use of computer based evaluation tools.

Activities and Accomplishments

The computerization component of the AFI Project produced a number of significant accomplishments. Actual and long-term outcomes depend on the Government's commitment to enforce and continue the modernization efforts. At the conclusion of this phase of technical assistance, the following general accomplishments have been achieved:

- a set of information systems design development standards are available for use at the Minister of Finance Computer Center and across all the data processing groups;
- a financial management system that integrates or creates the basis for integration of the budget, treasury, accounting and debt management processes;
- a budgeting process that is more automated, efficient and comprehensive in its coverage and useful for decision making;
- treasury operations that are more timely, transparent and supportive of the budget execution process;

- accounting data processing and financial reporting procedures that are more complete, accurate, timely and auditable;
- a debt system that is more accurate, responsive, comprehensive for the administration of public debt, and that also provides analytical capabilities; and
- trained staff in the areas of accounting, budgeting, treasury, debt management and data processing.

This section provides a summary review of all the activities carried out during the AFI project. The first part is a review of the status of each of the areas. For each major system or group of modules the most important tasks and milestones are listed. Also, a brief description of the system/module features is provided.

Development of Design and Programming Standards

One of the most important tasks performed during the computerization component of the AFI Project, and the one with more long-term overall impact, was the development of a set of standards for design and development of information systems. These standards had begun to be developed in the MoST Project in conjunction with the MOF Computer Center. The original purpose of this task was to unify and update the standards and procedures. However, this objective was extended later to include a full set of new development tools and standards, all of which provide the following benefits:

- a standard, effective and efficient table-driven security feature to be implemented in all of the Ministry's Fox-Pro based computer systems. This feature provides a greatly enhanced security against both accidental and malicious loss of data, and prevents reoccurrence of problems which had existed in the past;
- a standard, effective and efficient table-driven initialization work area to be implemented on all the Ministry's FoxPro based computer systems. This feature provides a standard and automatic solution to the problem area of FoxPro-based systems.
- an automatic interface which takes output files from Visible Analyst and uses them to generate a FoxPro data dictionary, enhancing the system development and documentation process in both the development and maintenance stages of the system lifecycle.
- a parameter-driven screen program generator which reduces greatly the time devoted to program coding in the development of FoxPro-based systems.

Work Accomplished

- Concept development
- Define elements to be standardized
- Review and selection of tools: Visible Analyst and FoxPro
- Design of standards
 - Prepare standards for database design
 - Prepare standards for Error/User messages
 - Prepare standards for Security Access
 - Prepare standards for on-line help
 - Prepare standards for documentation
- Document standards
- Programming of Standards System
- Programming of Visible Analyst - FoxPro interface
- Programming of error handling routine
- Programming of the security access module
- Programming of the on-line help module
- Programming of screen generator for table maintenance

Government Accounting Operations

Primary responsibility for government accounting is placed in the Government Accounting Department (GAD), which is responsible for recording all operations that affect the budgetary balances of the GOES and for determining and reporting on the government's year-end balances. The GAD is also charged with prescribing the standardized account classifications for government incomes and expenditures. The framework guiding El Salvador's Government Accounting is driven by the Government Accounting Law, enacted in December 1991. The primary goal of this law was to establish a uniform system guided by a body of principles, standards and technical procedures. The new law establishes a more decentralized approach to governmental accounting and offers an opportunity to shift accountability back to the managers in the executing agencies, a key principle for improving accountability through Integrated Financial Management Systems.

Computerization of government accounting. In the last few years, the GOES undertook significant steps toward the computerization of the government accounting system. Most notably was the Government Accounting Project, which was managed by a government executive committee chaired by the Vice-Minister of Finance and assisted by a consultant from the International Monetary Fund (IMF). The new computer system, designed to operate with the new chart of accounts used for the budgeting and accounting functions, supported the decentralization of the accounting function throughout the GOES while maintaining or even improving the control in the system. Other objectives for the new system included a more timely reporting of spending agency commitments in electronic form to DGT where they can be used for cash management purposes. The detailed design and development of the system was carried out by two local companies. The effort had two main components: (1) a microcomputer-based distributed system for use in the executing agencies accounting units to capture information on spending commitments and other financial transactions; and (2) PC network based application for the integration of all entity transactions and general government accounts reporting at the GAD.

Many accomplishments had been achieved in this area as of the beginning of the AFI Project. The government accounting law had been passed and the computer system had been implemented in several spending agencies. The progress achieved, however, was not without delays and setbacks. Implementation of the new system suffered setbacks in fully developing and testing the computer system; in particular, the software for integration and reporting was still incomplete. The objective of the AFI Project in this area was to provide full support in the last phase of the implementation of the new system, particularly in the documentation, training and providing technical leadership and expertise in the design and development of some of the most difficult functions of the centralized module, such as the "Ledger Closing".

The first important effort of the AFI Project was the preparation of a comprehensive Requirements Analysis for the Automated and Integrated Financial Management System and a work plan for the development of such a system. This effort was followed by the development of Evaluation Criteria for accounting and financial information software packages. These criteria were used to perform the evaluation of the system which the Computer Center was attempting to implement and also three commercially available packages: Platinum, Accountmate and TecApro.

After the decision was made that the system under development by the CC would finally be implemented, and regardless of the result of the evaluation that indicated that the package solution was feasible, the AFI Team began providing full support to the development and implementation effort. Some of the tasks performed were as follows:

- analysis, design and development of several inquiry and report programs for both the accounting and budgeting features, including the cross referencing of the Chart of Accounts to and from budget classifications;
- analysis, design and development of: the cashflow analysis inquiry and report programs; the monthly and annual closing programs; financial statements inquiry and report programs; modifications to allow the system to operate in a multi-user configuration;
- analysis, design, development and implementation of a methodology to maintain updated the version of the software and to ensure that the installation for testing was executable; and conversion of the system to generate and install the executable programs.

Finally, the AFI Team provided personal production and technical leadership in helping the Accounting Department and the CC to complete the system technical and user documentation. Particularly important was their involvement in retroactively developing the requirement analysis document for the governmental accounting system software.

Budgeting

When the AFI Project began, the first analysis of the budget processes showed that each of the major functions of public budgeting (formulation, execution and evaluation) were limited in their effectiveness as policy tools, due to several factors, including the serious limitations of the information systems that supported these processes.

Budget formulation. The major problem identified within the budget formulation process was the fact that it was more of an exercise in presenting data than one of analyzing outcomes or alternatives. For example, alternative budget strategies corresponding to different financial scenarios are not prepared as part of budget formulation. Because of the limited information processing capabilities, the review of budget requests by the DGP emphasized its accuracy and conformity to the budget circular, in most cases to the expense of program objectives.

The short-term solution to this pressing problem that was achievable within the scope of the AFI Project was to develop a number of simple Budget Formulation modules. Each of these modules maintained integration functionality to be used at the different stages of the budget formulation process.

Institutional Budget Formulation Module: Work Accomplished

- Develop Institutional Budget Formulation Module
 - Analysis of Requirement for the Ministry of Education
 - Prototype Budget by Program (BBP) Process
 - Test and Adjust the BBP Prototype
- Implement the BBP Prototype at the MinEdu
- Redefine Requirements for Budget by Management Areas
- Reprogramming of the Institutional Budget Formulation Module
- Documentation and Training Tasks
 - Document Technical and Functional Specifications
 - Implement Security Access Shield

Budget Formulation Module for Public Enterprises: Work Accomplished

- Design and Develop Budget Formulation Module for Public Enterprises
 - Analysis of Requirements
 - Design of Data Entry Forms
 - Design Reports
- Coding Data Entry Module
- Coding Reports Module
- Implement Security Access Shield
- Documentation and Training Tasks

Budget Formulation Modules: Features and Functions

- Budget Formulation: Institutional and Public Enterprises
 - Tables and Files Maintenance
 - Central Government
 - Record Personnel Budget Transactions
 - Record Requested Amounts (Specific Objects and Work Line)
- Public Enterprises
 - Record Personnel Budget Transactions
 - Record Requested Amounts (Specific Objects and Work Line)
 - Record Estimated Revenues by Specific Objects
 - Record Annual Goals by Work Line
- Inquiries
 - Detailed Transactions
 - Summary Transactions
 - Reports
- Central Government: FIP, FUP, AFUP
- Public Enterprises: FEP
- Personnel Budget Baseline
 - Processes
 - Create/Maintain Personnel Budget Baseline
 - System Distribution
- Institutional Consolidation
- Security Access

Centralized Budget Formulation Module: Work Accomplished

- Design and Develop Centralized Budget Formulation Module
- Analysis of Requirements
- Design Central Database
- Coding Communication Module
- Coding Data Load Module
- Implement Security Access Shield
- Documentation and Training Tasks

Centralized Budget Formulation Modules: Features and Functions

- Create/Maintain Institutional Budget Files
 - Central Government
 - Public Enterprises
 - Personnel Budget
- Inquiries
 - Summary Transactions
 - Consolidated Transactions
 - Reports
- Consolidated of Central Government

- Public Enterprises
- Processes
- Consolidate Institutional Data
 - Change Budget Process Status
 - Transfer Information to Institutions
 - Budget Formulation Closing
 - Security Access

Budget execution. The approved budget provides the financial basis for the operation of government agencies during the fiscal year. The budget execution occurs from January 1 through December 31. Allotments for the execution of the budget are approved by the DGP for each institution. The allotment system controls the frequency with which the funds are spent. Payment orders are submitted for approval to the DGP, the Court of Accounts and the DGT. These decisions are made several times due to the reprogramming of funds or the availability of new funds, thereby slowing the pace of budget execution. Liquidity problems, stemming from deficiencies in the DGT's cash management system, often delay the remittance of quarterly allotments. These delays interfere with operating agencies' ability to execute their budgets.

Within the scope of the AFI Project, a procedure and system was conceived that would expedite this process. The new procedure was called Budget Execution Programming (or PEP for its Spanish name: *Programacion de la Ejecucion del Presupuesto*), which consists basically in establishing a quarterly allotment that is automatically prepared by the computer system and reviewed, negotiated and approved by the DGP. The new system is simple and provides the capability of creating the allotments at the DGP and distributing these allotments by electronic means (diskettes) or by phone-modem to each of the executing agencies.

Budget Execution Module: Work Accomplished

- Design and Develop Budget Programming Module
 - Review Existing System: Annual Expenditures Programming
 - Analysis of Requirements for PEP
 - Design PEP Module
 - Coding PEP Module
- Implement Security Access Shield
- Documentation and Training Tasks

Budget Execution Module: Features and Functions

- Budget Execution Programming
 - Recording
 - Execution Program
 - Update Current Balances
 - Reports
- Requests Consolidation (by Unit and Item)

- Resources Request (by Month and Item)
- Resources Request (by Month and Line)
- Processes
- Send Requested PEPs
 - Integrate PEPs
 - Receive Approved PEPs
 - Receive Changes to Current Budget
- Security Access

Budget evaluation. Of all of the stages of the financial cycle, evaluation receives the least attention. The Department of Expenditure Control within the DGP evaluates the financial execution of the budget by institution, using the budget law as the baseline, the institution's allotments, credit reserves and payment orders. This financial evaluation focuses more on control than evaluating performance or outcomes, and hence provides limited useful information for decision making.

A significant obstacle to evaluating the budget is the lack of information on program goals or outputs by which to monitor spending. Institutions do not have historical data that can be used to evaluate their current work. Although the AFI project did not focus in this function, the issue of generating adequate information for evaluating the budget execution was resolved. The solution to this problem that appears in the section "Integration Effort", consisted in creating an interface with the General Accounting system. The interface allows for the creation of solid and auditable information directly from the accounting database. This subset of data is the basis for developing a comprehensive execution evaluation and monitoring module within the budget system.

The Financial Management System: Treasury Operations

The major deficiencies affecting treasury operations when the AFI Project began included: inadequate information to manage public sector finances efficiently; antiquated and cumbersome procedures for approving payments resulting in long delays in processing and issuing payments; and inadequate automation, adversely affecting the entire system of recording and processing of payments and disbursements.

Data processing and reporting. One of the most important deficiencies of the Treasury Operations was its slowness in accounting for revenues and expenditures, which led in turn to difficulties in the accuracy and timeliness between payment authorizations and obligations; and real access to funds in the Treasury account. Fiscal administration requires timely data reporting in order to administer public expenditures efficiently. It is impossible to program authorizations of approved government expenditures effectively if the amount of available resources is unknown. The principal reasons for the delays in collecting this information were: (1) the process of revenue accounting was totally manual; (2) many of the collections units took up to two weeks to remit payment receipts to the central office; and (3) banks had been permitted excessive float time to deposit revenue collections into the Treasury's account. The implementation of the electronic funds banking control and remittance system dramatically enhanced the reporting process and provided more accurate information.

The Payment Control System developed in the AFI Project aimed at integrating budgeting and expenditure control systems by providing the capability to manage executing agencies commitments, payments and payment reconciliation and to provide timely and accurate payment information that in the future can be integrated with a cash flow system.

Payment Control System: Work Accomplished

- Requirement Analysis and Definition
 - Interviews with Paymaster and Other Users
 - Document Existing System
 - Conceptualize a New Payment Control System
 - Present/Validate the New System with the Users
 - Functional and Technical Design
- Database Design
 - Design Functionality and Procedures
 - Design Technical Architecture
 - Review/Approve the Design
- Programming
 - Coding Data Entry Module
 - Coding DAFP Module
 - Coding DGP/DGT Interface
- Implement Security Access Module

Payment Control System: Features and Functions

- Files and Tables Maintenance
 - Header and Detail of DAFP
 - Header and Detail of Funds Requirements
 - Header and Detail of Payment Orders
 - Payment Concepts Description Table
 - Paymasters Table
 - Banks and Bank Accounts Table
 - Error Description Table
 - Payment Order Types Table
 - Specific Groups Table
- Inquiries
 - Transactions (by several criteria)
 - DAFP Applications
- Reports
 - Paymasters Catalog
 - Accounts Catalog
 - Report for Collection
 - Bank Account Balances

- Transactions (by type)
- Transactions (by account)
 - DAFP Applications
 - Payment Orders: Required and Pending
 - Payment Orders: Legalized and Pending
 - Payment Orders: Distributed
 - Daily Expenses (by paymaster)
 - Payment Requests: Legalized and Pending
 - Facsimile for Departmental Paymasters
- Processes
 - Budget Data Load (Interface)
 - Validation of Documents (DAFPs)
 - Send Fund Requirements to Financial Programming Department
 - Allocate Funds to General Paymaster
 - Pay Fund Requests
 - Distribute Funds to Departmental Paymasters
- Security Access

The Financial Management System: Debt Management and Analysis

Public debt service is a large and growing component of the GOES's Budget. This large debt service burden can be traced historically to a range of government policies and actions that have resulted in debt accumulation. But the outstanding debt and the interest costs that it imposes, also present significant management problems. These are the issues that were considered at beginning of the AFI Project and it resulted in need to include public debt management as part of an overall financial management strategy. At the beginning of the this project the Government had begun to address issues related to public debt management, such as trying to eliminate the overlapping debt instruments that characterized the public sector debt. That was the beginning but many important debt issues remained to be addressed.

Debt management and coordination. The first issue addressed by the AFI Project was the coordination and management of its public debt. A major problem facing the government was that there was no organized database of information related to the public debt of El Salvador. The system existing at the beginning of the AFI Project, the System for Public Debt Management, SIGADE, had proved to be totally inadequate to meet Ministry of Finance requirements. This resulted in the definition of a computer system that would consolidate all the public debt data and would create a database as the foundation for a Debt Management System.

Debt Management System: Work Accomplished

- Design Spread Sheets to Organize/Convert Debt Data
- Requirements Analysis
- Data Conversion (from Central Bank)
- Design Administrative Module Prototype

- Code Administrative Module Prototype
- Data Conversion and Load (from original documents)
- Design de Full Debt Administrative System
- Code Debt Administrative System
- Implement Security Access
- End-user and Technical Training Tasks
- Prepare User Manual and Technical Documentation
- Installation, Test and Adjustments

Debt Management System: Features and Functions

- Public Debt Administrative Module
 - Maintain Catalogs
 - Countries, Currencies, Commission Types, Floating Rates, Payment Terms
 - Disbursement Types, Loan Status, Payment Frequency
 - Lenders, Borrowers, Destination Sector, Executing Units
 - Technicians (in charge), Lender Types, Calculation Method, Rate Types
- Maintain Loans
- Loans: General Data / Payments / Components / Disbursements
 - Payment Schedule
 - Payment Schedule (BIRF)
 - Generate Payment Schedule (Currency Basket)
 - Maintain Payment Schedule
- Inquiries
- General Data
 - Payments
 - Disbursements
 - Security Access
- Processes
 - Change Loan Status
 - Recalculate Payment Schedule in Full
 - Recalculate Payment Schedule Partial
- Reports
 - Payment Calendar for External Public Debt
 - Payment Schedule (Detail)
 - Payment Programming
 - External Public Debt Situation
 - Loan Details
 - Disbursements by Month
 - Disbursements and Availability
- Catalogs

Debt analysis and evaluation. The second issue addressed by the project was the capability of the GOES to evaluate alternative options for borrowing resources and its own debt capacity.

Prior to the Project, there was little confidence that the GOES debt was being managed in a skillful and cost-effective way that would minimize the long-term debt servicing costs to the government. There were no satisfactory analytic tools in place for assessing these issues, even if an up-to-date and accurate database were available. This resulted in the definition of an additional module for the Debt System: The Debt Analytical Model.

The main purpose of the Analytical Module of the Debt System is to assist the staff at the DGCP in analyzing the impact of changes in the economy and alternative financing options on the public debt. The module is built upon a database of loan records (which is the same database used in the Administrative module), and through a series of queries and reports allows the user to conduct sensitivity analyses of changes in the economy and the debt portfolio.

Debt Analytical Module: Work Accomplished

- Requirements Definition
- Functional and Technical Design
- Coding
- Implement Security Access
- Prepare Test Data
- Install, Test and Adjustments

Debt Analytical Module: Features and Functions

- Maintain Catalogs
 - Economic Indicators Table
 - Fiscal Indicators Table
 - Baseline for Yearly Economic Indicators
 - Baseline for Yearly Fiscal Indicators
 - Baseline for Monthly Fiscal Indicators
- Create New Loans for Analysis
 - General Data
 - Payment Schedule
 - Disbursements
- Inquiries
 - Payment Schedule Plan X
 - Payment Schedule Plan Y
 - Annual Cashflow (Baseline)
 - Annual Cashflow (Plan X)
 - Annual Cashflow (Plan Y)
 - Monthly Cashflow (Baseline)
 - Monthly Cashflow (Plan X)
 - Monthly Cashflow (Plan Y)
- Processes
 - Update Loan Database

- Create Plan X
- Create Plan Y
- Run Management
- Reports
 - Loan Details
 - Annual Cashflow (Detail)
 - Annual Cashflow (Summary)
 - Monthly Cashflow (Detail)
 - Monthly Cashflow (Summary)

Integration Effort: Development of Interfaces

Bank Revenues - Public Treasury Accounting. Revenue Collection: According to the Constitution of El Salvador, the responsibility for collecting public revenues is assigned to the DGT. The collection of the public revenues by the DGT is carried out through collection offices located throughout the country, and through private banks under contract by the Ministry of Finance. These funds are deposited in the DGT's accounts at the BCR. The recent introduction of the electronic funds banking control and remittance system, developed under the MoST project has enhanced control and accelerated the reporting of revenue collections. However, the current system does not handle the accounting component of the process. The interface developed in the AFI Project is an extension of the current system that increases the level of automation by pre-assigning accounting codes to the different transactions and creating a "default entry". This entry is later reviewed, modified and authorized for posting later during the process by the accounting personnel. The interface also creates strong integration between the revenue collection function and the accounting function.

Work Accomplished

- Requirements Analysis
- Functional and Technical Design
- Coding
- Installation, Test and Adjustments

Value Added Tax (IVA) - Public Treasury Accounting

Work Accomplished

- Requirements Analysis
- Functional and Technical Design
- Coding

Income Tax - Public Treasury Accounting

Work Accomplished

- Requirements Analysis
- Functional and Technical Design
- Coding

Government Accounting - Budget

Work Accomplished

- Requirements Analysis
- Functional and Technical Design
- Coding

Treasury Administrative Systems - Public Treasury Accounting

Work Accomplished

- Requirements Analysis
- Functional and Technical Design
- Coding
- Pilot Test

Recommendations for the Future

Financial Management Systems: Integration

The concept of system integration was discussed at length during the last phase of the AFI Project. The project's initial intent was to create an all-encompassing and centralized database. This idea, however, was abandoned during the early stages of the project since both the local institutional conditions and the project's characteristics made the fulfillment of this objective unattainable. Instead, it was decided that the concept of integration was to be implemented defining specific levels and types of integration. Under the concept developed, there are no absolutes, but rather each environment is defined as a function of the financial, human and technological resources available in the institution in particular, and the country in general.

The system developed by the AFI was designed to automate and integrate in a gradual manner the different functions of the government's financial management process. Automation is accomplished with the development and implementation of new information processing systems that incorporate the wide use of computers. The pace in the implementation of this technology is due to several reasons:

First, at the onset of the project the automation level in the financial administrative area was minimal, and one of the objectives of the project was to increase and institutionalize the use

of information systems. This is always a rather slow process that is accomplished by the implementation of information systems as well as by an extensive process of training of the technical personnel and the functional user.

Finally, the integration that is necessary to establish among the different functions is limited due to administrative, organizational, and legal constraints. Thus, the incorporation of new systems implies the changes in each of the fields described above. These changes, however, do not occur in a speedy manner, since they are associated with political processes that are beyond the scope and nature of the project.

In order to set the grounds for the continued integration of the financial system, the IFS project developed, and in some cases it was able to implement, a set of interfaces among different functions, as it is detailed in the preceding section. These interfaces are transfer files that are exchanged among the different functions. The communication "link" of the different interfaces varies in accordance to the conditions of the units that provide and receive the information. In some cases, the files are loaded in a magnetically and are delivered to the receiving unit. The most common form of transferring files is carried out through the communication via telephone lines, that are connected to modems in computers at both ends of the communication. This is a case of limited integration, but it represents a leap forward compared to the state of affairs when the project was initiated.

The second most important contribution of the IFS project to the development of an integrated financial system, was the generation of a common environment for all of the systems, both in the functional and in the technical area. In the functional area, the project developed a set of standards for the design, programming, security/control of access, user interface, documentation and so forth. The training of the Ministry's personnel was an important aspect in the success of this area. Technically, all of the systems were developed using the same hardware and software platform, i.e. microcomputers in Novell networks with DOS and windows environment. Also, all of the systems were designed and developed using the same CASE tools, the same programming and database system, namely Visible Analyst and FoxPro.

The maintenance and extension of this system throughout the Ministry of Finance will continue to further the development of systems and modules, to improve and support the tasks associated with financial administration. The systematic use of standards, on the other had, will facilitate the development and implementation of new systems. The compatibility of all of these systems, the currently developed and the new ones to be developed, are a key element in the integration of the system.

The future capacity to create and to establish databases that are wide and integrated will depend on the technical capacity of the Ministry of Finance's and in having access to the resources required to accomplish a Wide Area Network. This network, at the minimum, has to be able to cover the most important areas of the Ministry of Finance, that is, Budget, Accounting, and Treasury.

Concerning financial integration, it is recommendable that a practical path be taken, namely, the gradual development of additional modules that includes more functions. The availability of resources as well as the capacity to implement incremental changes in the legal, administrative and organizational areas will help consolidate the integration of the administrative financial system of the MOF of El Salvador.