

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20548
BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY

1. SUBJECT CLASSIFICATION: **Urban development and housing** LD00-0000-0000
A. Primary
B. Secondary
Housing

2. TITLE AND SUBTITLE
AID Housing Guaranty Program - financial management analysis and systems study; final report

3. AUTHOR
(101) Peat, Marwick, Mitchell & Co., Washington, D.C.

4. DATE 1978	5. NUMBER OF PAGES 157p.	6. ARC NUMBER ARC
------------------------	------------------------------------	----------------------

7. TITLE OF SOURCE ORGANIZATION AND ADDRESS
PMM

8. SUPPLEMENTARY NOTES (including organization, Publisher, Availability)
(Final report)

9. ABSTRACT

10. DOCUMENT NUMBER PN-AAG-420	11. PRICE OF DOCUMENT
12. SUBJECT TERMS Housing - Investments Financial management - Low income housing Evaluation Project management	13. PROJECT NUMBER
	14. CONTRACT NUMBER AID/otr-C-1499
	15. TYPE OF DOCUMENT

Final Report

Aid Housing Guaranty Program— Financial Management Analysis and Systems Study

Prepared for the

**Agency for International
Development**

October 1, 1978

prepared by



Peat, Marwick, Mitchell & Co.

PEAT, MARWICK, MITCHELL & CO.

1025 CONNECTICUT AVENUE, N.W.

WASHINGTON, D.C. 20036

(202) 223-9525

September 29, 1978

Mr. Arthur Smith
U.S. Agency for International Development
1875 Connecticut Avenue, N.W.
Washington, D.C. 20523

Dear Mr. Smith:

Peat, Marwick, Mitchell & Co. is pleased to submit its final report, AID Housing Guaranty Program Financial Management Analysis and Systems Study. This report presents the findings and recommendations on financial management operations which have resulted from our study of the Housing Guaranty Program (HGP) conducted between May and September of 1978.

This report addresses the results of our study from three perspectives. First, in a diagnostic examination and evaluation sense, the financial management of HGP is discussed in a manner that identifies those current practices or elements of the HGP operating environment inhibiting the effective or efficient financial management of the program. Second, the findings of the diagnostic review are combined with the needs identified of AID management, borrowers, and investors to evolve, at the conceptual level, a system for controlling and monitoring transactions of the HGP within the constraints of the current and generally projected loan agreement provisions. Third, this report develops an alternative model system for HGP operations that involves a scenario for program control without extensive AID involvement and that fosters a considerable amount of direct borrower/investor interaction.

PMM&Co. appreciates the cooperation and many courtesies extended to our staff by officials of NSLL and ASB and, in particular, by the AID staff during this study. The Firm is pleased to have participated in this important effort to substantially contribute to the effective and efficient financial management of HGP. If we can be of further assistance, please call either Jonathan Wallman or David Halwig at 223-9525.

Very truly yours,

Peat, Marwick, Mitchell & Co.

PEAT, MARWICK, MITCHELL & Co.

1999 K STREET, N. W.
WASHINGTON, D. C. 20006
202-223-9525

December 5, 1978

Mr. Arthur Smith
Chief, Loan Division
Office of Financial Management
U.S. Agency for International Development
1875 Connecticut Avenue, N.W.
Washington, D.C. 20523

Dear Mr. Smith:

PMM&Co. is pleased to provide this letter supplementing our final report, AID Housing Guaranty Program - Financial Management Analysis and Systems Study, dated October 1, 1978. As you recall, our mutual review of this report upon delivery revealed three items which warrant further clarification or augmentation to ensure the highest level of integrity and quality in the end product of our study.

First, the report places considerable emphasis on the complexity of the current Housing Guaranty Program (HGP) financial management operations. Although this condition is in part attributable to several discrete but substantial historical changes in HGP operating philosophy, it specifically emanates from the terms of individually negotiated project implementation agreements which may vary considerably with respect to reporting and repayment provisions. The section of our report titled Implementation Management (pages II.12-II.14) states, in part, "In the past, many of these documents were prepared without sufficient input from officials other than legal counsel, according to the AID officials interviewed. The lack of input from financial and program managers may have resulted in the preparation of documents that do not reflect the requirements of these areas." This statement should not be construed to imply that AID legal counsel are solely responsible to independently negotiate loan agreements or negligent in carrying out related HGP responsibilities. Rather, the intent of this observation and its related recommendation is to encourage greater participation in the definition of project terms by program and financial management, whether the agreements are negotiated wholly or in part by legal counsel or any other Agency representative.

Second, Chapter V of the report addresses a number of organizational responsibilities for HGP financial management. One set of conclusions and recommendations deal with the need for a procedure by which consistent

P. M. M. & CO.

Mr. Arthur Smith
U.S. Agency for International Development
December 5, 1978
2

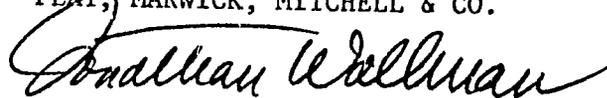
accounting policies can be developed for program financial management. Specifically, on page V.13, it is recommended that, "An assignment should be made of responsibility and authority for making final accounting policy determinations." This recommendation first appeared in the draft final report and was to have been deleted in the final report. In that the referenced authority had been assigned and responsibility had been exercised prior to the PMM&Co. study, the recommendation is superfluous and was retained in the final report due to editorial oversight.

Third, the Executive Summary of the final report contains a section on the alternative model concept of retaining an independent trustee to oversee borrower repayments. As in the case of other sections of the Executive Summary this discussion summarizes major arguments developed in the body of the report. In addition, however, the summary of the Model System Concept synthesizes a number of points of both the detailed chapter of the report and discussion of pertinent issues held with your staff and senior management of the Office of Housing. For this reason, the summary augments, rather than strictly parallels the report narrative.

We recommend that our comments on these three areas be distributed to all holders of the final report. If we can be of further assistance, please call David Kalwig or me at 223-9525.

Very truly yours,

PEAT, MARWICK, MITCHELL & CO.



Jonathan M. Wallman, Principal

JMW:MEM

Final Report

Aid Housing Guaranty Program— Financial Management Analysis and Systems Study

Prepared for the

**Agency for International
Development**

October 1, 1978

prepared by



Peat, Marwick, Mitchell & Co.

EXECUTIVE SUMMARY

This report examines the current operations of the AID Housing Guaranty Program (HGP). Its purpose is twofold: to identify those operational aspects of the HGP that are inconsistent with efficient operations or that inhibit financial and program control; and to develop, at the conceptual level, a system design for HGP financial management which reflects modification and incorporation of the above identified operational aspects. The report also addresses nine specific accounting issues that were raised by AID officials.

BACKGROUND

The AID HGP is one mechanism used to attract U.S. investors to provide long-term financing for low-income housing programs in developing countries. Originally authorized by the Foreign Assistance Act (FAA) of 1961, the HGP provides a U.S. Government full-faith and credit guaranty to investors who supply capital for construction of low-cost housing, sites and services, and slum improvement. This assistance is expected to increase in-country housing investments in lower-income shelters, upgrade community facilities, maximize use of existing housing stock, upgrade housing and building materials industries, and improve the organization of housing administrative services.

The program has undergone significant changes since its inception. As originally conceived, the program relied upon U.S. builders to construct housing in Latin America. For a number of reasons, this program format was terminated. In its place, AID developed a format using host country institutions to channel funds among homeowners, AID, and investors. A further refinement required a host country government guaranty of repayment as part of the contractual agreements. AID also broadened the geographic scope of the program to include developing countries other than those in Latin America.

GENERAL FINDINGS

A significant amount of management complexity is associated with the operation of the HGP. This complexity appears due to the:

- . evolution of the HGP as a consequence of various legislative actions; and
- . variations in project legal documents that establish requirements of program participants and, therefore, drive financial and program management.



The lack of standard requirements has resulted in different payment and reporting procedures for different projects. For example, variations in payment channels and intervals, reporting requirements, and reserve requirements are the result of individually negotiated legal documents. These variations tend to reduce management control and ease of program operations.

- Two requirements of future legal documents are recommended. First, borrower/investor requirements should be consistent for all projects. While a specific project may warrant some modification, uniform contractual arrangements should be encouraged. Increased uniformity can reduce complexity and improve management control and efficiency. Second, AID financial and program managers should assist in the development of uniform legal documents. These documents should reflect the needs of financial and program managers; their input into document development is therefore essential.

Current operations force AID into a reactive mode of operations. In other words, AID managers must rely on information provided externally (i.e., from borrowers and investors) to determine the current status of individual projects. In some cases, project requirements are minimal, reducing AID's capacity to act in advance of potential problems.

CONCEPTUAL SYSTEM DESIGN

The proposed system design contained within this report is directed at placing AID in a proactive rather than reactive mode of operation. The conceptual design establishes the principal features processes which must be implemented to provide a fully integrated system which is viable within program complexity and which delivers:

- the level of financial information detail required to fulfill management needs for control and program monitoring;
- the ability to monitor and control the cash transactions of the central reserve;
- an interactive capability to operate in harmony with major Agency accounting systems;
- a method of anticipating the long-range impact of short-term activities through planning and budgeting; and
- an effective definition of responsibilities for various internal AID organizations and contractors in the management of the program.



The system concept offers three principal features which facilitate its ease of operation and productivity:

- . the creation of an integrated data base for transaction and static information now contained in a variety of ledgers and files maintained jointly by AID, NSLL, and ASB;
- . the use of a highly modularized approach to financial management that includes the major processes of planning, budgeting, project transaction accounting, and reserve control as "building blocks" within the total system design; and
- . the use of single-transaction processing which maximizes the use of each piece of data that is input to the system.

Furthermore, the system fosters interaction at the three user levels -- appropriations, program, and project - so that AID financial and program managers can exert comprehensive control over HGP operations. It is the integration of the management of the three user levels that is the key to the conceptual design. At the appropriation level, AID must manage current obligations and expenditures which include administrative costs such as payroll, contracts, and guaranty claims and payments. These current obligations and payments must be controlled in accordance with the appropriation issued annually by the Office of Management and Budget as if HGP were financed from funds appropriated annually. In fact, the HGP is financed from a revolving fund, with expenses offset by various fees charged to program participants and by recoveries from host country guarantors.

The financial management information required for management at the appropriation level is, in many cases, quite different from that required at the program level. Many transactions will therefore be classified so that they affect both the appropriation and program accounts within the system. Other transactions will be classified initially at the appropriation level only and subsequently allocated by the system to the program level. Still other transactions will be input only at the program level and have no impact on appropriation accounts.

The lowest level of financial management information to be maintained in the system is the project level. Records will be maintained on all the financial aspects of each project undertaken by HGP, including borrower payments. The project information will be structured in such a way that it can be readily summarized to produce program-level information. Since all appropriation-level data will be allocated to the program level, the system will also require

that all program-level data be allocated to projects. In this way, the two following major financial management goals will be realized:

- . Each financial event will be recorded only once and will affect the appropriation, program, and project levels, resulting in a completely self-reconciling set of records.
- . Each project will be fully costed with all direct and indirect expenses, making it possible for HGP to manage individual projects based on AID's net investment in the project.

The employed system design enables implementation of stand-alone modules to allow the maximum flexibility to AID in system development. Maximum efficiency and effectiveness, however, are derived from fully implementing system design features at a highly integrated level.

The system described by this report is far reaching in scope. It encompasses the traditional financial management aspects of an automated accounting and reporting system and the associated program support operations which enhance the effectiveness of information consistency, control, and flow. The design spans the entire life of a project, from initial contact by a potential borrower through liquidation. Within the context of the financial complexities of the many varieties of loan agreements, the system design accommodates projects internal or external to the central reserve, with or without intermediary fiscal agents or reserve provisions and maintained on a monthly, quarterly, or semiannual basis.

IMPACT ON THE ORGANIZATION

The impact of such a broad-based system design is particularly critical for the Loan Division where responsibility for system development, implementation, and maintenance would probably be assigned. In view of the limited resources in LD available for HGP activities, the implementation of the system must be carefully planned. The systems implementation question also hinges on the issue of whether LD should absorb the monitoring, accounting, analytical, and reporting functions of NSLL. The impact of this decision on LD staffing is not clear-cut due to the duplication of certain functions by LD and NSLL and the use of NSLL personnel time to perform functions not currently considered by AID. The results of this study indicate no reasons why AID could not perform such NSLL functions other than the availability of personnel. In fact, the integrated design concept supports unified function and control. However, the impact of this action in the near term must be carefully assessed to ensure a smooth transition of both function and experience at the detailed level and to ensure adequate staff in AID to maintain the operation in the future.

IMPLEMENTATION

This report provides guidance on the considerations which must be addressed in implementing the system design. The implementation chapter recommends the following three-pronged approach to expedite the transition process and increase program control in the near term:

- General Program Improvements - including those elements of the systems design which can provide advantages irrespective of the automated system,
- Phased Assumption of NSLL Activities by AID - including those considerations for ensuring a smooth, orderly transition; and
- Development of Automated Systems - including those considerations for planning the development and implementation of an integrated system.

The scope of the systems design is substantial. Therefore, the emphasis of the implementation guidance is on positive control over all facets of implementation.

THE ALTERNATIVE MODEL CONCEPT

The conceptual system design presented in this report addresses the needs of the Agency to control current and projected project varieties. It emphasizes the proactive role which the Firm feels AID should take to maintain a reasonable level of control, given the present operating environment. It is recognized, however, that this proactive philosophy is not the only technique applicable to RGP financial management for all time. In this regard, the report develops a conceptual model for operations under an alternate concept. This model is constructed to be viable in an environment which de-emphasizes AID's direct involvement in borrower/investor transactions and emphasizes the direct interaction between the financial institutions of lesser developed countries and the U.S. capital markets.

As a concept, this alternative model presents a workable philosophy of financial management and control through the use of a commercial trustee acting as an intermediary for all transactions between borrowers, lenders, and AID. In application, however, this model must be approached with great care because it represents significant changes to current operations. It raises many questions of propriety, control, cost, and responsibility which must be studied carefully before any attempt at implementation is made.



TABLE OF CONTENTS

<u>Chapter</u>		<u>Page</u>
	EXECUTIVE SUMMARY	1
I	INTRODUCTION	I.1
	Background	I.1
	Purpose of the Study	I.2
	The Model System Concept	I.2
	General Findings	I.4
	Report Structure	I.6
II	CURRENT SYSTEM AND GENERAL REQUIREMENTS ANALYSIS	II.1
	Nature of the Housing Guaranty Program	II.1
	Current System Description	II.5
	AID Financial Management Responsibilities	II.7
	The Loan Cycle	II.11
III	SYSTEMS DESIGN CONCEPT: PROGRAM FINANCIAL MANAGEMENT	III.1
	Scope of the System Conceptual Definition	III.1
	Applicability	III.4
	Financial Management Basis	III.6
	System Features	III.31
IV	SYSTEM DESIGN: DATA PROCESSING CONCEPTS	IV.1
	System Objectives	IV.1
	Processing Features Overview	IV.1
	General Accounting Concept	IV.4
	Accounting Period Cutoffs and Closings	IV.5
	System Interfaces	IV.7
	Audit Trails and Historical Retrieval	IV.7
	Error Suspension/Correction	IV.8
	Process Control Tables	IV.11
	Transaction Flow Through the System	IV.12
	Descriptive Table Maintenance	IV.19
	Process Control Table Maintenance	IV.20
	Reporting Capabilities	IV.22

TABLE OF CONTENTS (Continued)

<u>Chapter</u>		<u>Page</u>
IV	Security Considerations	IV.24
	Auxiliary Processes	IV.24
V	ORGANIZATIONAL ACCOUNTING RESPONSIBILITIES AND IMPACT OF THE SYSTEM DESIGN	V.1
	Organizational Accounting Responsibilities	V.1
	Impact of the System Design	V.13
VI	IMPLEMENTATION PLAN	VI.1
	Background, Preparation, and Analysis	VI.2
	Implementation of Specific Features	VI.2
VII	ALTERNATIVE MODEL CONCEPT	VII.1
	Program Objectives	VII.1
	Borrower/Investor Relationships	VII.2
	Model Program	VII.4
 <u>Appendix</u>		
A	Accounting Issues	A.1
B	American Security Bank	B.1
C	National Savings and Loan League	C.1

LIST OF EXHIBITS

<u>Exhibit</u>		<u>Page</u>
II-1	Potential Investor/Borrower Situations	II.4
II-2	Current HGP Operations	II.6
III-1	HGP Financial Operations	III.3
III-2	HGP Financial Management Matrix	III.8
III-3	Appropriation Accounting Concept	III.9
III-4	Program Accounting Concept	III.15
III-5	Cash Reserve Projection Routine	III.19
III-6	Project Accounting Concept	III.21
III-7	Examples of Project Planning Transactions	III.34
III-8	Payment Conceptual System Overview	III.38
III-9	AID Fee Processing	III.40
III-10	Claims Payment	III.42
IV-1	Internal Processing Flow	IV.13
IV-2	Descriptor/Validation Table Maintenance	IV.21
IV-3	Process Control Table Maintenance Subsystem	IV.23
B-1	The AID Central Reserve Fund as Administered by the American Security Bank--Receipts and Credits	B.2
B-2	The AID Central Reserve Fund as Administered by the American Security Bank--Debits	B.3
C-1	National Savings and Loan League Operations	C.2

I. INTRODUCTION

As a principal arm of U.S. economic foreign assistance, AID must be sufficiently flexible and responsive to adapt quickly to frequent changes in both the direction and detailed implementation procedures of national foreign policy. Its programs and supporting management systems must be formulated to be equally flexible in their ability to deliver needed assistance in host countries, protect U.S. interests, and, in particular, provide Agency management with the required data for executive control and program development.

The Housing Guaranty Program (HGP) is one of many programs implemented by AID to provide economic assistance to developing nations that have been subjected over the years to major policy and, therefore, directional shifts to accommodate changes in broader overall foreign policy. These changes have resulted in the development of new organizations within AID, the assumption of additional responsibilities by its existing organizations, and expansion of the number and type of external institutions with which it must coordinate in program management and administration.

BACKGROUND

The HGP is one of the vehicles of the U.S. Government to help emerging countries develop sufficient housing stock and simultaneously achieve some degree of competency in providing shelter for their low-income populations. The Extended Risk Guaranty Program was authorized by the Foreign Assistance Act (FAA) of 1961 (P. L. 87-195). The program was extended by the FAA of 1962 (P.L. 87-505) and the establishment of reserve requirements to guard against loss within the program. The FAA of 1974 (P.L. 93-559) authorized the transfer of the Agricultural and Productive Credit and Self-Help Community Development Programs from OPIC to AID, and it provided various stipulated requirements. The program has expanded from a \$10 million experiment in 1961 to a present resource of \$1 billion; there are indications that this expansion will continue.

The HGP is a means of encouraging private sector U.S. investors to provide long-term financing for low-income housing programs in developing countries. The encouragement takes the form of underwriting (guarantying) the loans (mortgages) through the provision of a full faith and credit guaranty by the U.S. Government administered by AID. The administrative cost of the program is financed by fees charged for the guaranty. The fees also provide a reserve fund from which investors' claims can be paid.

However, from its initial concept of providing guaranties to provide suppliers of capital (investors) for construction of low-income housing in developing countries, AID has initiated actions to encourage developing countries to formulate and implement national housing policies. These initiatives are expected to: increase in-country housing construction investments in lower-income shelter; upgrade community facilities; maximize use of existing housing stock; upgrade housing and building materials industries; and improve organization of housing administrative services.

PURPOSE OF THE STUDY

The life of this program has been relatively long, and its history has been one of fairly regular administrative changes. The evolution of the HGP has embodied a number of procedures and policies designed to compensate for this change by accommodating the peculiarities of individually negotiated loan guaranty instruments within a single operating environment. In any dynamic environment such as HGP's, periodic evaluations are needed of direction, controls, and management decision-making information to effectively carry out the intent of underlying program objectives.

This report presents an examination of the current operations of the AID HGP. Its purpose is twofold:

- . to study HGP operations and identify aspects that are inconsistent with efficient operations or that inhibit program and financial control; and
- . to develop, at the conceptual level, a system design for HGP operations which reflects incorporation of recommendations for improvement in the above identified operational aspects.

The report also addresses nine specific accounting issues which were raised by AID officials.

THE MODEL SYSTEM CONCEPT

As originally conceived, this study was to include a description of a model financial management system that was unconstrained by legislation, regulations, or other limitations. As the study progressed, however, it became evident that such an exercise as originally was intended would not be meaningful for the purposes of the study.

The development of a model system was originally included in this study as a way to describe a "perfect" recommended system of HGP financial management based on a correspondingly "perfect" loan instrument. This concept was not intended to provide a recommendation for wholesale conversion of existing guaranties to the model format. Rather, it was intended to provide a desirable target framework that would incorporate the goals and objectives of HGP operations and that could be used to guide the formulation of future agreements.

To be applicable, the evolution of any model must take into account certain basic hypotheses. Such an hypothesis for HGP might be "all projects will use the central reserve," or "no projects will use the central reserve." Based on the selected hypothesis, the model system could be built. However, the realities of HGP do not allow such black and white restrictions. There is a necessary gray area which represents the requirements for individual project flexibility and accommodation of unique circumstances. An example of this is the recent Israeli agreement in which the central reserve is not employed, even though the general direction of other recent agreements emphasizes use of this central reserve.

The key issues, therefore, in the development of a model HGP system as identified during this study are embodied in the degree of involvement and direct control which AID maintains in the detailed transactions between borrowers and investors. There are two prevalent philosophies at work in this area. The first, total involvement, prescribes a role for AID of complete control over all loan transactions. Taken to its farthest extreme, total control would include the issuance of payments to investors by AID irrespective of receipts from borrowers and might include the sale of securities or similar participations by the Agency. The second philosophy is one of minimal involvement by AID, with transactions occurring externally. Taken to its extreme, this concept would place the Agency in a role requiring only the processing of claims for investors.

In reality, neither of these extremes is applicable, given the basic goals and objectives of HGP. In the first case, total involvement would eliminate any interaction between borrowers and the U.S. capital markets. In the second case, AID would not have the minimum controls considered essential either to protect the interests of borrowers and investors or to provide an adequate basis for claims. Unlike such issues as use of the central reserve, the philosophical basis of involvement can easily enter a "gray" area. By working from the two extremes and eliminating the features of each which seem to prescribe completely untenable conditions (i.e., no capital involvement or no control), it is possible to arrive at two model system concepts which are both workable in the HGP environment and which reflect the two prevalent philosophies of management.

This report addresses both of these model concepts but each is discussed in a different way. The first, extensive control, is in many ways similar to most current and projected future projects. The bulk of this report therefore takes the perspective of placing AID in a position of heavy involvement with borrower/investor transactions to address the current financial management needs of HGP. However, to present the concept of minimum acceptable AID involvement, an alternative system model is developed in Chapter VII.

GENERAL FINDINGS

Current operation of the HGP requires coordination by AID of its contractors, the National Savings and Loan League (NSLL) and the American Security Bank (ASB), program borrowers/administrators and investors/fiscal agents, and host country governments. Because of changes in program formats and variations in project requirements resulting from individually negotiated legal documents, the HGP is a complex operation.

Program complexity is manifested in numerous ways. For example, borrower and investor reporting requirements differ among projects. Similarly, there are varied repayment channels. In some cases, borrowers remit payments through the AID central reserve fund to the investor. In other cases, borrowers make repayments directly to investors. These types of variations limit management efficiency and control over operations. Furthermore, they require AID to react to problems rather than act in advance of potential difficulties.

Structurally, the financial management considerations of HGP fall into three categories, corresponding to the components of operations:

- Project - any individual guaranty instrument as the basic component of HGP;
- Program - the cumulative operations of all projects; and
- Appropriation - the fiscal and operational interrelationships of the program to the general financial structure of AID.

The use of the term "appropriation" with respect to HGP is not entirely accurate. The recognition that HGP is not dependent on annual appropriations from Congress is important to understanding many facets of financial management. However, the revolving funds which are used for claims and operating expenses and replenished by fee revenues are held in Treasury accounts. Access to these funds is, in general, provided through the usual methods of apportionment and control employed for funds that are truly appropriated.

Similarly, budgeting and accounting for fund status and usage are also generally performed in accordance with appropriated techniques and must be compatible with overall Agency accounting procedures. For these reasons, the use of the term "appropriation" in the context of this report is warranted.

One of the basic purposes of this study was to develop a "system" for HGP financial management operations. In this sense, a system is a collection of interrelated procedures, processes, and controls, both manual and automated, which encompasses the total financial management function. No system exists solely for its own sake; it must serve the information needs of various system users. In the context of the HGP system, users include both individuals and organizations concerned with HGP operations. Insofar as the system is interactive with other Agency or Federal Government systems, these too are users.

There is a distinct interrelationship between the user concept and the three categories (project, program, and appropriation) of HGP financial management. These categories comprise a hierarchy of HGP control, with each category representing a "level" of financial management. Each level, in turn, represents a discrete set of financial management considerations and processes. Therefore, each has its own set of information users.

The concept of system user levels is employed throughout this report. It is important to recognize that user levels are not always mutually exclusive. That is, the concerns of the Director of Housing or the Chief of the Loan Division are on an HGP-wide basis. They each represent, then, all three user levels. The use of this concept, however, is considered invaluable to the successful analysis of complex HGP operations and the evolution of a conceptual system design.

It appears likely that, in the near term, some of the contractor responsibilities will be assumed by AID. Specifically, the Office of Housing and the Loan Division have indicated their joint desires to place much of the financial management and accounting responsibilities for the HGP in the hands of FM/LD. Currently, NSLL performs much of the detailed accounting and some of the financial management functions for the HGP and provides general financial technical assistance. However, assumption of this function by AID appears to be a logical consequence of program maturity.

It is to this end that the proposed system design concept is offered. The design is aimed at the many aspects of HGP financial management. It establishes the principal features/processes which must be implemented to provide a fully integrated system which is viable within program complexity and which delivers:

- . the level of financial information detail required to fulfill management needs for control and program monitoring;

- the ability to monitor and control the cash transactions of the central reserve;
- an interactive capability to operate in harmony with major Agency accounting systems;
- a method of anticipating the long-range impact of short-term activities through planning and budgeting; and
- an effective definition of responsibilities for various internal AID organizations and contractors in the management of the program.

The system concept offers three principal features which facilitate its ease of operation and productivity:

- the creation of an integrated data base for transaction and static information now contained in a variety of ledgers and files maintained jointly by AID, NSLL, and ASB;
- the use of a highly modularized approach to financial management that includes the major processes of planning, budgeting, project transaction accounting, and reserve control as "building blocks" within the total system design; and
- the use of single-transaction processing which maximizes the use of each piece of data that is input to the system.

Furthermore, the system fosters interaction at the three user levels--appropriations, program, and project--so that AID financial and program managers can exert comprehensive control over program operations.

REPORT STRUCTURE

The remainder of this report is divided into six chapters, as follows:

- Chapter II, Current System and General Requirements Analysis, presents the major analytical findings concerning existing program operations. These findings are translated into general requirements which drive the development of the system concept.
- Chapter III, System Design: Program and Financial Management, describes the basic characteristics of the design concept. It is intended to illustrate the framework of a new management system and to incorporate the requirements defined in the preceding chapter.

- . Chapter IV, System Design: Process Features, provides a discussion of the data processing features required by the system design.
- . Chapter V, Organizational Accounting Responsibilities and Impact of the System Design, describes current responsibilities of FM/LD, NSLL, and ASB. It also describes potential impacts of implementation on these and other participants.
- . Chapter VI, Implementation Plan, presents some of the issues and considerations that AID must recognize as part of the implementation of the proposed systems design.
- . Chapter VII, Alternative Model Concept, describes the operations of HGP under a financial management philosophy that emphasizes direct investor/borrower interaction and minimizes AID's role in transaction control.

The report also contains three appendices which address:

- . the nine accounting issues raised during the engagement by AID officials;
- . the detailed functions of ASB; and
- . the detailed functions of NSLL.

II. CURRENT SYSTEM AND GENERAL REQUIREMENTS ANALYSIS

This chapter examines various components of the current Housing Guaranty Program (HGP) in terms of their relationship to the proposed conceptual design. Its purpose is to highlight those procedures and practices that, when modified and incorporated into the proposed conceptual design, will provide the Office of Housing and the Loan Division with an effective mechanism to manage and control the HGP.

In reviewing the current system, particular attention will be given to the requirements of the proposed conceptual design. These requirements, in a general sense, include the capacity to:

- make timely payments to investors and receive timely payments from borrowers;
- maintain sufficient reserves;
- access management information;
- generate timely and effective reports;
- facilitate planning and budgeting; and
- specify distinct but coordinated participant responsibilities.

These general requirements serve as system objectives and lead to the system goal: the provision of control and ease of operations for the effective management of the HGP. Furthermore, these requirements comprise a set of common themes which drive the analysis in this chapter, as well as the development of the conceptual design.

NATURE OF THE HOUSING GUARANTY PROGRAM

An examination of the operations of the HGP suggests three terms to describe the nature of the program: duality, complexity, and longevity. The nature of the program, as described by these terms, must be accommodated in the development of the conceptual design.

Duality

The current HGP is composed of two distinct functions: financial management and program management. Both functions are in evidence at each stage of the loan cycle. Each, therefore, must be represented in the development

of the new design. By providing for the interface of financial and program management, the new system will enable financial and program managers to access project data concerning both functions and to generate planning and budgeting documents based on expected activity levels.

Complexity

The YGP is a complex operation primarily because of its evolution since inception. Complexity has occurred as a result of changes in program format, varied relationships between investors and fiscal agents, and corresponding legal arrangements between borrowers, investors, host countries, and AID.

The original program format relied upon U.S. builders to construct housing in Latin American countries. The builder was responsible for the acquisition of financing and the establishment of a corporate borrowing entity. A local financial institution participated as a lender to the homeowner (consumer) and as an administrator of the program. As consumers purchased homes with perhaps a 10 percent downpayment and a 90 percent bank loan, the corporate borrowing entity was repaid and its role was ultimately eliminated. Consumer mortgage payments were then channeled through the administrator for repayment to the original investor.

For various reasons, the builder/administrator program concept was terminated. In its place, AID developed a new concept using host country financial institutions to channel funds among investors, borrowers, and AID. A further refinement was made shortly thereafter to require a host country guaranty of repayment as part of the program.

The evolution of the program has encompassed three distinct program types:

- the builder/administrator type;
- the host country financial institution type; and
- the host country guaranty type.

While new projects are of the third program type, the majority of older programs (which represent the first two program types) are still active and require consideration in the design of a new system.

The HGP is complicated further by the different investor situations that exist. These situations are distinguished by the relationship between investors and fiscal agents. The following four investor situations have been identified:

- . the investor acting as its own fiscal agent;
- . the investor hiring its own fiscal agent;
- . the investor using AID's fiscal agent, the American Security Bank (ASB); or
- . the borrower using a paying agent (new programs only).

Thus, it is conceivable that 10 borrower/investor situations may exist, as illustrated in Exhibit II-1.

In addition to the 10 potential investor/borrower situations, other variations within a situation may occur as a result of variations in legal agreements between program participants. Differences in reporting requirements, payment channels, and payment intervals or the use of multiple fiscal agents, for example, are the result of individually negotiated legal documents, and these tend to complicate the management of the program.

Three factors, therefore, have complicated the management of the HGP:

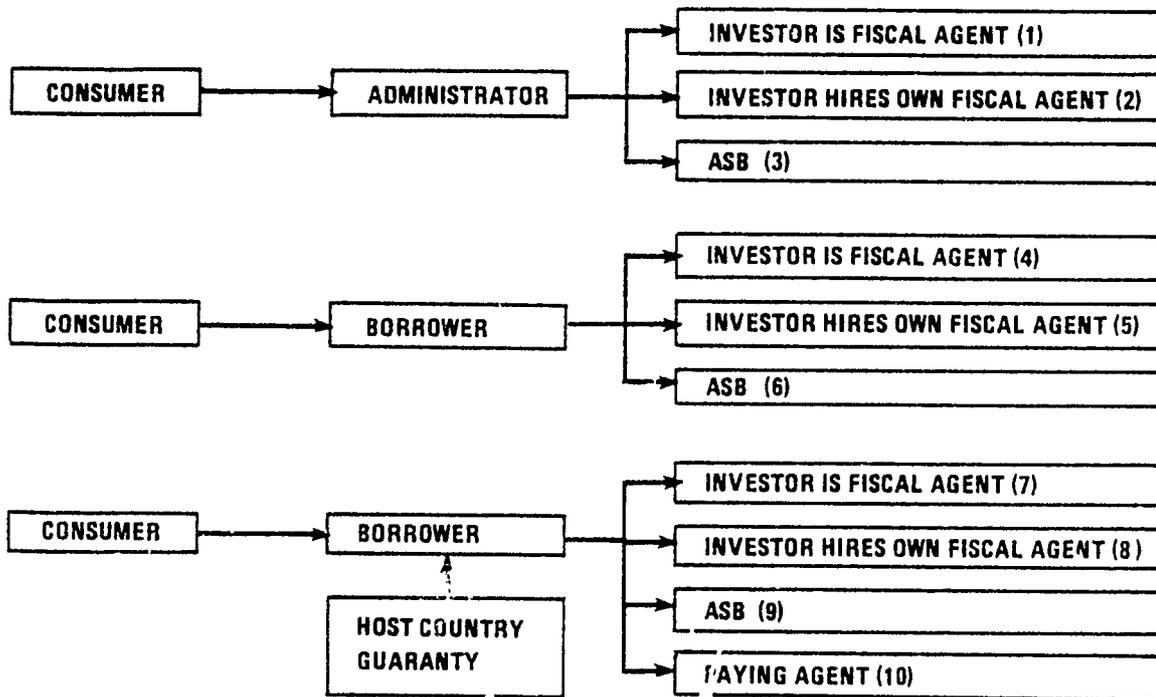
- . The evolution from a U.S. builder-type project to a host country guaranty-type project has changed the borrower side of the program.
- . The different investor and fiscal agent arrangements have made control more difficult since, in many cases, funds flow directly from borrowers to investors and AID is placed in a reactive mode to respond to problems identified by the investors.
- . The lack of standard investor/borrower requirements has produced variations in individual project operations and has thus complicated overall program operations.

Longevity

The third characteristic used to describe the HGP is longevity. In other words, current decisions made and incorporated into project legal documents will influence program operations for the duration of the outstanding loan (e.g., 20 to 30 years). Similarly, decisions reached during the early years of the program continue to influence current program operations.

EXHIBIT II-1

POTENTIAL INVESTOR/BORROWER SITUATIONS



It is therefore necessary to consider the types of investor/borrower requirements to be incorporated into future legal documents. Once specified and standardized, these requirements will tend to reduce administrative complexity and will form the basis for recording and reporting program information.

These three characteristics--duality, complexity, and longevity--describe the current program and, as such, are themes which will drive the development of the new system's conceptual design.

CURRENT SYSTEM DESCRIPTION

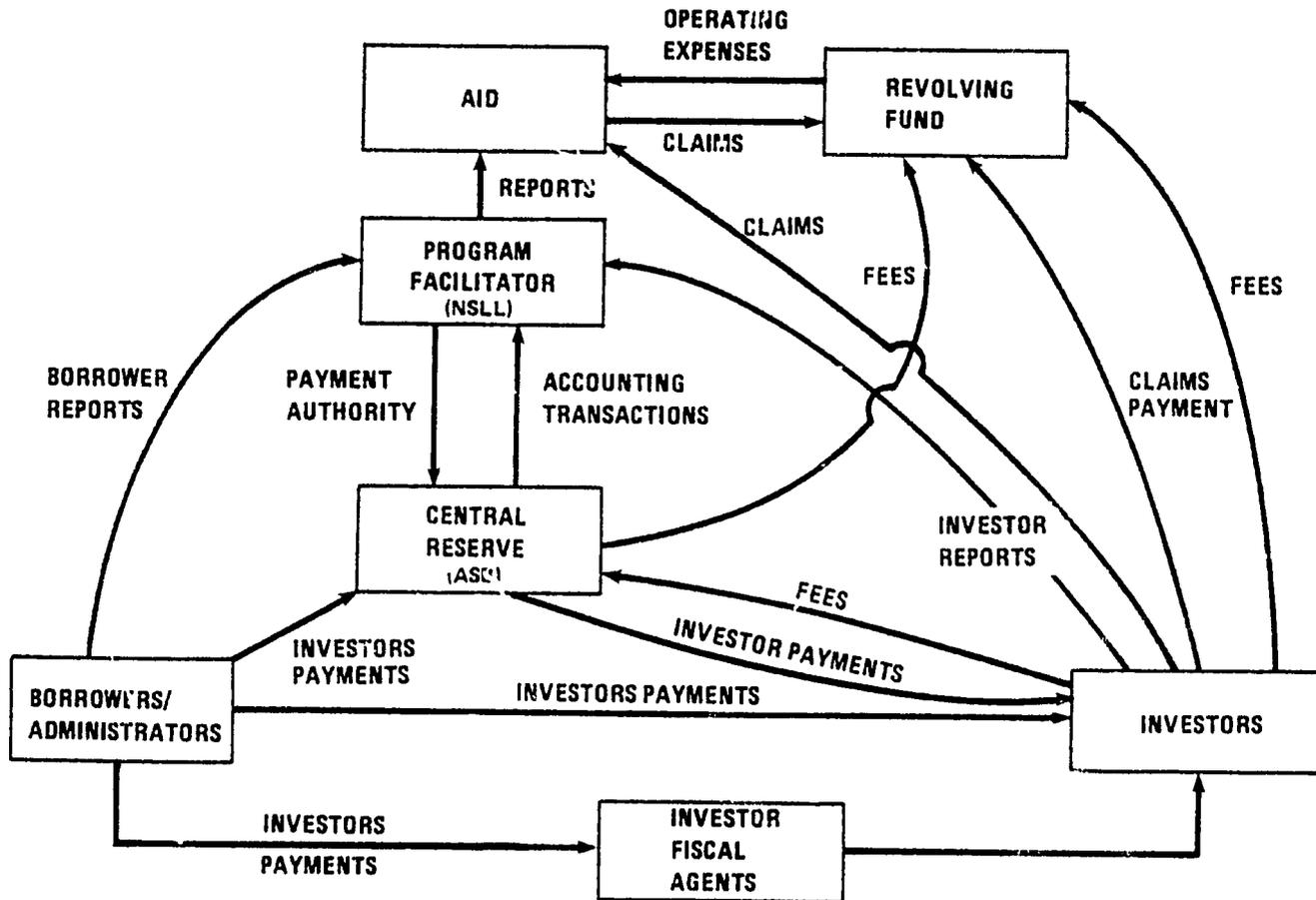
The HGP is one vehicle used by AID to assist emerging countries develop or improve their housing stock and, concurrently, achieve some degree of competency in providing shelter for their low-income populations. Originally authorized by the Foreign Assistance Act (FAA) of 1961 (P.L. 87-195), the program's authorization has been extended continuously by subsequent legislation. During its lifetime, the program has grown from a \$10 million experiment in 1961 to a \$1 billion, full-scale operation in 1978. Furthermore, there are indications that rapid growth will continue.

The program's evolution, in part to accommodate changes in broader overall foreign policy, has influenced program operations. Specifically, these changes have resulted in the development of new organizations within AID, the assumption of additional responsibilities by its existing organizations, and expansion of the number and type of external institutions with which it must coordinate program management and administration.

The HGP's current operation is illustrated in Exhibit II-2. There are five principal participants in the program: AID, NSLL, ASB, investors, and borrowers. The responsibilities of AID, NSLL, and ASB are discussed throughout this report (see Chapter 5 and Appendix C for descriptions of specific responsibilities). Borrower and investor responsibilities, however, differ among projects and are a function of the terms and conditions specified in individual project legal documents.

Two separate vehicles are used to manage the monetary flow among participants: the revolving fund (on account at the Treasury) and the central reserve fund. The revolving fund maintains the original capital provided for the program and is available to meet investor claims and program operating expense. The central reserve fund, administered by ASB, is a subset of the revolving fund and is used to channel funds among borrowers, AID, and investors for approximately two-thirds of the existing projects. For these projects, AID, through NSLL, provides a schedule of authorized payments to ASB for disbursements to investors.

EXHIBIT II-2
CURRENT HGP OPERATIONS



Upon receipt of the payment schedule, ASB initiates its investor payment process. Prior to disbursement, ASB determines whether sufficient reserves exist to cover investor payments. Disbursement is delayed if sufficient funds do not exist in the central reserve. ASB waits to receive borrower payments to increase the fund before making disbursements to investors.

The central reserve is not used for certain projects where borrowers disburse loan repayments directly to investors. For these projects, AID must rely upon investor/borrower reports to verify correct payments. These project repayment channels tend to reduce AID's project financial control.

The current flow of information (i.e., borrower and investor reports) is dictated by individual project legal documents. Variations in reporting requirements, as discussed later in this chapter, have resulted from variations in the legal agreements. In many cases, borrowers submit a report to NSLL at the time they disburse loan repayments to either the central reserve or the investor. AID receives a copy of the report from NSLL and shortly thereafter receives a report from the investor (also usually through NSLL).

Both NSLL and AID reconcile borrower and investor reports. Furthermore, investor claim requests are submitted to AID for action. AID, in turn, examines the request and determines the causes of the delinquent borrower payment. If a claim is justified, AID initiates its vouchering process and payment is made to the investor from the revolving fund held by the Treasury.

As described in Chapter 5 and Appendix C, NSLL plays a major role in the administration of the HGP. Currently, it provides management reports detailing information about specific projects (i.e., borrower/investor report reconciliations), alerting AID about project delinquencies, and describing central reserve fund operations. Thus, it is the primary conduit for the informational flows among program participants. When combined with ASB operation of the central reserve, NSLL and ASB become the primary conduits of both monetary and informational flows among program participants, all of whom are under the direction of AID.

AID FINANCIAL MANAGEMENT RESPONSIBILITIES

AID has ultimate responsibility for the management and control of the HGP. In terms of financial management, specific responsibilities include:

- monitoring the loan guaranty activities performed by its contractors, NSLL, and ASB;
- performing specific accounting procedures;

- . exerting fund control and maintaining reserve sufficiency;
- . controlling disbursement; and
- . maintaining and enhancing program marketability.

This section examines these responsibilities in terms of their relationship to the proposed system design.

Monitoring and Accounting

As part of its responsibilities, AID monitors program activities by maintaining close contact with NSLL and ASB and by analyzing borrower and investor reports and investor claims requests. Since most of the transactions are channeled through the central reserve fund, NSLL and ASB generate monitoring-related data (e.g., delinquencies) for use by AID. AID, in turn, reconciles these data with its own copies of investor and borrower reports. Variations in reporting requirements tend to make this reconciliation more difficult.

For those projects that do not use central reserve payment channels, AID has the difficult task of monitoring the flow of funds and information. These projects provide the lowest degree of control for AID. Direct borrower/investment channels, coupled with variations in reporting requirements, often force AID to be reactive rather than proactive.

Fund Control

Fund control includes maintenance of fund integrity and sufficiency of reserves. Fund integrity implies the separation of funds earmarked for different purpose. By separating earmarked funds, it is possible to ensure their use for intended purposes. Currently, fund integrity is limited. Some projects have specifically designated reserves, while other projects rely upon pooled reserves. Since all reserves are maintained in one account and used as required, it is sometimes difficult to determine certain categories of project-specific funds at any given point in time.

Fund integrity is clouded further when prepayments are introduced. When mortgagors prepay, the additional funds are placed in the central reserve fund until disbursement to the investor. However, while in the reserve, the funds may be used to meet payments due investors. Although in the final analysis, any liabilities incurred through the comingling of funds in this manner would probably be underwritten by the U.S. Government, this practice does not appear to meet the normal fiduciary responsibilities of a loan guarantor. This question should, at a minimum, be addressed by AID's legal counsel. PMM&Co. recommends, however, that this practice be discontinued to avoid the possibility of its being construed as improper during future audits or examinations.

PMM&Co. feels that an acceptable treatment of prepayments would be to deposit the funds in a separate account or set of accounts resembling an escrow so that they are segregated from other central reserve funds. Current practice requires disbursement of prepaid funds to the investor as specified in the contractual documents. In many cases, the disbursement is scheduled to occur once each year. Thus, AID is liable for the interest due to the investor from the time AID receives the prepayment until disbursement. Because this can become expensive, AID should consider contract modification to enable it to disburse funds immediately upon receipt of prepayments. Similarly, future loan agreements should require payments in advance of current due dates. This will reduce AID's interest expense and its contingent liability and will simplify the pursuit of fund integrity.

Similarly, part of the central reserve fund consists of trust funds established for some of the early projects. There is some confusion regarding the status of these funds. If these funds have a singular purpose, AID should separate them from other funds to maintain them for that purpose. Otherwise, they should be recognized for their contribution to the central reserve and be used accordingly.

Reserve sufficiency, the second part of fund control, requires an analysis of project specific and pooled reserves and fees to determine whether sufficient reserves are available to make investor payments. Since ASB does not make investor payments unless sufficient reserves exist, payment delays may occur. In the interest of facilitating timely payments, AID should ensure the provision of sufficient reserves prior to investor payment periods. Given the desire to make the central reserve fund a focal point, AID should consider increasing its size so that it can manage the increased burden of an expanding program. It should be recognized that there is no clear cut precedent of authority to accomplish this other than through the use of letter of credit arrangements similar to those employed by AID in certain types of commodity assistance programs.

To increase the fund's size, it would be necessary to access funds in AID's Treasury account. Because these funds are currently available only for payment of claims and operating expenses, it is likely that AID will have to negotiate their use for the broader purpose of managing the float created by borrower/investor payment patterns. If funds cannot be permanently transferred from the Treasury account, AID should request that its funds be available to compensate for shortterm deficiencies in the central reserve fund. AID and the Treasury should recognize that the central reserve is actually a checking account and is not suitable as a complete buffer between borrower and investor payments.

Controlling Disbursements

The size of the central reserve and its adequacy are also related to disbursement control. To achieve the objective of timely payments to investors, ASB must have enough money in the reserve to meet payments due investors. Because of the time lag at ASB between receipt of borrower payments and their recording and availability, the reserve has been short, causing delays in investor payments. Thus, control of disbursements is constrained by the limits of the central reserve.

Control is also complicated by cumbersome and diverse payment channels between investors, borrowers, and the central reserve. When payments are made between investors and borrowers only, control is minimal; when payments flow through the central reserve, slightly more control exists. In both cases, AID must rely upon investor reports to verify accuracy of payments. To maximize control, the new system should generate accurate payment statements in advance of actual disbursements. This will enable AID to check reserves for sufficiency and facilitate timely and correct payments to investors.

Program Marketability

The AID HGP is Congressionally sponsored and participates in the commercial credit markets. It therefore must be marketable to both public and private sector audiences (i.e., Congress and private investors). Marketability to Congress can be enhanced by evidence of program self-sufficiency and operating efficiency. Evidence of positive operating results in terms of net return to the revolving fund and housing production, as conveyed in accurate financial statements, can foster the program's reputation in Congress.

Similarly, marketability to investors can also be enhanced by efficiency of operation. The investor is concerned primarily with timely payments and the U.S. Government guaranty. Evidence of positive operating results and reserve sufficiency, when combined with accurate and swift payments, can improve program marketability to investors.

The ability to market this program in the future to investors and Congress will serve as a yardstick of its long-term viability. The analysis in this section and the proposed system design which follows is directed at the various program elements which can improve program marketability. Evidence of fund integrity and reserve sufficiency as reflected in financial statements can prove marketable to investors. Similarly, evidence of an efficient disbursement mechanism to ensure timely and accurate payments to investors should also be attractive to investors. For Congress, increased program control, improved management efficiency, and the achievement of self-sufficiency should prove meaningful as a measure of the program's viability.

THE LOAN CYCLE

The loan cycle is composed of three phases: origination, servicing, and liquidation. Both financial and program management occur during each phase of the cycle and, therefore, must be examined to identify the requirements of the proposed conceptual design.

Origination

Origination commences upon an expression of interest by a foreign country to participate in this program. It ends upon implementation of the project loan agreements. Within these extremes, AID, together with the foreign country, undertakes a thorough analysis of the prospects of initiating a specific project in that country. This process includes a series of analytical studies (e.g., shelter sector analyses, a project identification document, and a final project paper) that discuss relevant conditions of the subject country and shape the design of the specific project for which a guaranty has been requested. The proposed project is also reviewed internally and by an interagency committee to ensure that the project meets the goals and objectives of the AID program.

This process, according to AID officials, works smoothly and provides sufficient opportunities to analyze and review proposed projects prior to authorization. It is also the logical place to initiate use of the financial management system, as described later in this report.

Two activities that occur during origination require attention and incorporation into the system's design. These activities are risk management and implementation management.

Risk Management

Risk management should occur at the aggregate program level, as well as at the project level. While project level risk is assessed during the preparation and review of project documents (e.g., shelter sector analyses), other aspects of risk management require consideration.

At the program level, the relationship of fees to reserves and claims (and operating expenses) should be more clearly delineated. Based on interviews with relevant AID officials, there does not appear to be a clear definition regarding the allocation of fees to meet potential claims or actual operating expenses and the basis on which the fee level is set.

In part, the confusion originates with the program's legislation. The legislation's general provisions, Section 223, state that fees are available to

meet administrative and operating costs and are also available to discharge liabilities. It further specifies that payments made to discharge liabilities shall be paid first out of fees, as long as such fees are available. These statements are consistent with information obtained during interviews concerning AID's desire for program self-sufficiency.

Currently, long term projections of net operating results are made at an overall level. These projections serve an important function in financial management. For example, they project that the current trend of annual operating losses will continue for only a few more years before regular operating gains are achieved. As valuable as this process is, however, it is felt that it could be conducted in greater detail and with greater precision to reflect the operating complexities which are at work between the various revenue and expense elements. In this manner, management would be in a more favorable position for decision making in the current year and precision budgeting in the outyears.

It therefore appears that a more precise relationship between fee revenues, reserves for potential claims, and operating expenses should be established. This suggests the greater use of budgeting to estimate fees, anticipated claims, and projected operating expenses. This exercise can also provide a more precise measure of reserve sufficiency. To put it another way, the question is whether an expected fee revenue stream will generate sufficient reserve capacity to cover anticipated claims with a balance available to cover the costs of operations.

The answer to this question will provide the basis for establishing fee levels. An affirmative decision will indicate that fees are set at an appropriate level. A negative decision, however, should trigger an analysis of the appropriate fee level. This analysis must consider the reasons that fees are not adequate (e.g., increased risk or operating costs), as well as the political implications of changing fees.

The creation of a fee-setting mechanism, then, is a requirement of the proposed system design. Specifically, the system should have the capacity to focus on the relationship of fees to claims and operating expenses. It should enable the user to determine the adequacy of fees and to generate projections based on alternative scenarios of fee, risk, and operating levels.

Implementation Management

The last step of the origination phase of the loan cycle is implementation. During this step, legal documents are signed by the various participants and all conditions are finalized. It is this preparation of the various legal documents that is critical to the future efficient management of the HGP.

The legal documents which bind the program participants to the contractual agreements drive the operation of the HGP. It is within these documents that specific terms and conditions are established. Requirements for investor/borrower reports, payment channels and reserve requirements, and prepayment privileges, for example, are defined in the documents. To a large degree, these define program operations. It is therefore essential that HGP Financial Managers participate in the development of future project legal documents. In the past, many of these documents were prepared without sufficient input from officials other than legal counsel, according to the AID officials interviewed. The lack of input from financial and program managers may have resulted in the preparation of documents that do not reflect the requirements of these areas. Elimination of borrower reporting requirements, for instance, has been cited as an example of the type of problem which has occurred because of limited input by financial managers. It also seems likely that much of the complexity (i.e., the 10 situations) is a result of the wide variations in the legal documents establishing past projects.

While AID must adhere to the contracts of the past, there is now an opportunity to modify past practices by standardizing legal documents and facilitating input by financial and program managers. Standardization will enable AID to incorporate basic requirements of the program. Specific documents can then be tailored to particular situations within the constraints imposed by AID's standard format. In every case, documents should be reviewed by financial and program managers and a representative of the Loan Division. AID might also consider NSLL as a future resource for document review because of its independence and knowledge of commercial lending. Standardized requirements incorporated in the various documents can serve to reduce complexity by increasing uniformity. Since new projects require host country guaranties and use the central reserve fund (with the exception of Israeli projects), uniformity is being encouraged.

Uniformity can be enhanced by placing specific requirements on borrowers and investors. The development of standard report formats for borrowers and investors, for example, will reduce the amount of extraneous and incorrectly reported data being received by AID. Similarly, consistent payment channels and periods will reduce problems associated with tracing late payments. If, for example, all funds flow through the central reserve, then AID will know directly when borrower payments are late and will not have to rely upon an investor's report to signal a late payment. By requiring the use of AID-designated correspondent banking channels, the speed with which payments are delivered can be increased. Furthermore, there will be an established payment channel which can be easily traced to locate late payments. In general, standardization of requirements and the resulting uniformity will allow AID to act, rather than react, to a situation.

A second facet of implementation management is the control of actual commitments versus authorization limits. Total program authorizations and total and average country authorizations are constrained by legislation. Currently, both the Office of Housing and the Loan Division manually record these data.

One feature required of the system design is the capability to track guaranty commitments versus authorization limits. The system must perform its tracking function at the program and project level so that AID can monitor total and average face value guaranty amounts per country per year and aggregate these amounts to the program level.

A last component of implementation management is the coordination of drawdowns and the use of escrow accounts. Occasionally, situations have arisen in which project construction has not progressed sufficiently to justify a drawdown of the loan at the time it is scheduled to occur (as specified in the legal agreements). In these cases, the drawdown is made and the funds are placed into escrow. This action is justified since "work is not in place," but two considerations must be addressed in connection with this process. First, because interest expense is incurred once a drawdown takes place, AID's contingent liability is extended. The second problem concerns communication regarding drawdowns and associated escrow accounts from AID to NSLL. According to NSLL officials, NSLL is often unaware of such transactions and therefore may have incomplete project data. The result of this lack of communication is some loss of control over the affected projects and a potential distortion of the HGP liability.

While the use of escrow accounts to hold drawdowns is often sufficiently desirable to justify the added risk, good communication is a requirement of effective control. The system design, therefore, must have the capacity to match drawdown schedules with actual drawdowns and to signal the creation of escrow accounts when a situation requires their use. The system should also be flexible to enable financial managers to obtain a listing of escrow accounts by project. This list can become the communication device to inform necessary parties about changes in the scheduled flow of funds. If NSLL's current functions in financial management are assumed by AID, then the escrow list will become an internal document. If NSLL retains all or part of its current role, then distribution of the list or its contents to NSLL will provide the necessary information to effectively control funds placed into escrow accounts.

Servicing

Whereas projects are initiated and the financial management system engaged during the origination phase of the loan cycle, major interaction with the system will occur during the middle stage of the loan cycle--servicing.

Under normal circumstances, the servicing phase lasts until loan maturity, perhaps 20 to 30 years after origination. In contrast, the origination phase normally lasts about 2 years or until loan disbursements are made. Thus, servicing constitutes the largest part of the loan cycle.

Currently, major responsibility for loan servicing functions is shared by AID and NSLL. Descriptions of NSLL's activities are contained in Chapter 5 and Appendix C of this report. Although NSLL's role appears to be understood by AID, formal contractual requirements are only generally defined with respect to NSLL's specific function in accounting and HGP financial management. If a decision is made to contract out for these services in the future, it is recommended that AID specify the requirements of the contract in greater detail so that it can better control this function. If the role of financial management is assumed totally AID, then a clear understanding of NSLL's current activities is warranted.

The existing servicing function essentially involves the monitoring of individual projects. It is driven by two types of flows: monetary and information. Effective monitoring by AID or NSLL is limited by two factors: the lack of regular report requirements for all borrowers and the fact that funds for approximately one-third of the projects do not flow through the central reserve fund. Consequently, AID must rely on investors and borrowers for data concerning payments. In some cases, AID is an external party to transactions between borrowers and investors. In one case, an investor has agreed to transmit to AID only one report annually. These types of investor/borrower situations force AID into a reactive mode of operation rather than a proactive mode.

Nowhere in the current program is complexity more evident than in the servicing function. The 10 "situations" referred to earlier and the possible variations within these 10 situations have placed an unjustified and currently unavoidable burden on the servicing function. This burden is evident in the flow of both information and money. Information from borrowers flows inconsistently, with varied reporting formats being submitted by different borrowers. Similarly, borrower payments are occasionally lost. Locating lost payments is often difficult as a result of inconsistent payment channels. The fact that some projects use the central reserve and others do not further complicates the servicing function.

During the review, it was noted that due to inconsistent or undefined communication channels between various parties to a loan agreement, payments have been misdirected or made in duplicate. These situations are easily correctable; indeed, it was further noted that such cases have been corrected as they occurred. They are, however, indicative of a cumbersome monitoring system and result from the complexity of the 10 situations.

Based on the difficulties observed regarding the current servicing function, two important requirements for the system design emerge for increasing control and ease of operation. Specifically, the system should:

- . facilitate the timely flow of money and information among project participants; and
- . use the central reserve fund as an intermediary between borrowers and investors.

Both requirements are directed at future projects. Although many older projects do not use the central reserve or require routine borrower reports, AID should make every effort to modify existing arrangements so that older projects are consistent with new or future projects. It is recognized that a similar attempt at consolidation was undertaken to initially create the central reserve and that this recommendation may not result in substantial success. It is felt, however, that sufficient time has passed to demonstrate the viability of the central reserve concept to other investors. In light of this factor and the appreciable control advantages offered by the consolidation concept, AID's exploration of this idea is warranted. If modification is impossible, then any new system must provide a flexible approach to manage the flow of money and information for both old and new projects.

These two requirements suggest that AID and its central reserve act as the program's central focus. The system will provide AID financial managers with accurate payment data for investors and borrowers. AID will know the proper amounts (and allocation of funds between principal, interest, and fees) owed to investors and from borrowers in advance of payments. Once again, AID will be able to act rather than react to circumstances.

Similarly, information flow, when standardized with respect to content, distribution channels, and timing, will provide a check of AID accuracy rather than serving as AID's best source of project information. This ability to generate payment data in advance of disbursements will also place AID in an active, rather than reactive, position.

Two additional findings concerning the current servicing function deserve attention. First, disbursements to investors by American Security Bank (ASB) are frequently made prior to the receipt of authorization by AID. Apparently, ASB receives a copy of the payment schedule from NSLL and makes disbursements accordingly. NSLL also sends a copy to AID for approval. By the time AID submits its signed copy to ASB, payments have already been made to investors. Since it is likely that ASB or some similar entity will continue to serve as the disbursing agent, it is recommended that AID provide proper authorization to its agent in advance of disbursement to investors.

The second finding concerns the vouchering process used currently by AID to access funds in its Treasury account to meet investor claims. Current practice requires that each voucher receive approval from several AID officials. This process appears to be in accordance with Agency procedures for controlling disbursements. By its nature, however, it could potentially incur additional interest charges from investors due to the time required for this certification process and the Treasury processing time for disbursements.

Typically, investors have not charged late penalties for routine claims, but this practice does not preclude them from doing so in the future. Within the context of other recommendations made throughout this report, one method of expediting payment of claims would be to handle these transactions through the central reserve. Under this concept, ASB could be authorized to make disbursement in the same manner as a regular loan payment. Through use of the wire transfer technique, investor claims would be satisfied almost immediately. The central reserve account could subsequently be replenished from the Treasury account through the normal, but more time-consuming, vouchering process.

Liquidation

The last phase of the loan cycle, liquidation, is the shortest of the three phases. Liquidation, in many cases, occurs instantaneously--a loan matures, final payments are made and recorded, and the specific project file is closed. In an ideal situation, routine loan maturation might be the only transaction in the liquidation phase. In reality, however, other transactions, including defaults and massive refinancing (project "buy out"), may occur.

Current operations have not focused on routine loan maturation. Because the program is only 17 years old and the shortest loan maturity is 20 years, originally guaranteed loans are still active and will not reach maturity for at least 3 more years. According to various AID officials, there are no current provisions for processing loans that mature routinely.

For routinely maturing loans, final payments should trigger action by AID to record and report the transactions. This requires a simple accounting entry which should generate a final loan statement.

For some projects, reserves were established under a quasi-mutual fund concept. In other words, when the loan reached natural maturity, any balance remaining in the reserve account for that project would be returned to the homeowners who had participated as mortgagors. Currently, the specific projects which are mutual in nature are not easily distinguishable. Furthermore, the size of the reserve available for this purpose does not appear to be earmarked specifically for reimbursement to consumers.

If, in fact, some projects were designed as mutual fund programs, they should be so designated within the framework of the new system, and the associated reserves should be segregated from other reserve funds. Beneficiaries of the program (i.e., recipients of the mutual funds) should also be identified. Policies should be defined to manage disbursements and to determine what criteria qualify a homeowner as an appropriate beneficiary (i.e., original or subsequent owner).

Since some loans do not reach maturity, additional liquidation processes must be established to manage defaults and refinancing situations. Defaults are a natural occurrence in loan guaranty programs, and routine accounting procedures should exist to handle their disposition. Furthermore, these procedures should be guided by generally accepted accounting principles.

The fact that current standard accounting policies and procedures for loan defaults do not deal with all needed matters recently surfaced as a problem requiring resolution. Lengthy discussions between officials of the Loan Division and the Office of Housing occurred regarding the proper recognition of losses resulting from a default. The completion of standard accounting policies and procedures, based on generally accepted accounting principles, will eliminate the need for many case-by-case discussions and facilitate the routine recording and reporting of defaults.

Similarly, specific accounting practices should be established to control refinancing decisions. In the past, existing loans have been purchased by a new entity. The proceeds of the sale constituted repayment to the original investor. The purchase or refinancing of the loan by a new investor without an AID guaranty terminates AID's involvement and contingent liability. These changes were reflected in the accounting records and reported to AID's financial managers as such situations occurred in the past. However, the HGP financial system should be capable of treating refinancing in as routine a manner as any other liquidation.

Treatment of the reserves of associated projects should also be fully defined by accounting policies. For projects with mutual fund characteristics, the issues are the same as those raised by the discussion of routine loan maturation. For other projects, policy determination is required to guide the proper use of available project reserves.

Summary

An analysis of the current operations of the HGP suggests that certain modifications should be made to improve control and ease of operation. These modifications, in a general sense, are requirements of the proposed system design. At the basic level, the need to reduce complexity through standardization of future legal documents is recommended. The benefits of increased

uniformity include simplification of program management and increased operational efficiency. More specifically, they include the ability to:

- . increase the speed of payments to investors and from borrowers;
- . access precise information at the project and program levels;
- . generate timely and substantive reports at the project and program levels; and
- . facilitate planning and budgeting.

In summary, the requirements, when incorporated into the proposed system design, will enable AID financial and program managers to act in advance of problems rather than to react to problems after they occur.

III. SYSTEMS DESIGN CONCEPT: PROGRAM FINANCIAL MANAGEMENT

This chapter presents the basic concepts, operating procedures, and principles of the conceptual system of financial management for the AID Housing Guaranty Program (HGP). It represents the culmination of the requirements definitions and incorporates the diagnostic comments and observations of previous sections of this report. This chapter presents a broader view than the use of the term "conceptual design" would imply. In addition to addressing the data processing aspects of automated accounting and management systems, the design describes all facets of program financial management studied, including manual support and interfacing requirements.

This chapter does not present the conceptual design from the detailed data processing perspective. Discussions of such considerations are provided in the next chapter. Some of the underlying, salient characteristics of the automated features of the conceptual design are, however, addressed here in order to provide a familiarity with the operation of the system in the automated mode.

SCOPE OF THE SYSTEM CONCEPTUAL DEFINITION

The conceptual design is directed toward all aspects of Housing Guaranty financial management examined by this study. It has been observed several times in this report that the program has many inherent complexities, stemming from such factors as variant project operating characteristics, the commercial aspects of a federal program, and the typical longevity of a project. The conceptual design establishes the principal features/processes which must be implemented to provide AID with a fully integrated financial management system which is able within program complexities and which delivers:

- the level of financial information detail required to fulfill management needs for control and program monitoring;
- the ability to monitor and control the cash transactions of the central reserve;
- an interactive capability to operate in harmony with major Agency accounting systems;
- a method of anticipating the long-range impact of short-term activities through planning and budgeting; and

- . an effective definition of responsibilities for various internal AID organizations and contractors in the management of the program.

One of the principal features of the system concept is the creation of an integrated data base for transaction and static information which are now contained in a variety of ledgers and files maintained jointly by AID, NSLL and ASB. Exhibit III-1 illustrates the total financial management operations of the HGP. The central core represents the integration of these various functions into a single financial data base, providing the ability to record and report the results of those related activities at various levels such as:

- . overall program status;
- . loan repayment status; and
- . individual project status.

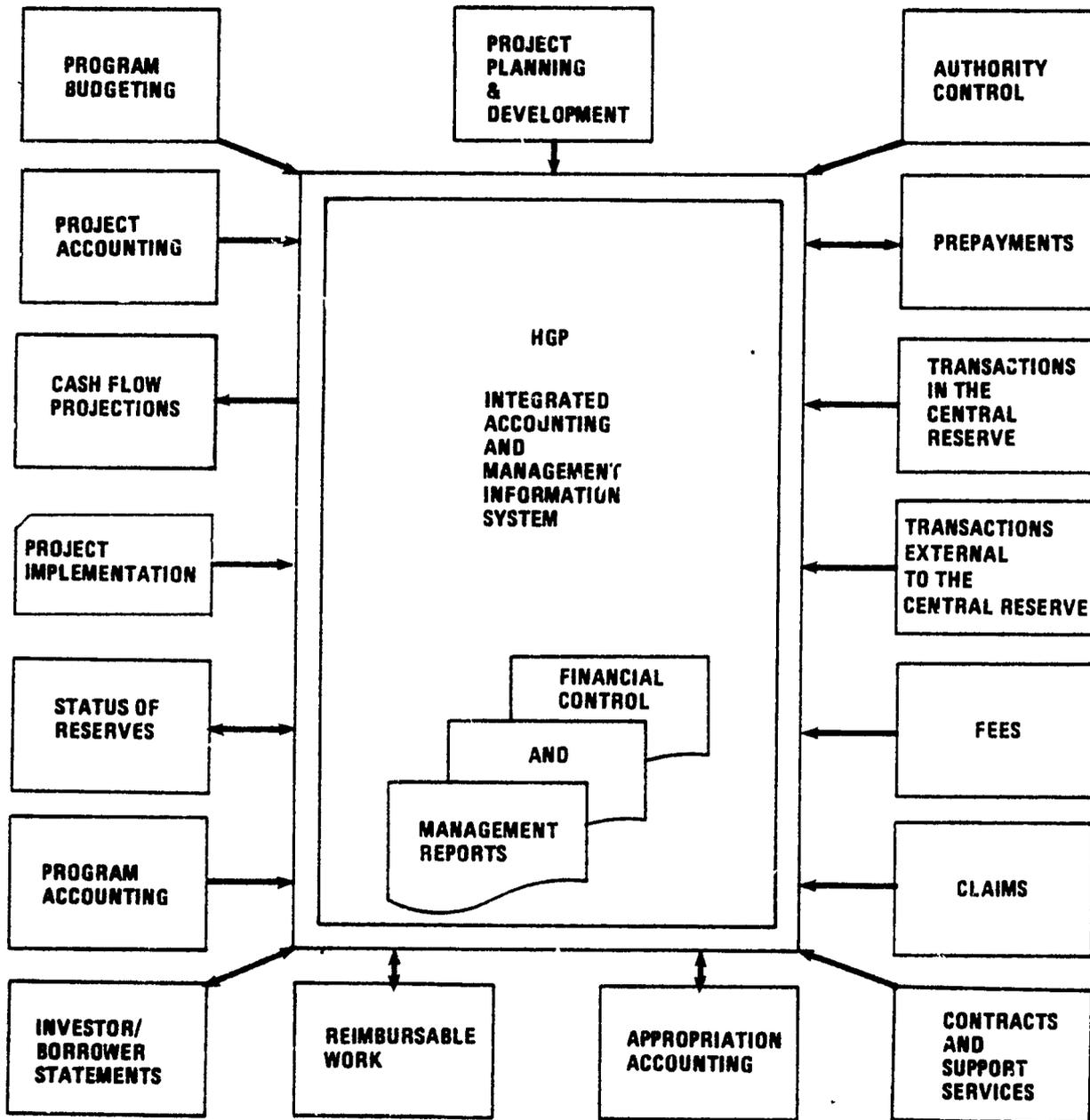
In addition to providing various "pictures" of financial data, the integrated system addresses the auxiliary processes encountered in program management such as:

- . balance of reserves;
- . budget performance;
- . project planning and control;
- . development of general and subsidiary ledgers;
- . contractual actions;
- . Agency support costs; and
- . reimbursable work.

The integration of these various financial and auxiliary operations is dependent upon the development and implementation of several key features:

- . standard input media for transactions;
- . critical coding structures for projects, borrowers, investors, and guarantors; and
- . the posting criteria for controlling the entry of transaction data to proper accounts and in proper periods.

**EXHIBIT III-1
HGP FINANCIAL OPERATIONS**



The details of these features are discussed below and in greater depth in the next chapter.

APPLICABILITY

To be of maximum use to an organization, a financial system must be adaptable to changes and variations in the environment in which it operates. In the case of the HGP, the variant payment provisions of different projects must be accommodated by the conceptual system design.

Historically, different policy eras of the HGP have led to basic differences in payment provisions. The more recent programs utilize the central reserve in combination with host government guarantees underwriting the AID risk. This arrangement provides a high level of transaction control and, in this context, would serve as a suitable model for future projects. The older projects will eventually expire but, due to the considerable time involved, the system must address their requirements as an inherent part of its design.

Within the more recent programs, a variation has occurred regarding the use of the central reserve. Specifically, the Israeli project allows direct payment to an investor. This one exception is sufficient to demonstrate the need for flexibility in payment provisions.

The conceptual design provides for monitoring payments external and internal to the central reserve. Although the central reserve method appears to offer numerous advantages to AID and investors (such as speed of payment and degree of control), the system cannot be restricted in a manner which excludes other possible project schemes.

The conceptual system design is one which, taken as a whole, is developed on the hypothesis that AID will assume all functions of accounting and control for HGP. That is, AID will perform those functions currently assigned contractually to NSLL to monitor transactions on the central reserve, develop various statistical and action reports, and perform analyses on project data. Similarly, the design employs large-scale automation of function and calls for third-generation computer technology. It is recognized that AID has not yet made a decision regarding the use of contractor services for monitoring, reporting, and analytical functions. The time factor involved in making this decision, the assumption of partial or complete responsibility for these activities, and the availability of data processing resources to implement the system may not make the total design feasible for immediate enactment. It

is also recognized that AID is currently evaluating proposals to develop a new, automated Agencywide general accounting system. The eventual design of this Agency system can materially impact the interfacing and interactive features for appropriation data transfer of the HGP financial management system. The system design presented in this report, however, addresses these considerations and is highly adaptable to the possible outcomes of pending Agency decisions.

The system design employs a highly modularized approach to financial management. That is, major processes such as planning, budgeting, project transaction accounting, and reserve control are designed as "building blocks" to total system design. With few exceptions, each block or module can be a viable management tool alone or in various combinations with other modules. Because the system uses a carefully conceived, integrated data base, each module draws its information from and records transactions to a common set of files, irrespective of the presence of other modules. For example, if necessity dictates the short-term in-house assumption of control over transactions through the central reserve, the project accounting features of the system could be implemented alone. Program and appropriation data from project-level transactions could be directed to report in a compatible mode for posting to manual general ledgers and the other Agency accounting systems. Later, as modules are added, the data diverted for reporting and posting would be available for automatic interface or consolidated reporting with other program data. Similarly, project accounting could continue to be assigned to contractors, with discrete interfaces to an in-house program financial system.

The conceptual design calls for single-transaction processing, which is described in detail in a later section. This technique of maximizing the use of each piece of data has many substantial advantages over alternative input methods. It is the Firm's understanding that the new Agencywide accounting system will employ a similar approach. It is anticipated, therefore, that this conceptual design will be generally compatible with new AID system requirements.

When developing a new management system, it is normally advisable and desirable to implement the system's features in as comprehensive a manner as possible. This ensures the maximum continuity in operation, the greatest return from resources applied to the effort, and the least disruption of normal activity for conversion. The single transaction concept itself is based on the advantage of using data from a single source to update all files. However, given the dynamic operating environment of the HGP, the proposed conceptual design allows AID flexibility in its use and implementation.

FINANCIAL MANAGEMENT BASIS

To be effective, a financial management system must be responsive to its various users and user levels. The makeup of the user base must drive the systems and processes of control used to plan, monitor, and evaluate operations. It is the capability to cross-reference similar planning and performance data to the specific accounting and control requirements of all users without undue manipulation or duplication of effort which makes an integrated financial management system different from parochial accounting systems.

The HGP is composed of three distinct operating entities or user levels. HGP is a Federal Government activity and, as such, is subject to the various accounting and updating requirements associated with this role. As a part of the total AID operation, the transactions and status of the program must be reportable in accordance with the general Agency chart of accounts. This "appropriated" aspect also requires that the program conform to the allotment/obligation requirements of expenditure actions, develop annual budgets, and submit apportionment requests.

As a program, however, the HGP strongly resembles a nonappropriated, revolving, or industrial fund. Because it is given a single appropriation as initial working capital and is allowed to accumulate cash reserves and fee income through repayment transactions, the program strongly resembles a commercial operation. The precept behind the "program" aspect is that programwide activities must be reported on a profit or loss basis. The business of the program is to process payments and underwrite risk. The combination of these factors substantially differentiates the HGP from other AID appropriated activities and generates requirements for planning, accounting, reporting, monitoring, and control, in addition to those required to meet appropriated fund responsibilities.

The program is not the lowest user level for HGP operations, however, HGP is composed of numerous projects which, through their individual transactions, performance, and status make up the operating characteristics of the program and appropriated aspects of financial management. Although they are closely associated with program and appropriated accounting records through such features as pooled reserves or claims, there is still a need to effect sound control over transactions at the project level in order to manage HGP financially.

Unique accounting and management requirements exist which must be met by the financial management system at each user level. Other requirements, however, are not mutually exclusive. For example, a claim originates from a short or delinquent payment in a project account; it is reflected

in the operating expenses of the program and must be channeled through the obligation-expenditures processes of the appropriation accounts.

The interaction of the various user levels forms an intricate matrix for financial management. Exhibit III-2 demonstrates the interactive requirements of accounting and financial management control for the HGP Recognizing that all the "blocks" of overlapping data do not necessarily exist in reality, the exhibit essentially depicts the complex structure required for comprehensive control. The specific considerations of each axis of the matrix are discussed in the following sections.

Appropriation Financial Management

The accounting for HGP under the appropriation concept is very similar to that performed for other agencies. It is composed of five distinct transaction categories:

- . Legislative;
- . Budgetary;
- . Preexpense;
- . Expense; and
- . Reimbursement.

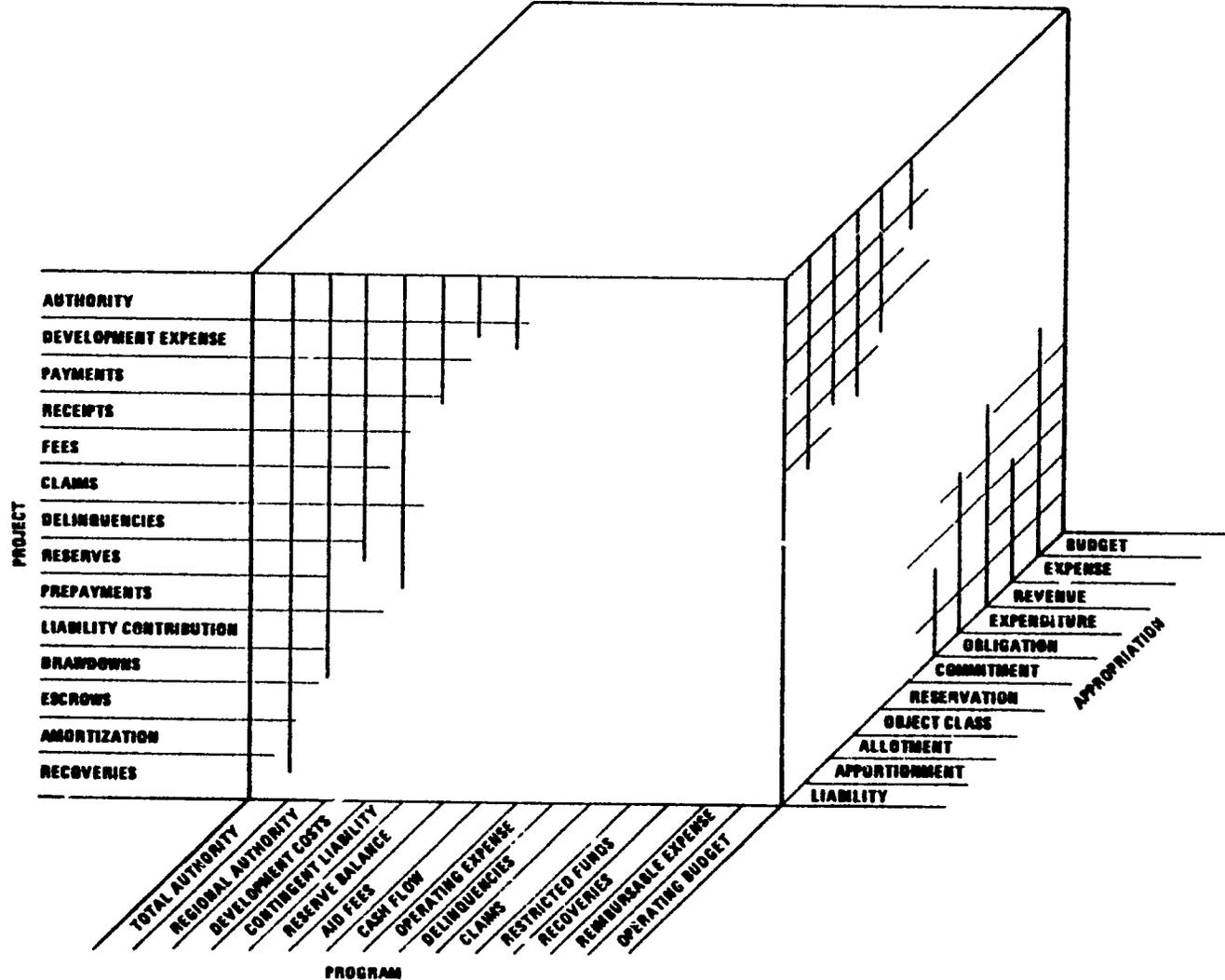
Taken together, the activities encountered in each of these categories combine to provide overall performance and status information on the program operations in terms which are compatible with Agency financial management procedures. Exhibit III-3 depicts the general concept of appropriation accounting for HGP. It shows various activities or events in program operations which are consolidated into appropriation-level transactions and fed to the appropriation accounts. Through interaction with various major AID financial and accounting systems, these transactions result in several financial management tools which are required for effective program management.

Legislative Actions

The primary legislative actions impacting the HGP are embodied in the various Foreign Assistance Acts (FAAs) enacted over the past several years. The FAA basically authorizes the program, appropriates the funds for use in administering the program and paying claims, authorizes the accumulation of income to replenish the appropriation, and sets various restrictions on the

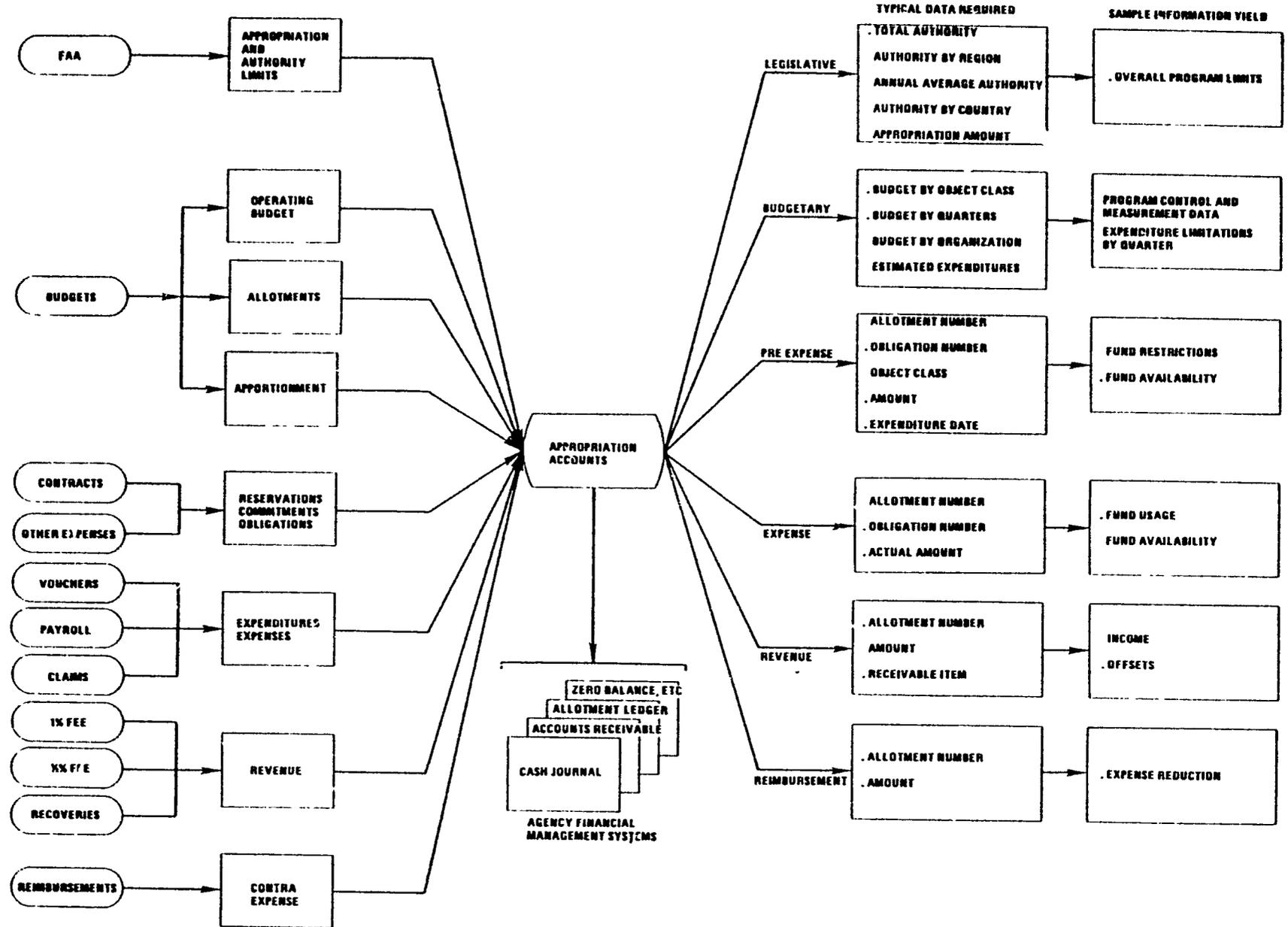
**EXHIBIT III-2
HOUSING GUARANTY PROGRAM
FINANCIAL MANAGEMENT MATRIX**

8 III



**EXHIBIT III-3
APPROPRIATION ACCOUNTING CONCEPT**

III. 9



amounts and distribution of guaranty instruments on a programwide, regional, and individual project basis.

To manage funds within appropriation restrictions, the financial system establishes the various criteria and limits in the appropriation files. These data typically include such elements as:

- . total authority (now approximately \$1 billion);
- . authority by region (i.e., a certain number amount of total guaranties must be issued for Latin American projects);
- . annual average authority (i.e., \$15 million average guaranty value authorized per year);
- . authority by country (i.e., \$25 million ceiling);
- . total amount of appropriation (originally \$50 million); and
- . other restrictions (i.e., use of authority for particular categories of housing projects or agricultural projects).

The basic information derived from legislative transactions is the definition of the overall operating limits of the program. The financial management responsibility is, therefore, to ensure that program activity stays within these limits. In the case of the fund balance in the treasury account, there is the additional requirement to ensure that sufficient income is generated to maintain the program itself and to provide adequate cash for the disposition of large claims.

The monitoring of compliance with many of the legislative requirements is an integral part of the financial system design. By comparing proposed projects and projects being implemented to active projects and legislative restrictions, automatic projections of authorization limits-to-actual are made.

Budgetary Actions

Operating much like a revolving fund out of a continually and externally reimbursed appropriation, the HGP has characteristically had greater flexibility in budgeting for its annual operating expenses than other Agency organizations. One of the inherent aspects of the program is that unexpected, large expenses may be encountered (i.e., default claims). Strict budgeting under these conditions, therefore, is not always practical. At the appropriation level, however, this flexibility does not relieve the program of responsibilities to provide accurate budgetary data, to the extent possible, for control, allotment, establishment, and apportionment activities.

This system description does not attempt to duplicate the detailed budgeting operations of the Agency. However, the program must generate budgets in accordance with AID requirements, based on projections of operating expenses such as labor costs, contractual costs, materials, and claims. This information must be available in a compatible format to allow accumulation by object class and by fiscal quarter for apportionment purposes.

The development of operating budgets for appropriation control does not always lend itself to program management. In particular, the erratic nature of claim processing may not be strictly controllable under a quarterly apportionment procedure. The financial management system envisioned for HGP is capable of recording and tracking budgetary and expense data in appropriated and program terms simultaneously. This is accomplished in a manner largely transparent to system users through the use of an integrated data base structure and a single-transaction input technique. Some control over apportionment limits will be provided through the quick recording of preexpense transactions in the data base, thereby projecting the impact of various activities on the funds available for expenditure.

Preexpense Transactions

Although many of the cash flow transactions of the program take place through the central reserve, a considerable number are channeled through the appropriation accounts. These transactions, such as contractual actions, require equal control through reservation, commitment, and obligation processes in the appropriated accounts.

Commitments, reservations, and obligations provide management with two key pieces of data -- fund restriction and fund availability, as reflected in the appropriation accounts. Preexpense information is derived from a variety of restricting or committing documents. Although impacting quickly on appropriation accounts, these data are not always immediately pertinent to the program accounts where different accrual accounting methods or periods may be employed. The basic system design employs techniques which will accept all preexpense transactions and post them to appropriation files. Data required for later use in the program files will be reflected as open transactions and, through the use of a transaction or document number, will be posted to program or project files when necessary.

Expense Transactions

There is a marked similarity between expense and expenditure transactions for program and appropriated files. Expenses, whether accrued or expended, are reflected in both sets of accounts. There may be some periodic

variances, however, due to accrual methods. The primary sources of expenditure actions are contract or material vouchers, payroll transactions, and claims. Since vouchering actions generally apply to an established obligation, a deobligation must occur during processing. Payroll transactions in AID are simultaneously obligated and expended and are therefore posted to accounts in essentially a summary form. Claims usually require expedient processing and therefore demand that an obligation and expenditure document to be entered at the same time. In these cases, "expenditure" refers to any disbursement of funds from the appropriation account.

A difference exists between the posting of expenses to the program and the posting of expenses to the appropriation. This difference must be recognized in the system design. The allocation of expenses and the level of detail required for recording such expenses varies for program and appropriation purposes. The most notable difference refers to the use of object classes for recording operations versus the breakdown of expenses to suit the needs of program management and for comparison to the program operating budget.

The system design provides for recording expenses for both program and appropriation needs. This is accomplished through discrete coding structures which prescribe the accounting treatment of each transaction and assign account numbers to be posted simultaneously in either program or appropriation files. This technique will generally require the assignment of transaction codes only once, at the earliest point entry to the system (i.e., at the time an obligation document is processed). The specific posting instructions would be drawn from computer tables containing debit/credit groups indexed to the transaction codes.

Revenue Transactions

Generally, there are three sources of revenue transactions in the appropriation accounts:

- . 1 percent fees on a one-time basis;
- . 1/2 percent fees on a recurring basis; and
- . recoveries on an irregular basis.

In all cases, checks or other cash transfer media are recorded in the Agency cash journal and accounts receivable systems and are posted to the appropriation accounts. Currently, the automated process is supplemented by manual cash journals to verify transaction amounts for posting to program ledgers.

In most cases, revenues can be anticipated by calculating amounts due the appropriation, based on outstanding loan balances (in the case of fees) or on disbursements made on behalf of borrowers (in the case of claims). To provide effective management control over revenues, transactions should be recognized as accounts receivable at the earliest possible time in the accounting process. When payments are received, they should be applied against specific receivables for liquidation, and any variances to anticipated receipts should be noted on management reports for research and action. The procedure of verifying Agency cash records against manual program ledgers is duplicative. By adding an additional manual process, an additional source for error is created.

The system design provides for the automatic and simultaneous creation of accounts receivable in both the appropriation and program accounts. Reconciliation of cash accounts is provided automatically through batch totalling of receipt documents entering the cash journal system and the accounts receivable liquidation variance reports. Because the receivable entries are created by a single, uniquely coded source, their liquidation can only be effected by an identically coded cash transaction.

Reimbursements

Certain expenses, including salary costs incurred by the HGP in the performance of services for other agencies or organizations, are reimbursable. These expenses are accumulated by manual time scatter sheets, extended by hourly rates, and accelerated for fringe and overhead costs.

There are three primary considerations for management control over reimbursable expenses:

- the accuracy of both charged hours and extension techniques;
- accountability through the accounting system to ensure collection; and
- the maintenance of records to use for management monitoring and budgeting purposes.

The question of accuracy can only be addressed by internal management emphasis on the recording of time and other charges. Accountability for transactions is best provided by the creation of a receivable transaction to offset the expenses incurred. The maintenance of records for analysis should be provided by the detailed accounting files.

The system design calls for the earliest possible capture of reimbursable expense data and total accountability throughout the processing cycle. Timesheets should be entered as coded documents. The system will extract current salary and fringe benefit information from the Agency's payroll and personnel files. Automatic entries to the receivable and expense accounts of the appropriation and program files will be made, and a billing or reimbursement report will be issued. As a basic ingredient of the system design, all transactions will be maintained on a history file for future reference.

Program Financial Management

The purpose of the program accounting concept is to interface the detailed transactions at the project level with the gross transactions at the appropriation level and to develop program financial statements. Program-level accounting is not essentially different from the accounting methods now employed by AID to monitor and report on HGP-wide activities on a profit or loss basis. The concept encompasses four functions:

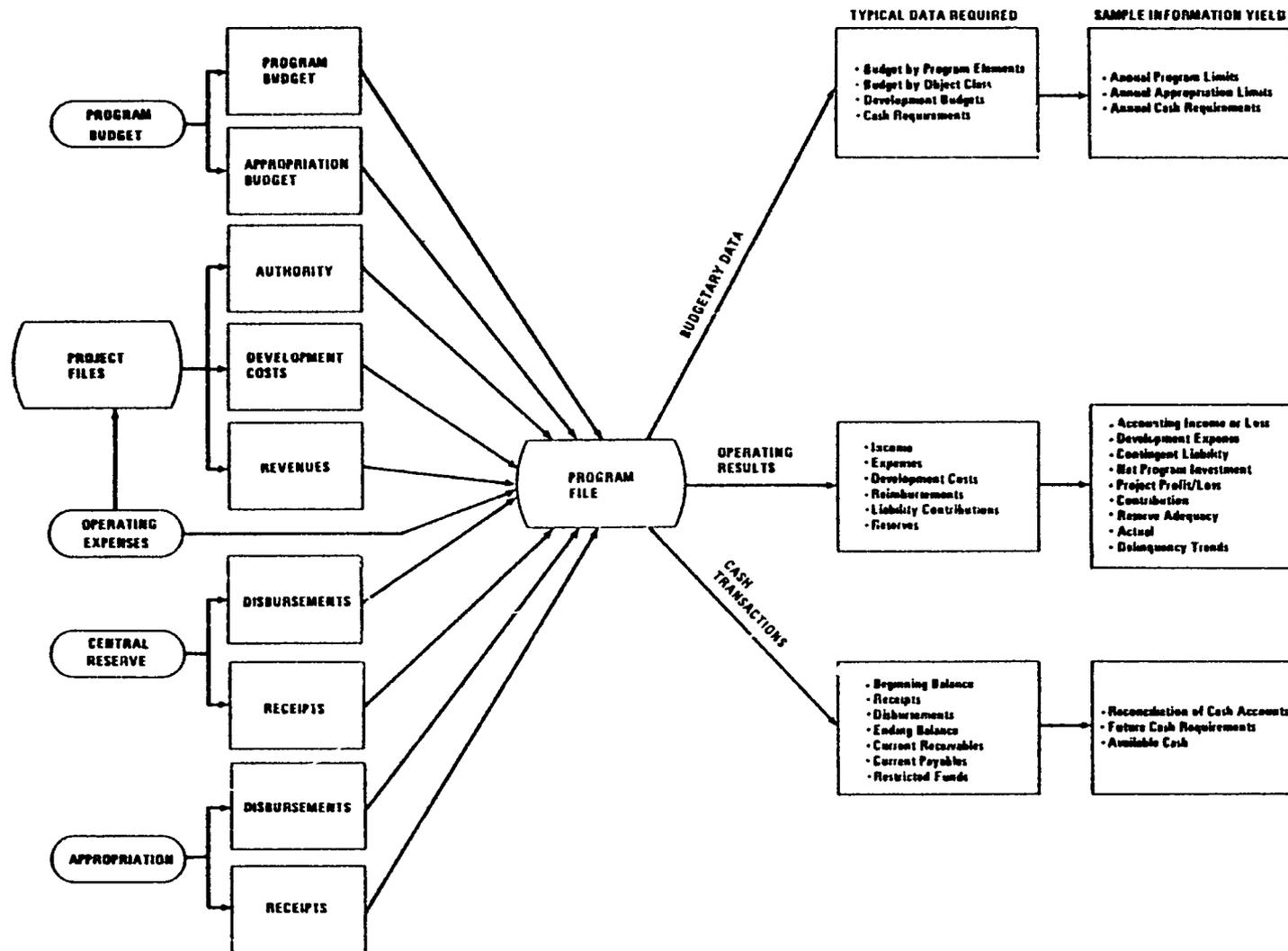
- . rolling up project-level transactions and project status to the program level;
- . collecting program-level operating expenses and making allocations to the project.,,
- . correlating the data in the appropriation accounts to actual transactions; and
- . monitoring a variety of performance factors at the program level such as overall delinquency trends, sufficiency of reserves, and actual program operating results versus the operating budget.

Exhibit III-4 depicts the salient characteristics of program accounting. Through the accumulation of data from various sources, program accounting involves three basic areas of financial management:

- . budgeting;
- . operating results; and
- . cash transaction control.

With the exception of cash control and the evaluation of overall operating results, the program-level accounting function is well defined in the appropriation and project accounting concepts. Repayment transactions at the project level are strictly controlled and therefore require only analysis for program-wide impact. Contractual actions are tracked in the appropriation accounts

**EXHIBIT III-4
PROGRAM ACCOUNTING CONCEPT**



and, since program accounting codes are applied at point of entry to the system, generally need only to be monitored for completion. Payroll expenses and Agency support costs are also input from appropriated files and similarly require minimal verification.

This discussion is not intended to oversimplify the program accounting function. Rather, it demonstrates the significant reduction in complexity available through the use of an integrated accounting system. The financial management responsibilities of this concept are largely oriented toward analysis of corrected data in automated files rather than the processing and analysis of source transactions as the basis for general program evaluation and control. The use of an integrated data base provides the immediate availability of individual transactions for detailed analysis on an "as needed" basis. By shifting the program-level focus away from the project level transactions and by using selective management exception reporting to highlight project level problem areas, the time of accountants, financial analysts, and financial managers can be better applied to the evaluation of the program as a whole.

Budgeting

Budgeting under the program accounting concept is procedurally identical to that under the appropriation concept. The classification of budget entries, however, must conform to the income and expense categories of the program accounts. Once coded in this manner, budgets are placed on files within the integrated system by cost or income category and used to monitor operating results on an ongoing basis.

Budgeting capabilities for a long-term activity such as HGP should be available on a multiyear basis. Projects implemented during the current year have an impact on revenue and expense for 20 to 30 successive years. Although it is not considered necessary or even feasible to accurately budget this far into the future, the ability to measure the impact of near-term actions and foreseeable events in the near outyears is important for management control.

Operating Results

The basic financial responsibility in measuring operating results is to examine the operating income or loss and the status of all program funds in light of the operating budget and overall program goals. The main source of data is the financial statement, generated automatically from the program files.

It is in the interpretation of the financial statement that one of the powerful features of a project-level control basis becomes apparent. The net profit

or loss of the program is composed of the servicing and development costs of individual projects, as offset by fee income, recoveries, and net variances in the appropriation account. Within a reporting year, an operating loss may result from the default of a single program. Conversely, an operating gain may result from the initial recovery of 1 percent AID fees (although the associated development expenses were recorded in prior periods). The nature of HGP indicates that this treatment of operating results is proper for financial reporting. It may not, however, be the best way to satisfy internal management needs to analyze the cause of operating gains or losses.

Under the project accounting concept, statistical records are maintained by project for a variety of categories such as development cost and net investment. By accessing this information, management is better capable of understanding the reasons for operating results and will be able to analyze the current status and performance of a program more effectively. A number of other statistical project elements are available for financial management use from the project accounting files. Examples of these are delinquency rates and project contribution margins.

Cash Transaction Control

The most complex aspect of the program accounting function is cash transaction control. This applies particularly to the operation of the central reserve, but also impacts on the use of treasury fund deposits.

Cash control for HGP has a dual nature. It involves:

- . the balance of available funds in the central reserve; and
- . positive control over specific transactions to ensure accuracy and accountability.

The balance of available funds refers to the requirement for AID to ensure sufficient available cash to meet current payments to investors. Positive control over transactions requires all disbursements to be preauthorized, to be recorded in the Agency accounting system, and to generate a debit advice from the AID fiscal agent for comparison to authorizations. Similarly, cash receipts should be recorded by AID from a credit advice and ascribed to a specific account or project. The cash transactions in the HGP records should balance with the bank statement provided by the fiscal agent. These two aspects of cash control are not mutually exclusive. It is only through the real time availability of cash balance data that the adequacy of reserves to meet current liabilities can be ascertained.

Much of the control over cash transactions and the evaluation of the sufficiency of cash balances is performed by the suggested system design. As previously discussed, all disbursements from the central reserve result from the payment schedule developed from current payment information contained in the transaction. When the debit advice is recorded, it will match with the disbursement record and be placed on the cash journal file. Receipt transactions will be processed in essentially the same manner. For those receipts which match a receivable item, the credit advice will liquidate the receivable and update the cash journal. Unidentified receipts will be reflected in the cash journal for accountability, but the transaction will be flagged for correction. All transactions in the cash journal will be maintained on file for reconciliation with the fiscal agent's bank statement.

The evaluation of the sufficiency of cash on hand is addressed by a modeling feature of the accounting system, presented as Exhibit III-5. This subsystem accumulates current payments due from the project files for actual projects, estimates payments due for projects scheduled for implementation during the modeling period, and draws comparison to the cash balance on hand reflected in the cash journal files. The system automatically applies payments due to project-specific or general reserves, as appropriate.

Reporting for the cash balance subroutine will normally be performed on a routine basis, comparing current payments to current cash available. The subroutine is designed to be used on a routine basis during disbursement functions and therefore will withhold disbursements if cash is not seen as available to the system.

The cash balance or cash flow subroutine also is capable of projecting cash requirements for future periods by including estimated receipts, planned implementation, and hypothetical or unplanned implementations.

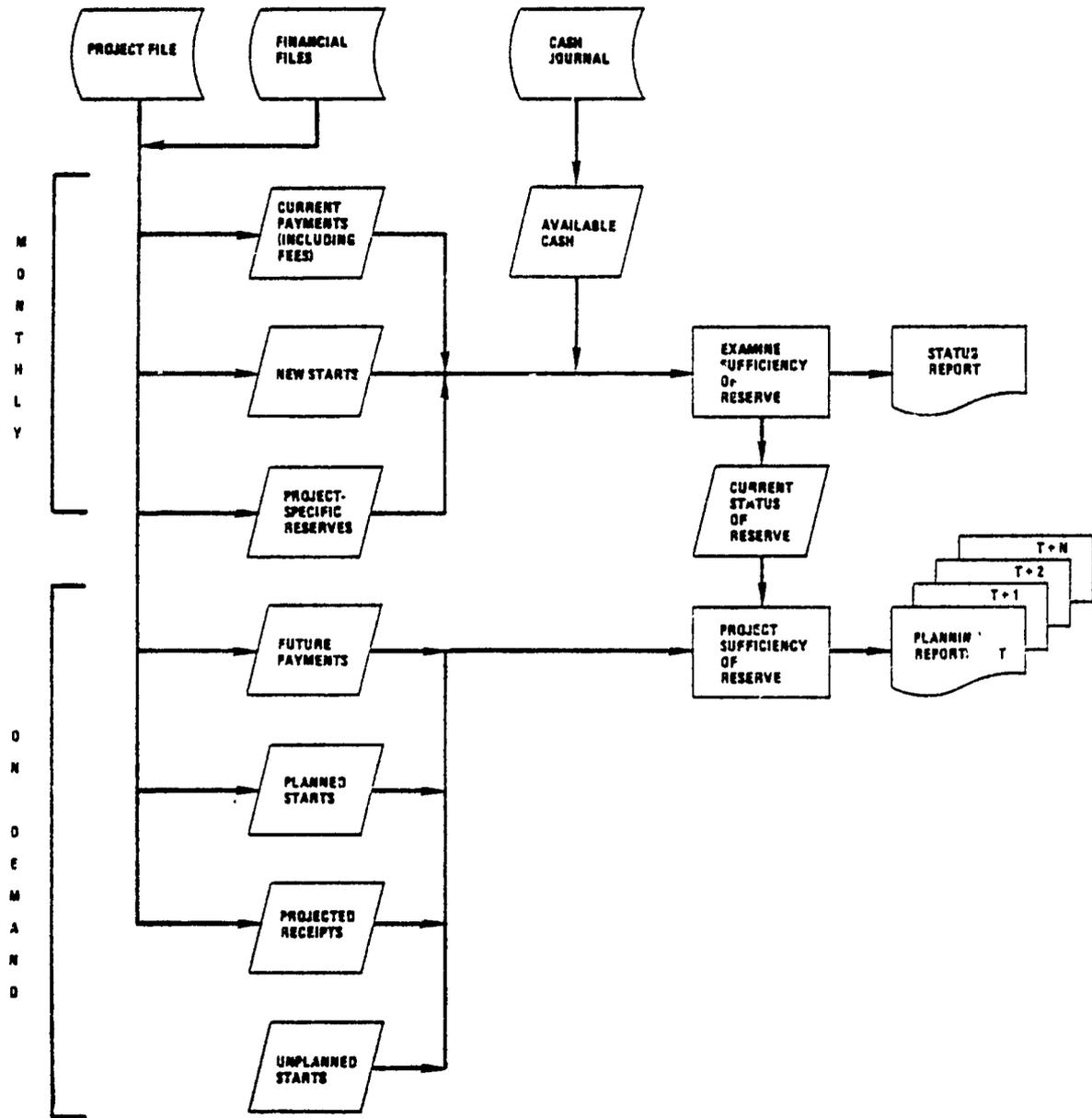
The same principles which drive the cash control of the central reserve also apply to the appropriation cash account. In a fully integrated system, cash transactions will be monitored by AID's cash journal system automatically. Without integrating the program accounting with the Agency's system, the appropriation account will be treated as a second AID fiscal agent with output reports from the cash journal system, vouchers for payment, and receipt documents serving as the control elements to the internal program cash journal file.

Project Financial Management

Because of the responsibilities of the HGP to the appropriation accounts, the strong interrelationship between program and appropriation transactions, and the fact that the program accounts are largely driven by transactions of

EXHIBIT III-5

CASH RESERVE PROJECTION ROUTINE



individual projects, it is proper to next address the lowest user level -- the project. The system of financial and management control developed for the HGP relies heavily on project-level data. The basic records used for project accounting under this concept are not unlike those currently kept by NSLL for maintaining transactions in the central reserve. The use of these records, however, and their definition in the automated mode present a different focus on financial management responsibilities and accounting than is now used. Several new concepts are introduced such as:

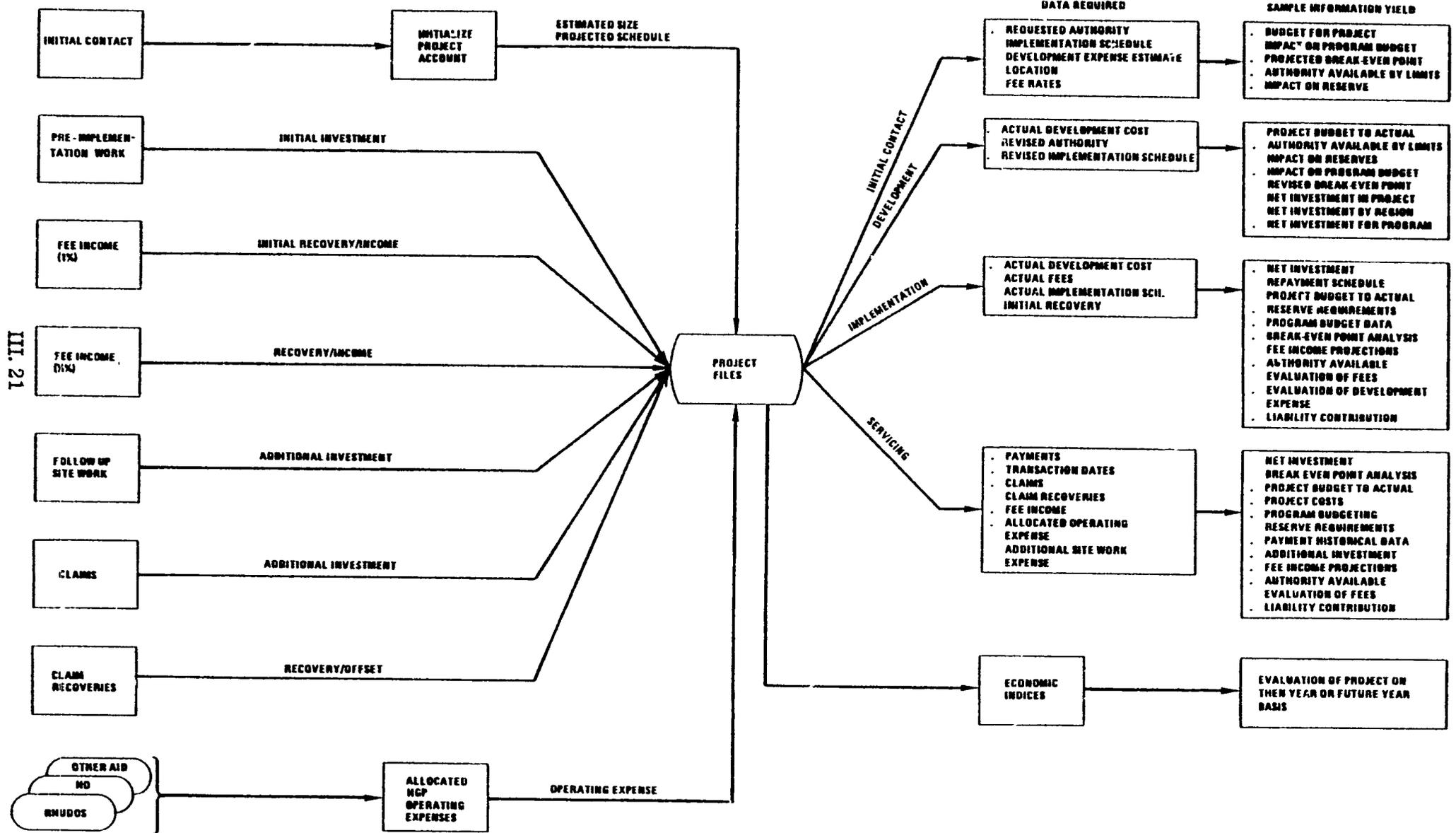
- Development Costs - those expenses incurred before implementation of a project whether or not they are eventually recoverable through fees.
- Net Investment - an ongoing statistical record of the total cost of developing, implementing, servicing, and liquidating a guaranty less the fee income received.
- Operating Expense Allocations - using the hypothesis that all operating costs are attributable to some project or set of projects, this concept employs direct charging and allocating of operating expenses at the project level.

The project accounting concept involves four basic transaction types and one analytical subroutine as depicted in Exhibit III-6. These are based on the typical life-cycle of a project as follows:

- Initiation - the first contact with a potential borrower.
- Development - the period of time during which loan agreements are being formulated, site surveys and analyses are being conducted, and conditions precedent are being met.
- Implementation - that point in time when a loan agreement is being enacted, drawdowns are made, and the initial AID fee is received.
- Servicing - the active life of an implemented project, between enactment and liquidation, during which fees are received and expenses paid.
- Economic Indices - an analytical tool capable of translating past, present, or future data into then-year, current year, or outyear dollars.

The data involved in each of these transaction types, management uses of these data, and the automated processing techniques are discussed below.

**EXHIBIT III-6
PROJECT ACCOUNTING CONCEPT**



The focal point of the project accounting concept discussion is the individual project file. This should be viewed at the conceptual level as a unique record which contains certain permanent project information such as borrower/investor identification, amounts authorized, and implementation dates. Also contained in the project file are historical records which reflect payment and receipt information. The file is "built" throughout the life-cycle of the project, providing a comprehensive record of the instrument while it is active, as well as when it is liquidated.

Initial Contact

Financial management and control over projects should begin when serious contact is made by a government or borrower regarding the issuance of a loan guaranty. Once formal discussions have begun, AID will become increasingly committed to underwriting specific loan amounts within the projected time of actual authorization. The first priority of financial management should be to ascertain whether the desired authority is available within the desired time frames. The second priority should be to immediately reserve sufficient authority in the accounting records to protect the integrity of future negotiations. This is accomplished by initializing the project file with basic preliminary project data such as anticipated authority and likely authority issuance date.

The use of the project file during initialization is two-fold: as a planning tool and as a device to record a pending project and reserve authority. As a planning tool, the project file is scanned for all existing and planned authorities. The requested authority is combined with authorities and appropriation limits to determine the authority available for the initialized project. A reservation is established on file to prevent subsequently initialized projects from superseding the available authority.

As the initial contact stage progresses, supplemental data become available for management analysis and control such as estimated fees and the required development level of effort. All data should be correlated to provide a development budget and estimate of total fee income. Using this information, effective evaluations can be made regarding the viability of the development effort in light of anticipated fees. By using breakeven analysis techniques, management will be able to judge the propriety of fee income versus the future investment in the project. Similarly, the projected impact on auxiliary processes such as the central reserve balance and the operating budgets of the HGP can be ascertained and assessed.

Development

The development phase begins during initial contact and ends at implementation. It is during the development phase that background work is performed

on the proposed project and its financial structure. The authorization agreement is signed during this phase, but the implementation schedule may be revised periodically before finalization.

The primary emphasis of financial management during this phase is on the collection of development expense data and the revision and updating of implementation details such as schedules, fee rates, and the authority amount. Actual costs are compared to budget to measure the progress of the project. The revisions made to anticipated agreement provisions are designed to allow additional management analysis of the fee structure, the breakeven point, and the impact of the project on the central reserve and program operating budget. In addition, refinements of the authority reserved for one project will allow more accurate definition of guaranty authorities available to other projects. Similarly, changes in the implementation or agreement schedule involving different years may conflict with various program restrictions (such as average annual project authority) and must be recognized by the system quickly in order to prompt management response.

The development phase introduces the concept of "net project investment" to the financial management of HGP. As defined above, this refers to the resources of the program applied to a project, less the return through fees. At this time, no fees will have been recovered; however, the net investment account provides a good evaluative management tool which is viable throughout the active life of the project.

Normally, when one refers to development costs as net investment, it is assumed that the expenses are incurred in anticipation of some return. In concept, this applies to the HGP, where development expenses are expected to be eventually offset by fee income in some future period. In a commercial environment, the accounting treatment in this case might be to offset these costs with a prepaid asset account. The HGP, however, has no assurance of recovery costs and would therefore probably not be entitled to this flexibility. It is possible, however, to reflect development expenses on official statistical records within the accounting system for management purposes. Fees, when generated, would be, in part, recoveries against the cost, and the resultant net investment amount would provide an effective means for measuring individual project performance and evaluating fee rates. At the time of regular program-level financial reporting, the net project investment would assist management in more effectively evaluating overall operating costs and qualifying net operating income or losses. The net investment concept is also viable in assessing the level of assistance activity provided by the program for selected countries or regions.

At some point during the development phase, the actual guaranty agreement is signed. This action must trigger several management responses in

the accounting system. Primarily, the authority amount and implementation schedule become final. The project files presenting reserved authority amounts must be firmly restricted. The implementation date must also be recorded in order to provide target date recognition within the system. This serves as both a management tool for planning and a "tickler" file to provide action reports should an implementation date arrive without evidence of drawdown or other scheduled activities. Supplemental information regarding potential agreement provisions such as escrows should also be recorded. Once again, this should serve as an integral check against a planned event which is not evidenced as occurring on schedule.

A number of other activities should take place at the time the agreement is signed. A preliminary amortization schedule should be calculated. The budgetary impact and effect on reserves of future payment/disbursement transactions can also be developed, based on the amortization schedule and projected fee income.

During the time between the agreement signing and implementation, additional development costs will be incurred, which will be treated as before. In addition, the majority of the permanent project file data (such as investor/borrower/host country guarantor identification, repayment provisions and communication channels) should be loaded in preparation for preliminary disbursement.

Implementation

Implementation occurs at that point in time when the agreement is being enacted, drawdowns are being made, and initial fees are received. Implementation is a phase of the guaranty agreement which requires prompt response from many aspects of the financial management system. It is at this stage that AID must first formally recognize an increase in the contingent liability and assume a series of responsibilities to investors and the program with respect to fund control and cash management.

A successful implementation phase is characterized by the coincidence of the three following actions:

- the accounting system recognizing that a drawdown is due in a particular amount based on the project file;
- AID receiving notice of drawdown (disbursement) from the investor; and
- AID receiving a notice of drawdown (receipt) from the borrower.

If these items do not match with respect to time, amount, or other provisions of the loan agreement (such as an escrow), the accounting system will generate a warning for management action.

The mechanics of this process in the automated mode involve the creation of a record based on project file data which indicates a transaction due. This record will be progressively loaded with borrower and investor reports as received. Until all three match, an error message will be generated.

The internal accounting activities during implementation essentially entail the conversion of a development file to an active loan file. The outstanding balance of the loan is posted to the contingent liability file. In the case of some escrows, only the interest due adds to the liability. Each project record maintains its own account of "liability contribution" to the total program. Individual project liabilities can therefore be computed on a variety of bases, such as total outstanding principal and interest or a lesser amount in the case of a project with a host government guaranty.

To recognize the 1 percent fee transaction, a receivable must be established in the accounting records, with an expected receipt date. Notifications of delinquency or nonreceipt must be generated for management action.

To accommodate the upcoming repayment transaction in the central reserve, implementation should trigger an amortization of the loan amount, a cash flow projection for additional reserve balance requirements, and an open transaction for the first month's payment of principal and/or interest to the investor. The AID-developed amortization table should be provided in the form of a repayment schedule for borrower and investor records.

Servicing

The servicing phase encompasses the major portion of a typical project's life. It is characterized by payments made by borrowers or administrators to investors either through the central reserve or directly. In the case of delinquent payments, a claim is processed by AID. If there is a host country guaranty, an AID claim is generated for recovery. In some cases, claims may be charged to project reserves; in others, they are charged to the appropriation. Operating costs are incurred by AID pursuant to servicing responsibilities.

The financial management emphasis during the servicing is driven by payment control. As in the case of a drawdown during implementation, a successful loan payment is characterized by the coincidence of the three following records:

- . payments received by investors;

- payments issued by borrowers; and
- payments anticipated by AID.

Beyond matching the total amount of the payment, the equal allocation of funds to subsidiary items (such as principal, interest, fees, and prepayments) is required by all parties.

One of the precepts of sound repayment management requires that AID assume a proactive role in monitoring transactions. This is accomplished through the precalculation of payments due and allocations of payments to proper subsidiary accounts. A second precept is the expedient issuance of payments to the investors from the central reserve or the expedient processing of claims from investors not using the central reserve. Third, AID should have a means of quickly recognizing missing or payments varying from project records. Further, the Agency must have the means of processing the flow of cash accurately and quickly and of being able to trace its path accurately to locate missing payments.

Several underlying techniques are employed in accomplishing the requirements of payment management and control.

- Borrower/Investor Statements - AID-generated documents resembling bills in format and displaying amounts due and their allocations based on project files.
- Sufficient Reserve Balance - the dollar amount required on hand in the central reserve to meet the current payments due investors.
- Payment Missing/Delinquent Reports - management reports which continuously reflect open items on the project file during the repayment period.
- Electronic Funds Transfer - the maximum use of high-speed cash transfer mechanisms for payments, receipts, and claims.
- Correspondent Network - that unique route which payments take between borrowers, investors, and AID.

Each of these concepts is discussed in greater detail in the System Functions section. However, to demonstrate the general flow of repayment data and relate the associated internal accounting controls to the project accounting concept, the following briefly describes the repayment cycle.

The project file generates a current payment transaction based on the internal repayment schedule. Prepayments are stored in automated files and

supplemental prepayment actions are added. A borrower/investor statement is produced, representing AID's perception of the upcoming repayment transaction. Simultaneously, a disbursement transaction is created for central reserve projects and the current payment schedule is produced. A receivable transaction is created to reflect amounts anticipated from borrowers to the central reserve. For all projects, the AID fee is calculated and a receivable is established on appropriation accounts.

At this time, AID has created a complete pending set of transactions which will provide the basis for comparison with the actual transactions as they occur. From the established open items and their interaction with the actual transactions, AID will derive delinquency, late payment, fee income, claim, principal, interest, and prepayment data. This information will provide one of the bases for management control at the project level.

In terms of project operations, the repayment transaction provides data on fee income and claims. To complete the financial picture, additional data such as followup site work, claim recoveries, and operating expenses for the Housing Office, RHUDOS, and other AID organizations must be added. It is the interrelationship of these various income and expense items which provides the financial control at the project level.

Fee Income. Fee income is a revenue item which replenishes the appropriation account. The specific amount due can be anticipated and ascribed to individual projects. The fee rate and repayment schedule of each project file contribute to the income control process in the current period and provide detailed budget input for outyears. Fee income is also an offset to project expense and is therefore reflected in the net project investment account.

Followup Site Work. Projects usually require that periodic one-time research or analytical tasks be performed. These may be of a corrective nature (i.e., in the case of chronic delinquencies) or of a routine nature (i.e., interim audits of host country borrower institutions). Although the costs associated with these efforts are an integral part of the operating costs of the program, they can, in many cases, be ascribed to particular projects or groups of projects. Expenses, therefore, should be recorded at the individual project level in a statistical or memorandum account similar to those used to record development costs. As project-specific expenses, these are applied to the net invest account.

Followup work should be controlled from the time the tasks are defined and, if contracted, should be recognized by the appropriation account as a commitment or obligation.

Claims. Claims to projects without reserves represent an expense to the program and appropriation. Although these may be temporary (due to late

payments) or may ultimately be recovered, they are project-specific and therefore should be controlled at the project level. Under the project accounting concept, claims are an additional investment of program resources and contribute to the net investment of the project.

If claims are subrogated by host government guaranties, an appropriate receivable should be established in the accounting records. During the collection process, management reports should reflect the status and aging of the transaction to provide accountability and control and to prompt management action as required. Historical records of subrogated claims should be maintained even though reimbursed by host governments in order to provide a basis for future analysis of project status.

If claims are charged against project-specific reserves in excess of the reserve balance, a liability is incurred by AID. Because reserve-bearing projects often have the potential of recontributing reserve funds under more favorable conditions, negative reserve balances should be maintained statistically. This will ensure that the future accumulation of reserves will offset the Agency claim expense.

All claims should be maintained on historical files for future reference. In this regard, claims against specific reserves should be monitored as a means of anticipating future program liabilities.

Claim Recoveries. Any recovery from a claim paid by the Agency must be recognized by the accounting system. This is important to evaluate the operating results of the program. Claim recoveries should be applied against specific claim actions. Both the claim and recovery should be retained by the accounting system to provide historical records of project performance. Claim recoveries should be applied to the net project investment account.

Operating Expenses. Other than followup work and claims, operating expenses are accumulated through the basic support costs for the program within the Office of Housing, the RHUDOS, and other AID organizations. Operating expenses in this context refer to costs such as salaries, fringe benefits, rent, agency support costs, and programwide contractual services (i.e., NSLL and ASB). These expenses can generally be identified as project-specific, regional, or programwide.

Operating expenses are normally controlled at the program and appropriation levels. They are not ascribed to individual projects. However, virtually all operating costs of the HGP are incurred pursuant to some function of project development, implementation, and control.

Throughout the discussion of the project accounting concept, the term "net investment" has been used to describe a means of measuring the resources of the program expended against revenues gained at the project level. This provides a sound management control, as well as a basis for evaluating various salient characteristics of projects such as the relevance of fee income. It is important to note, however, that a major portion of the program resources applied to a project do not appear in a manner suitable for management analysis of true project cost and, therefore, actual net investment. The process for developing these values involves the application of basic cost accounting concepts in order to allocate operating expenses along some equitable basis to each project (whether actual, under development, or in the predevelopment stage). By accumulating these data for all projects, management will be better able to plan and budget new projects, both for the near-term and for future program years. The allocation basis should be established empirically within reasonable assumptions. An example of an initial assumption is that projects requiring monthly servicing entail three times the servicing effort of quarterly projects and six times the effort of semi-annual projects.

The allocation basis would be an integral part of the accounting system. Indirect and administration costs would be accumulated at the program level and distributed to the project accounts for reporting. Direct payroll costs for in-house analytical work could be collected by using timesheets similar to those currently used for reimbursable services. Only direct effort for a project would need to be recorded. All other time would be chargeable to indirect or administrative pools for allocation.

Liquidation. Liquidation occurs at the end of the servicing period and can be the result of natural maturation, default, or a buy-out of the loan by an independent investor. Under any of these circumstances, the financial management responsibilities are twofold:

- . to ensure all balances in accounts are reconciled and closed; and
- . to ensure a permanent transaction file exists to record the entire financial history of the instrument.

The closing of accounts is accomplished by using a discrete set of accounting transaction codes to generate a preclosing trial balance of the project before and after application of actual closing procedures. Once all accounts are reconciled, the project would be closed automatically. Residual account balances should be reassigned. For example, a receivable for anticipated future collections against claims paid would be established in the case of a default.

Upon liquidation, all system project-permanent and historical transaction files would be correlated and presented in a discrete report to serve as a

hardcopy record of the entire life of the project. This report would be retained for reference and evaluation and could also serve as the basis for termination audit procedures, as required.

Economic Indices. An auxiliary feature of the project accounting concept is the automated application of various economic indices to depict the impact of past and future variations in currency values and inflation. This process is not an integral part of the normal accounting flow. Rather, it is a tool to assist management in the evaluation of economic factors during the length of a project.

The economic indices are contained in a subroutine to the central system. This subroutine is primarily a modeling device which can either translate historical data into present value dollars or project future dollar values using hypothetical inflation or currency revaluation rates. Data are called from HGP files and loaded in a separate file for use by the subroutine. Various parameters are provided either by the system (past currency exchange or inflation rates) or by the user (predictions or hypothetical values). Various reports or displays can be generated to depict the effects of these factors on individual projects or the program.

There are several major uses of the economic index subroutine. For budgeting, past experience can be translated to current values in order to estimate near-term expenses on a common basis. For project evaluation, the effect that external economic factors have on the net investment of the program may assist in evaluating fee structures or in establishing terms for future agreements. For older projects where severe currency devaluations have historically been a problem, the economic index subroutine provides a valuable tool in examining the viability of the project, anticipating future claims, or predicting probable defaults. In its more sophisticated form, the subroutine can be automatically accessed when processing the repayment transactions of these older programs to regularly predict the long-term impact of current exchange rates and produce warning reports when repayment elements are projected to fall below established parameters. Similarly, the subroutine can be used to project current period claims for older programs by inputting official rates of exchange as of the close of the repayment period.

The use of economic indicators is not limited to single project analysis. By accessing categories of projects (such as all those with deflated currencies) and applying appropriate variant rates, displays of future claim estimates can be made.

SYSTEM FEATURES

The pending section discussed the financial management responsibilities and controls required for the successful development of an automated accounting system for HGP. In some areas, detailed descriptions of data flow through the system were provided. This section completes the picture of the conceptual design by addressing other specific features offered by the system.

General System Characteristics and Considerations

The system envisioned for optimal control and ease of handling HGP activities is a highly integrated computer system. Data are stored in discrete sets of data files in a manner which facilitates easy retrieval and correlation to provide management reporting and analysis at a number of user levels.

The system is designed to accumulate accounting, budgeting, and statistical data for project, program, and appropriation control and management. Individual accounts are established to record various transactions such as receipts, disbursements, income, and expenses, providing management reports on the operations of the HGP at each user level. Asset, liability, and equity/investment accounts are also maintained to reflect the status of the program. Although some overlapping is possible, separate sets of accounts are established at the appropriation, project, and program levels..

The system employs a single-transaction technique of recording transactions. This concept requires the assignment of unique transaction codes for each event which can occur in program administration. Transaction codes are keyed to specific debit/credit accounting pairs as in most double-entry bookkeeping systems. However, by using codes to reference the proper accounting treatment of each event, it is possible to simultaneously update as many account pairs as desired and at different user levels from one transaction. Unlike posting to manual records, which requires balanced source documents and two offsetting entries, each transaction under the system concept is self-balancing and automatically preedited, thereby eliminating the need for tedious manual account reconciliation prior to financial reporting.

The system is designed to operate harmoniously with the major Agency appropriation accounting systems. The final system design will depend on the degree of interfact achievable and desirable between the two functions. At the highest state of integration, the project and program accounting would be a subsystem of the Agency system network. Transactions affecting appropriation accounts would be recorded directly, automatically, and without manual intervention. The next highest state of integration would provide appropriation data in a format compatible for entry into the Agency system. The lowest state of integration would require duplicate records to be maintained by the

program and the Agency, leading to considerable manual effort to reconcile the two sets of accounts. The higher the state of integration, the more effective and efficient the system will be when implemented.

In order to capitalize on modern computer technology and input techniques, documents entering the system should provide data in a single format or discrete set of formats and be designed to allow direct entry. The design of universal input documents to record transactions at their source will eliminate the need for voluminous data transcription.

The system is capable of operating successfully in a number of data processing environments. Given the scope of AID's Office of Financial Management facilities, it would be reasonable to consider this a likely location for the automated operations. The final site selection, however, is contingent on the availability of those resources, the program management's desire for flexibility, time-sharing options (i.e., display terminals for inquiry and update), and other factors. The possibility of acquiring a small computer to support the system should be considered also, but the tendency away from loan agreements requiring monthly repayments may make the full application of such a resource to HGP accounting unwarranted.

Project Planning and Authority Control

Project planning and authority control are vital management functions, as discussed above under the project accounting concept. This is a particularly complex function because of the lengthy time passage between the initial contact by a potential borrower and project implementation.

The restrictions placed on a project authority are derived directly from the enabling Foreign Assistance Acts. Limitations include such factors as:

- . the total authority for HGP;
- . the average authority allowable by year;
- . the authority minimum for Latin Americans; and
- . the maximum authority per country.

When a project is first contemplated, it may be only one of several projects in various stages of development. In no case is the associated authority actually released. To ensure that authority amounts used for initial project planning are not superseded by the issuance of authorities on other pending projects, the accounting system maintains authority records in the project files.

Authority control can be characterized by three levels of restriction:

- . Level I - those projects currently under signed agreements with defined expiration dates;
- . Level II - those projects being negotiated and having authority reserved with an estimated agreement data; and
- . Level III - those projects in the initial contact stage without firm limits as target agreement dates assigned.

The system is designed to compare the authority amounts at each level with legislative or other management limitations to ensure control is maintained.

Exhibit III-7 conceptualizes the contents of the authority records at each level. It can be seen that authority files are maintained considerably into the future in order to recognize the long-term nature of HGP operations. Totals are drawn by year in this example, although the file itself is a multidimensional matrix with axis drawing totals from other parameters such as region or country. At Level I, the records reflect the total authority in force and balance of the residual authority available. At Level II, reservations of authority are reflected in the years of expected release. At Level II, average authority planned for release by year is also recorded. For activity at Level III, three scenarios are presented. In concept, these deal with a project being considered for implementation at various times and at a deserved authority amount. The treatment of the transaction at Level III is like that of a "request" for authority. Based on the parameters provided (in this case, date and amount, but, in an actual case, country, regional, or other data), the authority files are scanned. If the authority is not available, the transaction will be reflected, but the system will report on selected alternatives, such as a lower authority amount or a different agreement data. If the transaction is accepted, it will automatically be placed in Level II as a reservation.

In addition to its basic function, the authority control routine can also be used to test various alternatives or, if presented with a dollar amount, generate a set of acceptable agreement dates. The authority control file data also can be used to provide a variety of management statistical information such as total authorities in force or regional distributions.

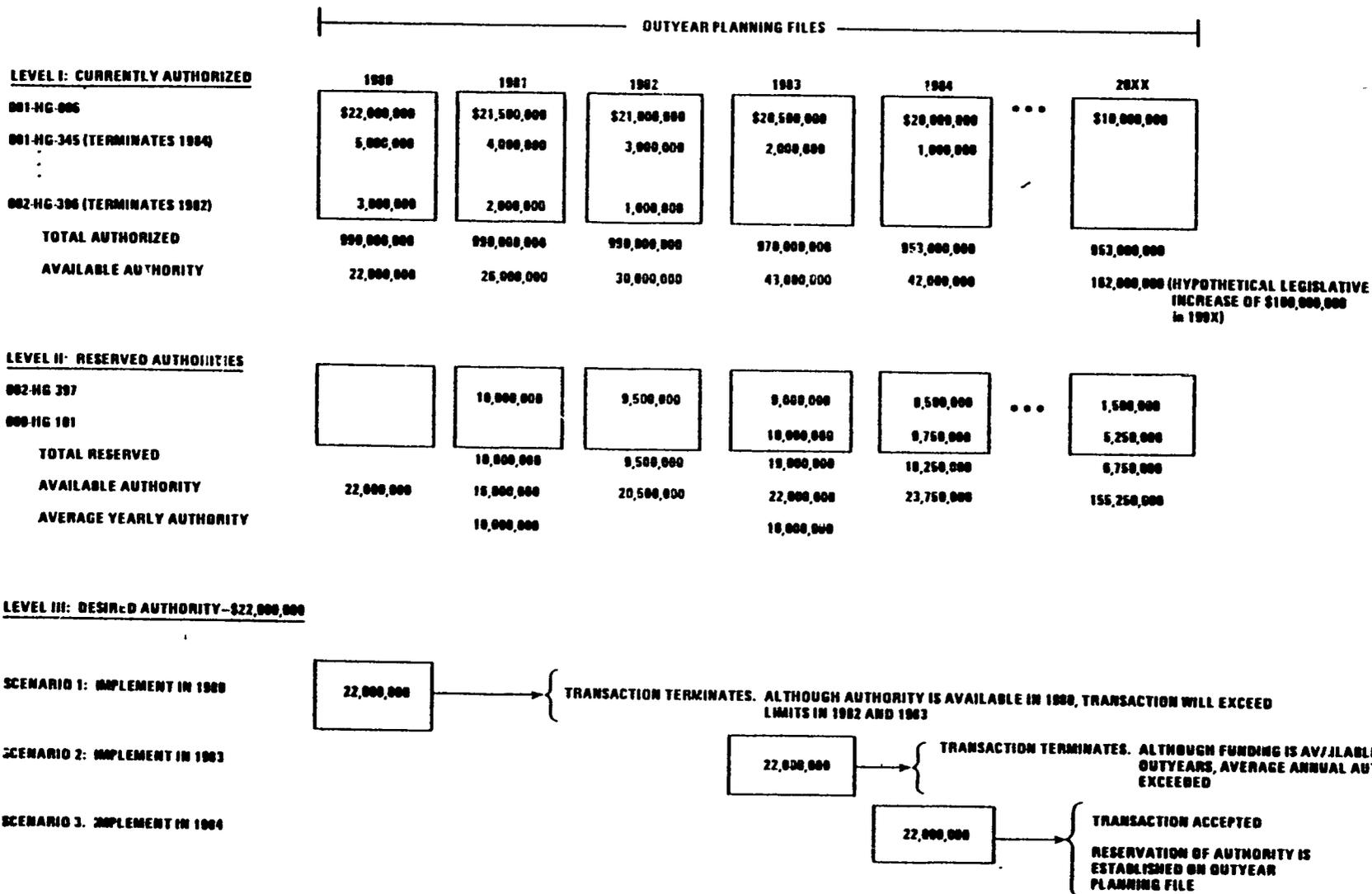
Investor/Borrower Statements

Investor/ borrower statements are similar in concept to bills generated by an accounts receivable system. They represent a summary of the current status of individual "accounts" or projects as of the end of the reporting period (monthly, quarterly, or semiannually). Their real usefulness is to place AID in a more proactive posture regarding loan repayment transactions.

EXHIBIT III-7

EXAMPLES OF PROJECT PLANNING TRANSACTIONS

III. 34



In concept, these statements are multipart, multicolumn, computer-generated forms. They contain current status and current payment due information for the use of borrowers and investors in reconciling their payments or receipts. Static information is displayed, such as the project number, location, and name and address of the borrower or investor. Individual line items are provided for total payments and allocations to subpayment categories such as principal, interest, fees, prepayments, and reserves. The first column is preprinted from the AID project file data, reflecting the anticipated transaction amounts. The other columns are for the use of the borrower or investor in recording corresponding payment data. Space is also provided for borrower/investor notation of reasons for variance.

Statements are issued to each party prior to the next due date for payment. They are returned and completed in lieu of the current borrower, administrator, or investor report. AID enters the statement data in the HGP accounting system, where they will be reconciled with anticipated payment data reflected on the project or program files. Variance reports are generated automatically for research and action.

The borrower statements offer several advantages in controlling repayment transactions, including the following:

- . They are in a standard format, suitable for direct input to computer files.
- . They provide a verification of cash transactions in the central reserve.
- . They place borrowers and investors in the position of having to justify variances with AID's records, rather than placing AID in the position of having to conduct time-consuming searches to reconcile errors.

Payment Cycle

The payment cycle is one of the most critical functions in the HGP. Due to the dynamic nature of loan agreements, good control over the processing of payments and the reconciliation of borrower, investor, and AID records is necessary to avoid delinquencies, defaults, or additional assignments of interest. Data from the three sources must be compared and variances resolved quickly. In a mortgage transaction, errors in amounts paid or allocations to principal, interest, or fees can compound from one period to the next unless rectified promptly.

The control over payment transactions is exercised through comparison of the following:

- . Aid project records to borrower reports;
- . AID project records to investor reports;
- . investor reports to borrower reports;
- . credit advices to accounts receivable records;
- . credit advices to borrower reports;
- . debit advices to investor reports;
- . debit advices to payment schedules; and
- . cash journal balances to central reserve statements.

In the case of a complete repayment transaction, each of these data pairs must match.

A complete set of data pairs will not exist for all payment actions. The associated cash comparisons will be available only for projects paid through the central reserve. Projects using direct payment channels will rely on AID records and borrower/investor reports for control.

Primary management control is exercised through exception reporting which lists those transactions which do not result in equal data pairs. For example, a missing payment report will be generated for payments expected but not received; a variance report will be generated for unequal borrower/investor/AID pairs. A variety of other reports will provide management with financial statistical data on subjects such as claims, project status, or delinquency.

Correction of variance must be equilateral throughout the system. Within AID, procedures must be established to quickly effect remedial entries to project files. Externally, AID must ensure that borrowers and investors are aware of discrepancies and that their records are brought into balance before the next payment cycle.

A special kind of variance occurs when a payment is cited to have been made by a borrower or AID but is not received by AID or investors. These "lost" payments require prompt action to avoid paying claims unnecessarily

or issuing duplicate payments. Lost payments should be investigated by initiating tracer actions from the source of payments. One of the concepts developed for the central reserve recommends the use of AID fiscal agent correspondent bank networks and electronic fund transfers for all cash repayment transactions. The system design calls for the storage of all repayment networks in the project file. These data can be quickly accessed and will provide a routing for each step in the payment process.

Exhibit III-8 depicts the payment cycle for the HGP at a conceptual level.

The project file is the driving factor in controlling repayments. By calculating the current payments due from borrowers and to investors from the outstanding project balances and repayment provisions, a number of activities can occur:

- . issuance of borrower/investor statements;
- . issuance of payment schedules to the central reserve; and
- . creation of a series of open transactions which will become the cash, receivable, and payable entries to the accounting system.

The borrower/investor statements have already been discussed. They reflect the status of individual projects and current payments due based on the AID files. Statements are forwarded to borrowers and investors in advance of payment to encourage corrective action prior to cash transactions, thereby avoiding unnecessary reconciliation efforts.

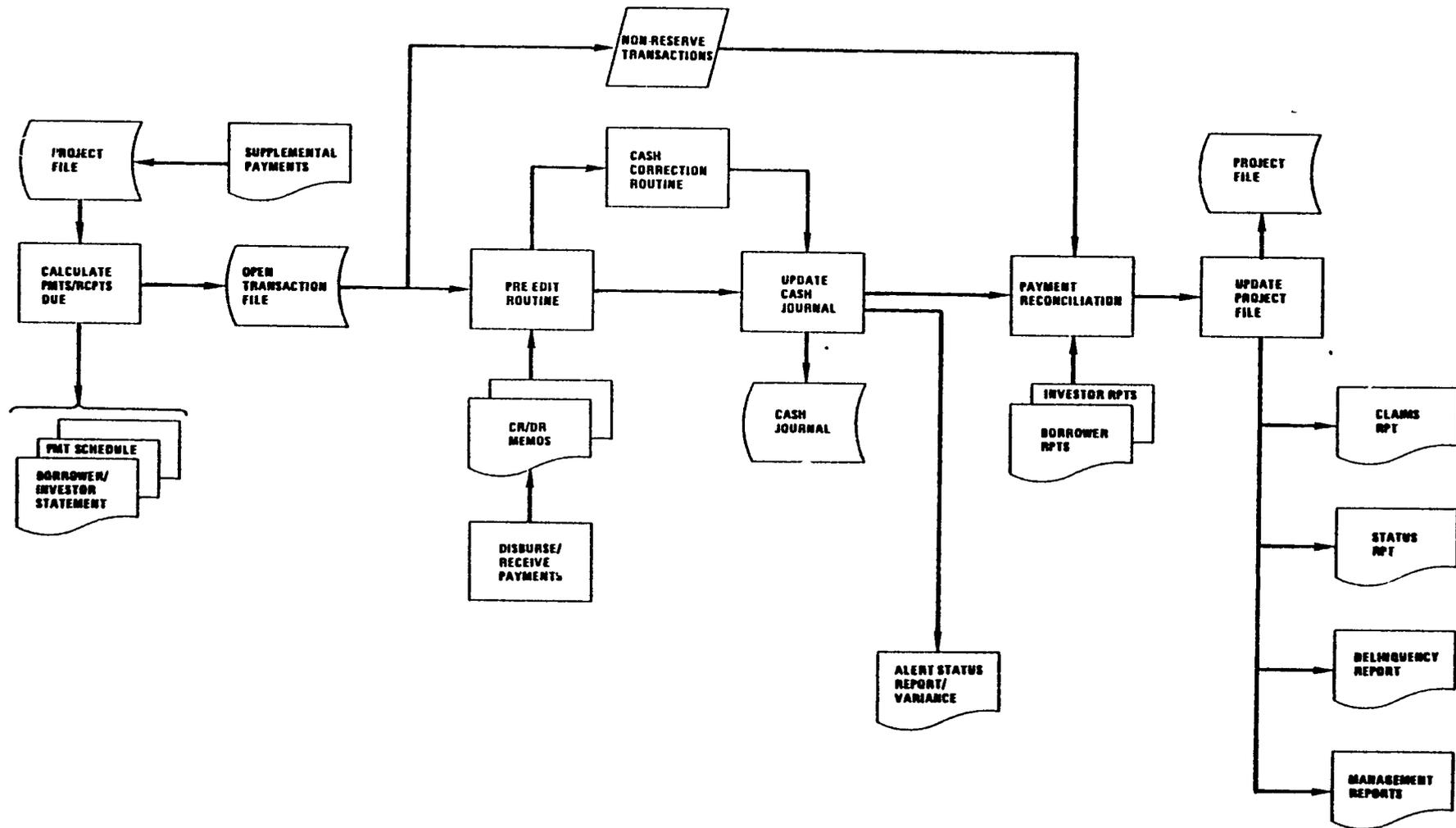
The payment schedule reflects all payments due investors from the central reserve. It is also used to disburse AID fees and pay claims as discussed separately under the claims payment and fee collection subsections. Payments are distributed by categories such as principal, interest, fees, and prepayments. For each project, permanent identification is provided to be used in the disbursement process. Also, the current address and payment route for investors is provided to ensure correct delivery of payment. The schedule is certified as correct by AID and forwarded to the Agency's fiscal agent for disbursement.

The open transaction file is composed of pending accounting system transactions. At the time repayment amounts are calculated and borrower/investor statements are printed, there is technically no receivable, payable, or cash event. These are triggered by the period closing date. At this time, open transactions are released to the system for posting.

EXHIBIT III-8

PAYMENT CONCEPTUAL SYSTEM OVERVIEW

III. 38



The central reserve will record a number of cash transactions during the period closing time frame. Payments and receipts will be evidenced by computer-ready debit and credit advices, respectively. The cash transactions will be edited against pending action records, subjected to an edit routine, and used to update the cash journal file. During this process, any variance between anticipated and evidenced transactions will be noted on an alert status, variance, or payment missing report.

Completed investor and borrower statements will be returned to AID irrespective of central reserve involvement. These will be entered in the system, compared to each other, and compared to accounting files. During the reconciliation process, a number of variance reports may be generated.

Once they are correct, payment amounts will be recorded in transaction files. A variety of management reports will then be issued regarding the status of the program.

Fee Collection

The system design includes a process for automatically calculating and accruing fee income from the project files. Exhibit III-9 depicts the fee collection cycle.

Fee income is calculated at the time borrower/investor statement transactions are generated. At the end of each month, a series of transactions are automatically generated to recognize the fees receivable and revenue in the appropriation, program, and project accounts (i.e., accounts receivable, accounts payable, project income, and net investment).

Fees are paid from the central reserve for projects under reserve control and by investors or investor fiscal agents for projects outside the central reserve. Central reserve fees are disbursed in the same manner as investor payments or claims -- through a payment schedule. Receipts from the reserve or investors are processed through the Agency cashier and cash journal system. Receivables are automatically liquidated.

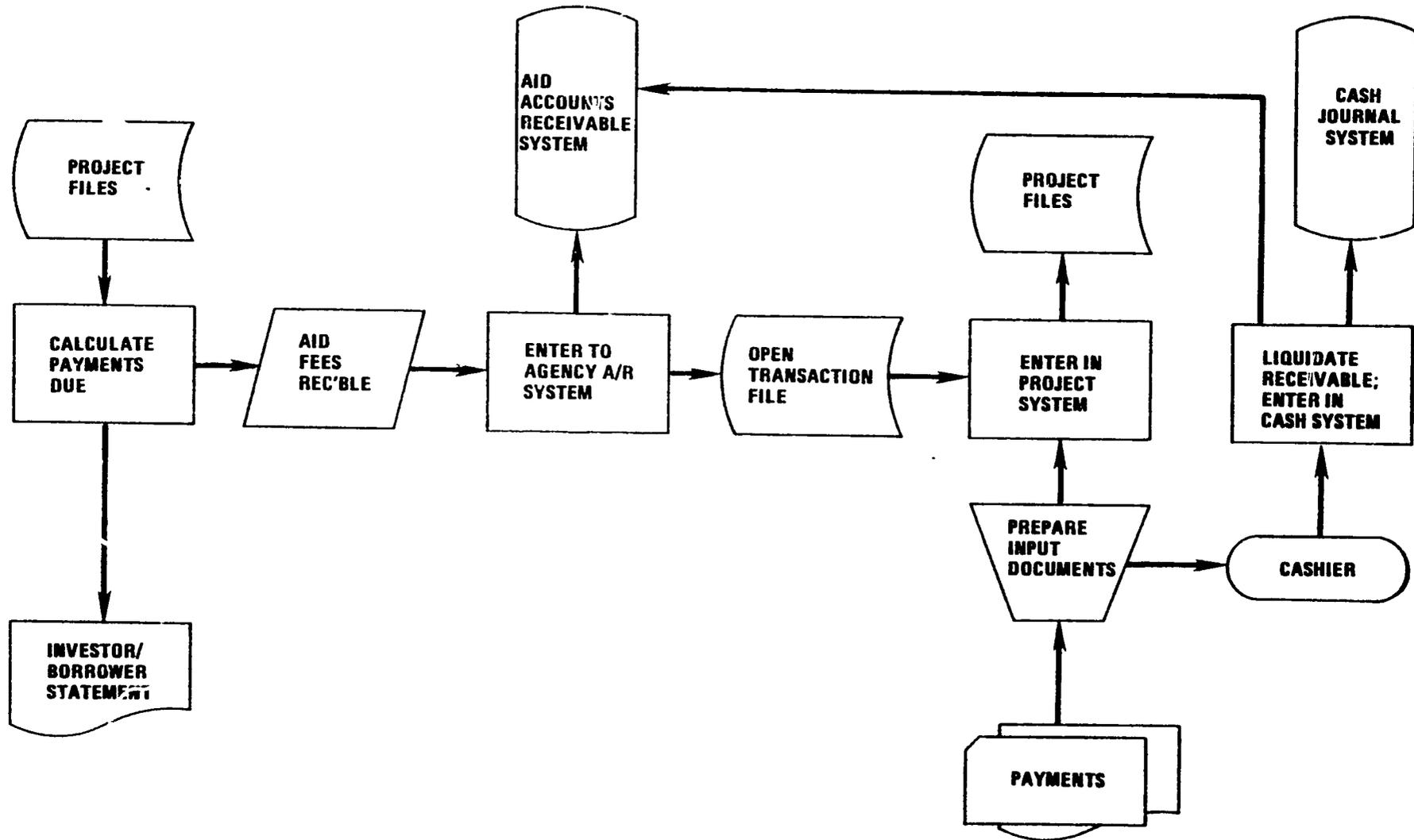
Claims Payment

The treatment of claims is of vital concern to the system design. These transactions result in the disbursement of U.S. Government funds or AID-entrusted project reserves and therefore require strict control.

Claims fall into two basic categories:

- claims resulting from payment shortfalls from borrowers to the central reserve; and

EXHIBIT III-9
AID FEE PROCESSING



- . claims resulting from payment shortfalls from borrowers to investors .

Claims falling into the first category are self-evident to the accounting system through the comparison of anticipated borrower payments and actual receipts. These claims are, in effect, prepaid by the Agency during routine loan repayment disbursements from the central reserve. The minimum balance definition for the central reserve under the system concept requires that claim payments made in this manner should be reimbursed to the reserve from the appropriation account, although charges may be applied against project reserves .

Claims external to the central reserve can be identified by three methods:

- . comparison of borrower and investor reports with the project files;
- . prenotification to AID of expected payment shortfalls by borrowers; or
- . statistically predictable claims for older programs where payment amounts are affected by currency exchange rate fluctuations or where chronic delinquency is an identified problem .

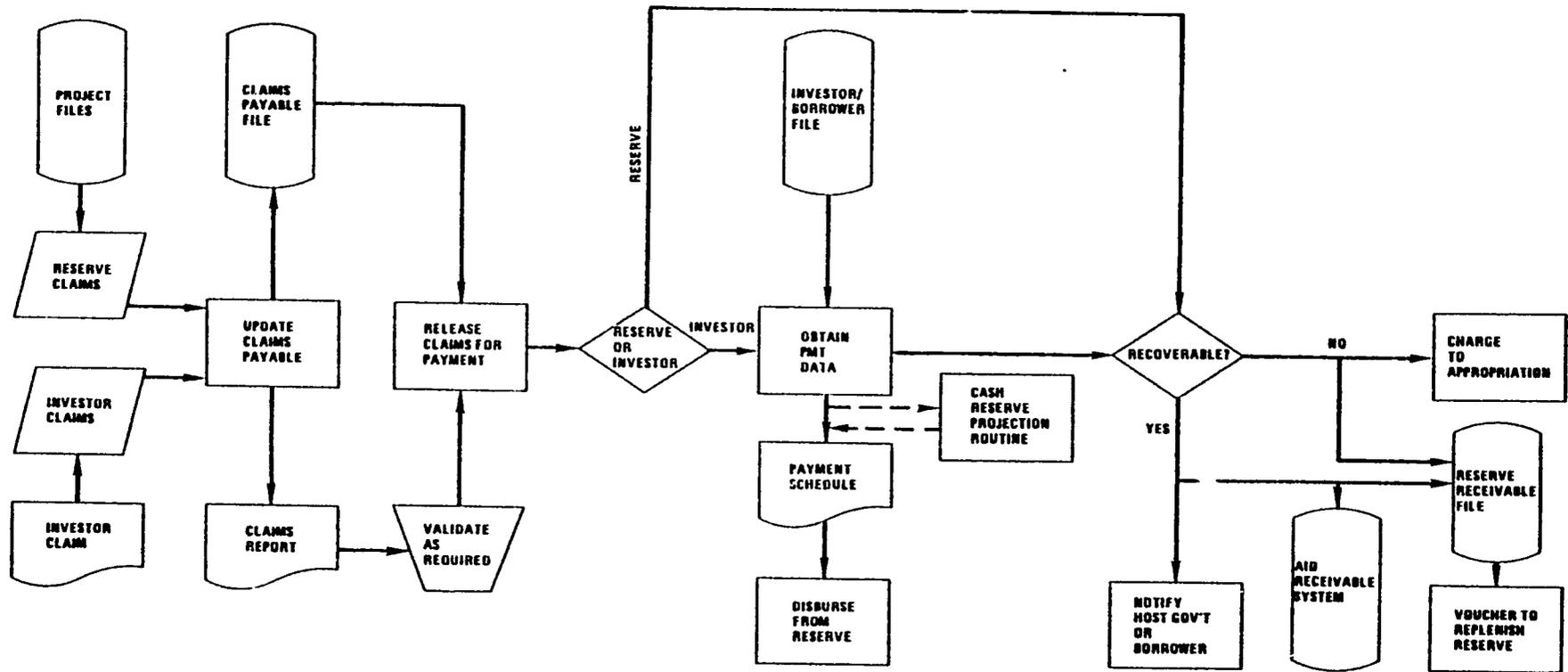
Claims in these situations should be paid from the central reserve to maintain continuity in payment channels and to expedite processing the claim transactions. In these cases, as in cases of claims against central reserve projects, the central reserve must be examined for a sufficiency of funds prior to disbursement and it must be replenished from the appropriation accounts .

Exhibit III-10 depicts schematically the flow of information during claims processing. Essentially, claim amounts are provided by the project files and investor reports. A transaction is created to record the pending liability and a claims report is generated. This report should be verified as required, although many of the normal claim authentication parameters and criteria can be provided by the project file. Following validation, claims are released by the system to trigger a series of accounting transactions. Since investor-reported claims are not prepaid, the system generates a supplemental payment schedule to be used as authorization from the central reserve .

Claims which are presumed recoverable (i.e., in the case of a host government guaranty or short payments due to currency devaluation where a Maintenance of Value agreement is in effect) are reflected as receivable items, and a report is generated to be used in preparing notification to the host

EXHIBIT III-10
CLAIMS PAYMENT

III. 42



government or the borrower. Other claims considered recoverable (such as as a lost borrower payment) are also reflected as receivable items pending receipt of funds. As discussed above, claims paid from the central reserve result in a replenishment action from the appropriation account. The system automatically maintains the integrity of project-specific and general reserves to ensure control.

The system provides for the recording of anticipated claims by allowing the entry of supplemental disbursement data to the project file. Projects subject to currency revaluations or chronic delinquency are flagged and an action report is generated. Estimates of claim amounts can be computed either manually or automatically by using project performance histories or current rates of exchange. Some risk of overexpending funds must be recognized by management in precalculating estimated claim amounts. This risk may or may not be justified by the value of expediting investor payment and avoiding additional interest charges on overdue payment amounts.

The system is also designed to accommodate advance notices of short payments by borrowers. This procedure is subject to the same kind of risk analysis by management as the AID-developed claim estimate described above.

Reimbursable Work

Reimbursable work performed by the HGP for other activities is costed, accumulated, and billed by the accounting system. A majority of the expenses falling into this category appear to be due to labor charges. The system depends on employee time scatter sheets similar to those currently used by the program.

Timesheets are input to the integrated system through a labor distribution subsystem. Individual employee records are compared to current files of the New American Payroll System (NAPS) to extract labor cost and fringe acceleration data. Transactions will be automatically created to post appropriation program and project accounts with receivable income and expense adjustments, as appropriate. Depending on the degree of integration employed in the final system design, charges to proper allotments will be made either directly (highly integrated) or through the issuance of billing documents (less integrated).

Amortization Schedules

One of the most mathematically complex functions of the HGP is the amortization of loan amounts over the term of a project agreement. Projects must be amortized when implemented to provide repayment schedules. They may be reamortized under various circumstances, such as when prepayments are made or gross delinquencies occur.

The amortization process is contained in a subroutine of the main accounting function. It can be accessed for a variety of reasons such as to:

- hypothetically project repayment amounts for projects being negotiated;
- automatically generate repayment schedules upon project implementation;
- recalculate repayment schedules under incremental drawdown or escrow situations;
- reamortize loan agreements when prepayments are made (based on borrower payments, allowable dates for prepayments to investors, and accrued interest and repayments held in the central reserve, if appropriate);
- reamortize loans in gross default; and
- routinely reamortize agreements with delinquencies resulting in additional investor-assigned interest.

IV. SYSTEM DESIGN: DATA PROCESSING CONCEPTS

The characteristics, controls, and features of the financial management system for the Housing Guaranty Program (HGP) have been discussed in the preceding chapters. It is the purpose of this chapter to describe the major data processing concepts and techniques required to support the system efficiently and effectively.

SYSTEM OBJECTIVES

The general objective of this conceptual system design is to provide AID HGP management with an integrated financial management system that conforms to principles of sound financial management and applicable accounting guidelines. The system also addresses other auxiliary processes necessary to accommodate the three-level financial management environment, cash control requirements, and loan repayment processes.

The specific system objectives are to:

- . create an integrated data base that will accommodate the total financial management environment of HGP and incorporate statistical data pertinent to program management;
- . establish a uniform streamlined method of using third-generation computer techniques to reduce required coding;
- . incorporate both the plan/budget data and the actual cost data to facilitate the comparison of budgets and actuals at the program, project, and appropriation levels; and
- . reduce manual posting, reconciliation, and verification through the use of sophisticated computer logic.

PROCESSING FEATURES OVERVIEW

The HGP integrated financial management system is designed to operate in a third-generation computer hardware environment under a sophisticated operating system. The system makes use of advanced features which will result in many benefits to AID. The controlling conceptual philosophy is based on four techniques which utilize the speed, data storage capability, and control features on the computer. Those features are:

- . single-transaction input;

- . table-driven processing;
- . error suspension/correction procedures; and
- . retention of historical data for audit trail.

A brief description of these features will indicate the benefits derived from their inclusion in the system.

Single-Transaction Input

The single-transaction input concept is based on the philosophy that even though a single accounting activity (i.e., payment of an expenditure) may affect several general ledger accounts (resources, accounts payable, expenditures), there is no requirement to generate a separate transaction to debit or credit each individual account. The single-transaction concept provides the capability for maintaining the same general ledger control accounts at several levels of summary, all based on the receipt of one transaction.

Use of a transaction code to identify each unique accounting event facilitates implementation of this technique. The transaction code, along with its processing instructions, is described once and stored in a table. The processing instructions include a full accounting description of the event, including:

- . general ledger accounts affected;
- . edit criteria;
- . description of the accounting event; and
- . subsidiary accounts affected.

Association of the transaction code with the variable data describing an accounting event allows the system to access the static information related to the event. The coded transaction provides all variable data (e.g., document number, transaction amount, transaction date).

The ability to maintain a data base which provides varying levels of summary data with a single-input transaction is a significant feature of the system.

Table-Driven Processing

Table-driven processing implies the use and maintenance of fairly static

information used on a recurring basis. The data stored in these tables fall into two functional categories:

- . validation/descriptor codes and associated static data; and
- . process control data.

The validation codes are used to verify data contained in input transactions. The descriptor codes provide the bridge between numeric or abbreviated codes and their English language descriptors. The validation codes and the descriptor codes are static, undergoing little or no change. Process control data regulate the execution of the automated system in three general areas:

- . accounting transaction edit criteria;
- . subsystem posting instructions (e.g., general ledger debit/credit posting); and
- . accounting period posting.

The process control tables provide the detail edit and validation criteria for each unique accounting transaction. The tables specify which input fields must be present and what edits are to be performed on them. These tables also control the posting of data in the various summary categories, such as:

- . account balances in the general ledger and subsidiary ledgers; and
- . development costs of an individual project.

They also reflect each debit/credit account pair affected by an accounting transaction entering the system.

The control of accounting period posting is a significant function of process control tables. Several accounting period balances are maintained in each financial master file. The process control tables control posting to the appropriate accounting period.

The benefits derived from table-driven processing are:

- . reduced coding of input transaction data; and
- . enhanced user control.

Coding of input accounting transactions is reduced by storing static data, accessible through a code, in the table one time. As accounting transactions

are processed, the codes are used to retrieve associated data from the table. In addition, maintaining one central table of all codes, descriptors, and process control data allows better control of the overall integrity of the tables and any interdependence between tables.

Retention of Historical Data for Audit Trail

The ability to retain historical data for audit or report purposes is also a feature of the system. Every accounting transaction entering the system resides in either the error file or the history file. The history file is an accumulation of every accounting transaction that entered the system and affected master file financial data. Each record is uniquely identifiable by date and transaction identifier.

GENERAL ACCOUNTING CONCEPT

General accounting as proposed for the HGP integrated financial management system is accomplished via several automated features:

- creation of an automated general ledger file containing every General Ledger (GL) account maintained and the associated subsidiary accounts;
- creation of an automated transaction code decision table identifying every unique accounting event and the associated GL or statistical accounts affected by such events;
- development of a single transaction input which accesses the transaction code decision table and retrieves the associated GL accounts; and
- development of computer programs which post/apply the transaction values to the automated GL file.

The general ledger accounts and their respective subsidiary accounts are updated during the financial file update process. The accounts affected by each transaction are determined during the edit/validation process. The key to this determination is the transaction code which is coded on each input transaction. This code is then used to retrieve the GL and subsidiary accounts from the transaction code decision table. Transactions also post to

certain non-GL accounts maintained in project financial files, such as development cost statistics or net investment.

A number of internal controls are provided in the proposed financial system to ensure accurate general accounting information and consistency. These controls include the following:

- . Each transaction code identifies the accounts to be posted and prevents an out-of-balance condition.
- . The transaction code decision table ensures proper posting of transaction amounts to the subsidiary and memorandum accounts and, thus, reconciliation.
- . Automatic netting action eliminates manual adjusting for such items as the liquidation of obligations, and accounts payable.

Several special capabilities are provided in the integrated system, such as:

- . the capability to input special purpose transactions or special adjusting entries which permit direct coding of the debit and credit accounts affected;
- . the ability to add or modify general ledger accounts in the transaction code decision table without modifying financial file update processing logic;
- . the capability to overlap accounting periods (i.e., open the new accounting period for posting before closing the current period); and
- . the ability to report general ledger accounts status at any time to facilitate trail closing and production of off-station reports.

ACCOUNTING PERIOD CUTOFFS AND CLOSINGS

To accommodate varying repayment schedules and closing requirements of the accounting process, several conceptual design closing/cutoff features and techniques are established for the proposed HGP integrated accounting system:

- . management statistics file;
- . automated journal voucher adjusting entries; and

- capability to overlap accounting periods with the system processing cycle.

The management statistics file is an automated file, maintained both manually and automatically, which controls posting/updating of the financial data base. This file contains the following types of information:

- current fiscal year;
- prior fiscal year;
- current month;
- prior month;
- prior year open/closed indicator; and
- prior month open/closed indicator.

Input transactions contain the effective date of that accounting activity. This date is compared with the management statistics file to determine which accounting period (prior month, current month) the transaction affects. The financial data files contain multiple "buckets" or fields for each financial category (equivalent to GL accounts) for each accounting period. For example, the program file might contain a bucket for direct labor costs. Five buckets or occurrences of this amount would reflect the labor costs for the following periods:

- current month;
- prior month;
- prior month minus one;
- prior year; and
- current year.

The balances would be cumulative for each accounting period. During the update process, the management statistics file would control posting to the appropriate buckets based on the effective date of the input transaction.

Year-end closings consist of several basic steps. After processing of all normal transactions, adjusting entries are processed to facilitate the production of reports. After processing of adjusting entries, a closing transaction

is input to prevent subsequent transactions from being posted to the closed period. Within the system concept, year-end closings involve the automatic generation of closing transactions to transfer various income, expense, and memorandum account balances. Year-end closings occur after adjusting entries have been made.

SYSTEM INTERFACES

The financial management system interfaces or interacts with several of AID's general accounting systems. These systems are viewed as feeder systems which provide the financial management system with information necessary to maintain the integrity, accuracy, and completeness of the integrated data base.

Essentially, the financial management system includes several features necessary to interface with the feeder systems. These features provide:

- a standard interface framework (i.e., standard format and point of interface) so that all automated systems communicate with the financial data base in the same manner;
- table output to feeder systems to aid in validation of transaction data prior to input to the financial management system; and
- output to some interface systems which require financial data for their processing.

The current systems with which interfaces must be established include NAPS, the allotment ledger system, the cash journal system, and the accounts receivable system.

AUDIT TRAILS AND HISTORICAL RETRIEVAL

The term "audit trail" refers to the manner in which a particular element of data existing in the system files can be traced back to its source or forward to its position in a report. In addition to data maintained in the system files, the audit trail includes the source documents which become part of the accounting records as well as the financial reports. The activity reports generated each time the system is updated are also an integral part of the audit trail.

Historical retrieval of data maintained in the transaction history file is the major audit trail of financial data. All accounting transactions which

have successfully passed the update program are maintained in the transaction history file, along with data appended to the transaction from system tables. Each transaction in the file is uniquely identified with a transaction control key.

Activity reports provide the basic audit trail for table maintenance transactions. Each time a transaction is entered to update one of the system tables, it is reported in an activity report. In addition to listing table maintenance transactions, the activity reports list beginning and ending record counts in each of the system files. This helps highlight any missing reports or any unauthorized processing.

The history file update module merges images of accounting transactions processed by the financial master file update module into the transaction history file.

Audit trail outputs from the system consist of:

- a merged file of fully processed accounting transactions (transaction history file); and
- activity reports each time transactions are processed.

In the case of a large volume of input transactions, transaction history files may reside on tape and are stored in the data library, data processing department, to provide the ability to reconstruct transactions in the event of a limited loss or outright disaster.

It is sometimes necessary to reverse or "back out" erroneous transactions. For example, a batch of transactions may be entered erroneously. Instead of manually reversing each transaction, it is possible to access the transaction history file and automatically prepare identical transactions. The only difference is that the transaction processing code is "R" (reverse). The new transaction is released to the system and the effects of the original transaction on the financial data base is reversed. In addition, the record of the original and the reversing transactions is maintained on the transaction history file. This procedure allows correction of the error and maintenance of a complete audit trail.

ERROR SUSPENSION / CORRECTION

The design of the financial system emphasizes accurate, fully coded data before acceptance into the system. Transactions are completely edited to determine that data are accurate with respect to all system features before any

facet of the data base is updated. To control rejected transactions, the system incorporates an error suspension/correction feature.

Transactions that are flagged as erroneous are placed on a permanent error file and reported every time accounting transactions are processed. The continual listing of error transactions detected during prior cycles constantly prods the system user to take corrective action.

The error correction procedures incorporated in the HGP financial management system provide for efficient and timely correction of erroneous transactions. By combining a unique error code with an explanatory error message, the user of the system can easily determine the corrective action necessary.

The individual responsible for taking corrective action is aided by two output reports: the error code interpretation report, and the error correction report. The error code interpretation report clearly defines the error situation related to individual transactions. The error message states the exact situation causing the error. Using this report in conjunction with validation table listings, the user can easily determine the cause of the error and the corrective action to be taken. Once the cause of the error is determined, the user has another automated report to assist in correcting the error. Each accounting transaction has a unique key by which it may be addressed. The HGP system does not require the user to recode the entire transaction, but only the correction information. The unique addressing key and the item to be corrected are provided in the automated report. The user codes the correcting information, and the report is sent to the keypunching section or input directly through a terminal. Under either selected option for system design, the report is in the proper format for direct keying, without additional transcription.

Input to the error correction process consists of the accumulated error file and the error correction transactions. The accumulated error file consists of those accounting transactions flagged as erroneous during previous edit/validation cycles. These transactions are corrected or released from the error file. The error correction transactions are the coded and key-punched transactions which apply correcting data against the error file.

The error correction processing represents an attempt to match each error correction transaction with a transaction residing in the error file. If a nonmatch situation is encountered, the error correction transaction is listed with an appropriate message. The correction transaction is analyzed and recoded after the problem is resolved.

When a matching error file transaction is encountered, the correcting data are transferred from the correcting transaction to the error file transaction. The corrected error transaction is then released into the normal edit

validation cycle for revalidation. Each corrected transaction is deleted from the error file.

Output from the error correction process consist of:

- . the corrected transactions; and
- . an action report.

The action report reflects the disposition of each error correction transaction entering the process. Record counts also are provided to reflect the:

- . number of error transactions;
- . number of correcting transactions;
- . number of error transactions corrected; and
- . number of invalid correcting transactions.

The basic controls incorporated in the error correction process are:

- . the recurring error report; and
- . the unique identification of an erroneous transaction.

The recurring error report control feature forces the system user to take corrective action to delete the error transaction from the error file. Otherwise, this transaction constantly appears in every error report. This report will contain an aging feature indicating how long the particular error transaction has been in the error file. The unique identification of an erroneous transaction facilitates the correction process. Every accounting transaction entering the system is uniquely addressable from its arrival into the system to its placement in the history file. Therefore, erroneous transactions need not be recoded, but simply corrected.

The most significant special feature of the error correction process is the error correction report. This report is formatted to make the error correction process fast and efficient. Producing a key-ready correction report eliminates the step of manually coding input sheets.

Another special feature of the error correction process is the ability to make batch corrections. If all the transactions in a batch have the same error, a single correcting transaction may be applied to all. A further special feature of the error correction process is the ability to delete and release

error transactions. The deletion capability removes the error transaction from the system and must be tightly controlled. The transaction release feature permits a transaction to be released from the error file without application of corrective data. This capability is valuable for releasing transactions which were processed before their valid codes were placed in the validation tables.

PROCESS CONTROL TABLES

The process control tables incorporated in the HGP integrated financial management system are essential for maintaining the integrity of the total system. The process control tables/files are:

- . the transaction code decision table; and
- . the management statistics table/file.

The transaction code decision table provides three basic system requirements:

- . accounting transaction edit/validation criteria;
- . process control indicators; and
- . debit/credit accounts affected.

The table indicates which data elements must be coded or table-supplied for each unique transaction and what edits are to be performed on each data element.

Each accounting transaction equates to a given accounting event. Every accounting event effects at least one set of debit/credit control accounts. The transaction code decision table supplies the effected debit/credit account pair. The management statistics file contains system control information necessary for the posting of accounting transactions and certain master file record counts.

The transaction code decision table is maintained through special table maintenance procedures. The management statistics file is maintained both manually and automatically. Key indicators (i.e., prior month open indicator, prior year open indicator) which control the posting of the accounting transactions are normally maintained automatically. However, the capability to change system-dependent indicators manually is incorporated in the system. The management statistics file also controls module to module accounting

transaction flow and maintains relevant master file record counts (i.e., number of records in error file, updated financial file record counts). The record counts are posted automatically by programs within the system so that the counts always reflect the immediate status of these files.

The processing involved in the actual maintenance of the tables/files described takes place in several subsystems. The transaction code decision table is maintained via the special process control table maintenance function. The management statistics file is updated by the several modules executed during the normal accounting transaction processing cycle. Transactions to update the transaction code decision table are edited. In addition, the system maintains tables in synchronization; for instance, a transaction cannot reference an edit for which there is not defined edit routine.

Tabling of system control parameters gives the system manager flexibility to respond efficiently to minor changes in the system requirements with a minimum of system change (i.e., programming modifications). The capability must be carefully managed.

TRANSACTION FLOW THROUGH THE SYSTEM

As stated earlier, the single-transaction concept is based on the philosophy that one transaction contains all data necessary to describe that event for complete master file update. Exhibit IV-1 displays the major modules through which a normal accounting transaction flows. The "accounting event module" is presented in broken lines to show that this event may be initiated by many activities. It indicates that some event transpires before an accounting transaction is necessitated.

As described here, the system relies principally on a batch update process which builds a data base of financial information. This data base may then be accessed in a variety of ways to fulfill many different information requirements. The position of the system which deals with the construction and maintenance of the data base is described in terms of a batch flow for the following reasons:

- . The cyclic nature of many HGP processing activities and the cyclic nature of many feeder systems indicate that batch processing will conceptually form the core of system operations.
- . Batch processing provides the most generalized mode by which to describe the philosophy of design.

However, this design is not limited in concept to a fixed period batch update. The entire update cycle can be executed on demand. Moreover, the edit portion of the cycle can be executed more than once, building a collection of transactions to be used in update at a convenient time. Edit/update modular organization, the tabling of edits, and the data base concept provide the flexibility for future growth to message and batch message processing. Such growth may be in stages by system function. It may also encompass on-line entry/edit with batched update or totally on-line entry/update. The principles of uniform edits and update procedures, as specified in the common system tables, will apply.

A brief description of the modules present in the basic HGP system follows.

Preedit

The principal functions of the preedit module are data classification and reformatting. There are presently four input classes of data going into the preedit module:

- . manually coded transactions;
- . automated feeder system accounting transactions;
- . error correction transactions; and
- . table maintenance transactions.

Manually Coded or Feeder System Transactions

The accounting transactions are precipitated by some accounting event which must be recorded (i.e., an expenditure or receipt of cash). The transactions are either hand-coded or generated by one of the feeder systems. Those transactions received from a feeder system are distinguishable by a unique source code assigned to each feeder system. This provides permanent audit trail capabilities.

Error Correction Transaction

The error correction transaction is used to correct an error detected in an accounting transaction processed during a previous edit cycle.

Table Maintenance Transactions

The table maintenance transactions are used to maintain the various descriptive tables used during the preedit, edit, and reporting phases.

Transaction Reformat and Expansion

Accounting transactions received in the standard input format are transformed into the internal transaction which is used within the system. The external formatted transaction is expanded to include data extracted from tables. Edit control fields also are attached at this time.

The outputs from the preedit module are:

- . accepted, reformatted accounting transactions;
- . error correction transactions; and
- . accepted table maintenance transactions.

The accounting transactions are passed to the edit and validation module for further processing. Any error correction transactions are passed to the error correction module. Table maintenance transactions are forwarded to the table maintenance edit and validation module.

Error Correction Module

The error correction module applies error correction transactions against those erroneous accounting transactions detected during previous input edit cycles. The error correction module provides three capabilities:

- . transaction correction;
- . transaction deletion; and
- . transaction release.

The correction transaction replaces the incorrect data element in the erroneous transaction with new information contained in the correction transaction. The corrected transaction is then released into the normal process stream for reediting, within the same processing cycle, by the edit and validation module.

The deletion transaction causes the incorrect accounting transaction to be listed and dropped from the system. This capability is used when an erroneous accounting transaction is not correctable (for instance, if the transaction should not have been coded at all).

The release transaction causes an accounting transaction which had been flagged as incorrect to be released from the error file and passed to the input

edit and validation module without any changes being applied to it. This situation arises when an accounting transaction is prepared before its valid codes can be placed in the validation tables. An action report accounting for all input and output transactions is also produced.

Input Edit and Validation Module

The input edit and validation module performs all edits and validations required before passing the accounting transaction to the financial file update module. It is driven by the transaction code decision table, which specifies whether certain data fields must be present in the accounting transaction and which edits must be performed on these fields. A transaction code, which reflects one accounting event, indicates, through the associated control fields in the transaction code decision table, what information is required for that accounting event (e.g., a project transaction must provide a project number).

Once it has been determined which data fields must be included in the accounting transactions, the data fields are validated. Most of the validation process involves matching the coded value against a validation table that contains all allowable codes. If the coded value does not match an entry in the table, the transaction is flagged as an error. There are some additional edits, of course, such as validating numeric fields. If no errors have been detected, after all required data fields have been validated, the transaction is passed to the financial file update module. Invalid transactions are placed on the error file for subsequent release, deletion, or correction. Transactions are thoroughly edited and all detectable errors noted before rejection to the error file.

Another feature of the input edit and validation module is batch balancing. Accounting transactions are grouped in some manageable number (e.g., 30). All transactions within a group are assigned a common batch identification code and a unique transaction identification code. This feature permits addressing the entire batch of transactions or an individual transaction. When these transactions are grouped (batched), a control transaction is created. This transaction remains with its individual group members until they are placed on the history file. This control record contains:

- . the number of individual transactions in batch; and
- . the cash total of all amounts from individual transactions in the batch.

The input edit and validation module automatically recomputes the two figures and compares its results to the figures in the control transaction. If the two totals do not match, the entire batch is flagged as out-of-balance and placed

in the error file. The batch must then be corrected via the error correction module.

Financial Master File Update

The integrated financial system designed for HGP provides the budgetary, statistical, and accounting data required in meeting the anticipated reporting needs. The automated "data base" provides several logical views of the data. The major views of the data base are categorized as:

- . appropriation general ledger;
- . appropriation budget;
- . program general ledger;
- . program budget;
- . project ledger;
- . project planning;
- . cash journal; and
- . document detail.

The data base is maintained by posting the accounting transactions against their associated "views" of the data base. This process is controlled according to a set of well defined rules. During the preedit process, input transactions obtained additional classification codings, including the general ledger account pairs, for posting to the data base.

The master file updating and posting process involves control in three dimensions:

- . file control;
- . accounting periods; and
- . posting action.

File control requires matching the input transaction control fields with the master file. When a match does not occur, a new master file record is created; when a match does occur, posting against the existing record is performed.

However, before actual posting can take place, accounting period determination must be made to ascertain if the transaction's effective date falls within a currently open accounting period and to determine the proper account balances to be affected. Conceptually, each financial master file will provide the following financial balances for each level of summary:

- . cumulative-to-date;
- . prior month ending;
- . prior month beginning;
- . prior year ending; and
- . prior year beginning.

By maintaining these balances for each level of summary the system provides:

- . current month activity;
- . prior month activity;
- . current year activity; and
- . cumulative-to-date activity.

Finally, the arithmetic posting action (i.e., addition or subtraction) is determined by examining the relationships between the input transaction action (to debit or credit, as indicated by the transaction code decision table) and the account classification (debit balance or credit balance) of the affected amount.

The file matching controls described above are applied during the edit/validation process. Any accounting transaction meeting the control requirements is flagged and passed to the error reporting module and therefore does not affect the financial data base. All transactions entering the update module are error free and, by definition, permitted to process against the data base. Accounting transactions that have entered the data base update module are eventually passed on to the history file update module.

History File Update Module

The transaction history file contains all accounting transactions that have been posted to the financial data base. A current period's transactions are maintained on a conveniently accessed storage medium and are merged periodically into the cumulative closed history file.

Error Reporting and Error File Update Module

The error file update module merges new error transactions into the error file. The error file is maintained sequentially, and therefore a new error file is created in each processing cycle. The error reporting and update module provides two capabilities:

- . adding new error records to the file; and
- . producing reports indicating error messages and correction formats.

Adding new error records consists of sequentially merging new error records into their logical positions in the error file. Input transactions arrive in the error reporting and update module in batches or individually. When a batch error occurs, all transactions in the batch are passed to the error file. The batch control record is flagged for the appropriate error message. Detail transactions which follow the control record are flagged only for the individual data errors they contain.

Error Reports

During the error file merging process, a two-part error report is generated. First, the error file transaction listing provides a formatted print-out of all new error transactions and their related error codes and messages. Errors in transactions are reported. Batch balance errors cause the printing of every transaction in the batch. The actual transaction count and batch amount (as determined by the computer) are displayed along with the totals supplied on the batch control card.

The second part of the error report is the correction report, which provides an easy vehicle for correcting error records with a minimum of coding. The person making the correction need code only the correcting data item. All other information, including erroneous transaction access key, is provided on the report.

DESCRIPTIVE TABLE MAINTENANCE

The descriptive tables are used primarily to validate codes on accounting transactions and associate the codes with their relevant static descriptive and control data. These tables are maintained outside the main flow of the accounting transaction processing cycle as a subsystem. The subsystem provides three capabilities:

- . addition of new records;

- . modification of existing records; and
- . deletion of existing records.

Transactions which define descriptive table maintenance functions are separated from accounting transactions and edited in a distinct edit/validation module. Errors in transactions are reported. However, no error file is created for incorrect table maintenance transactions. They must be recoded. Exhibit IV-2 displays the table maintenance subsystem flow.

PROCESS CONTROL TABLE MAINTENANCE

In addition to the descriptive tables, several tables containing data used to control system processing are included in the integrated financial system. These tables are of critical importance, and their maintenance must be rigidly controlled in order to maintain the integrity of the system. Two representative system tables are:

- . the transaction code decision table; and
- . the management statistics file.

The transaction code decision table is the heart of the HGP system. It provides an automated equivalency of each event (i.e., project implementation, payment of a claim) for which the system must provide. The table gives two very critical groups of information:

- . required data fields for each transaction and associated edits; and
- . debit/credit control accounts to be affected.

The required data fields indicate which items of information must be coded for each input transaction. For instance, this table would indicate that a project number is required for that transaction which applies costs to the project in the automated system. It also associates with each field the edits which must be performed on the contents of that field in the input transaction.

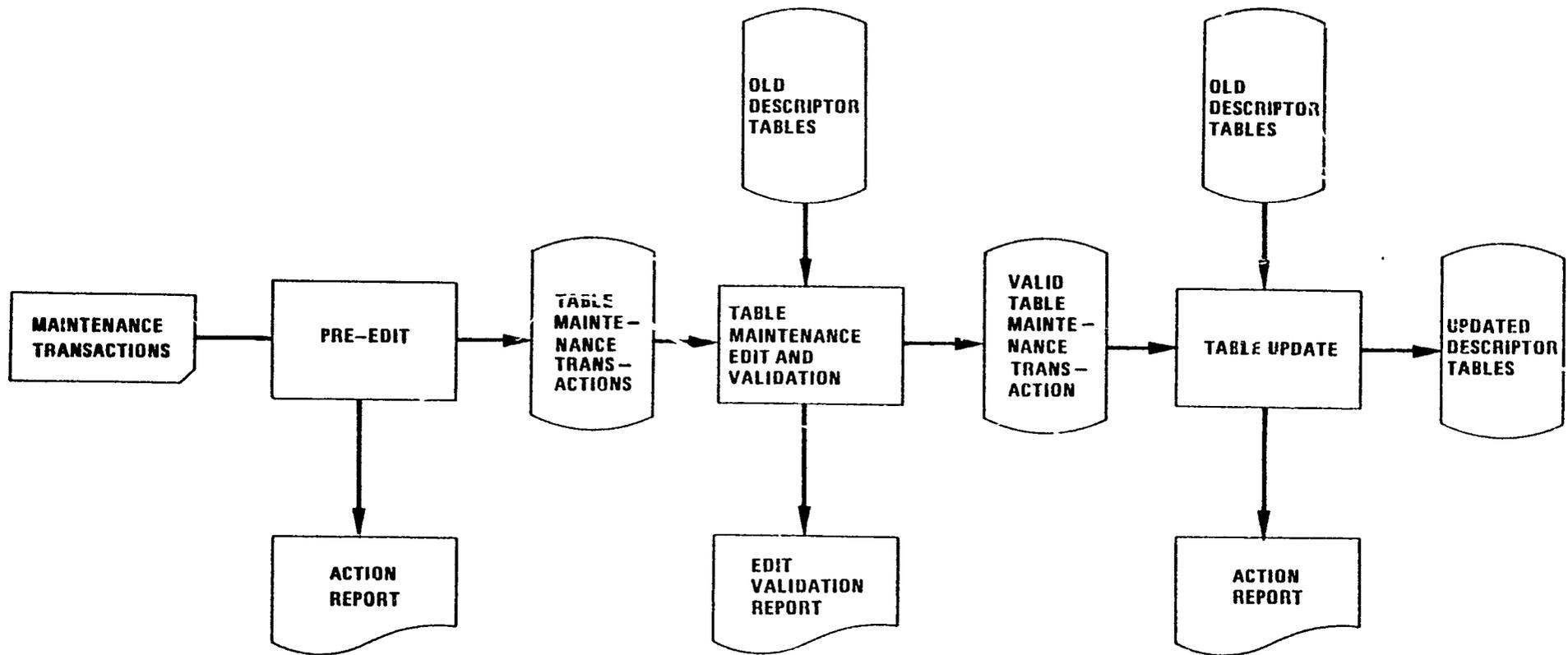
The debit/credit control accounts affected by each accounting transaction indicate, for example, the following debit/credit accounts for a disbursement transaction:

<u>DR</u>	<u>CR</u>
Cash	Accounts Payable

EXHIBIT IV-2

DESCRIPTOR/VALIDATION TABLE MAINTENANCE

IV. 21



This example does not present the total picture for this situation but serves to illustrate the type of information contained in the table.

The management statistics file provides control information for system processing. The posting of the five balance fields contained in the financial master files is controlled by this table, which will indicate, for example, whether the prior month and prior year are open. A transaction affecting the prior month's balance will first be compared against this table. If the prior month is not open, the transaction will be flagged and an appropriate message generated.

Exhibit IV-3 displays the system flow of a system table maintenance transaction. System maintenance transactions are not processed in the standard accounting or descriptive table maintenance flow. They are carefully edited before being applied to the control tables. All transactions are listed along with their disposition. A full listing of control tables is available as required.

REPORTING CAPABILITIES

The ability to access and report financial, statistical, and budgetary information at varying levels of detail is provided in the HGP financial management system. The data base is utilized through a variety of logical views to support the creation of reports required at the various levels.

The actual production of output reports is accomplished via the "reporting module." This module consists of a series of individual "submodules," each designed to provide a different set of information.

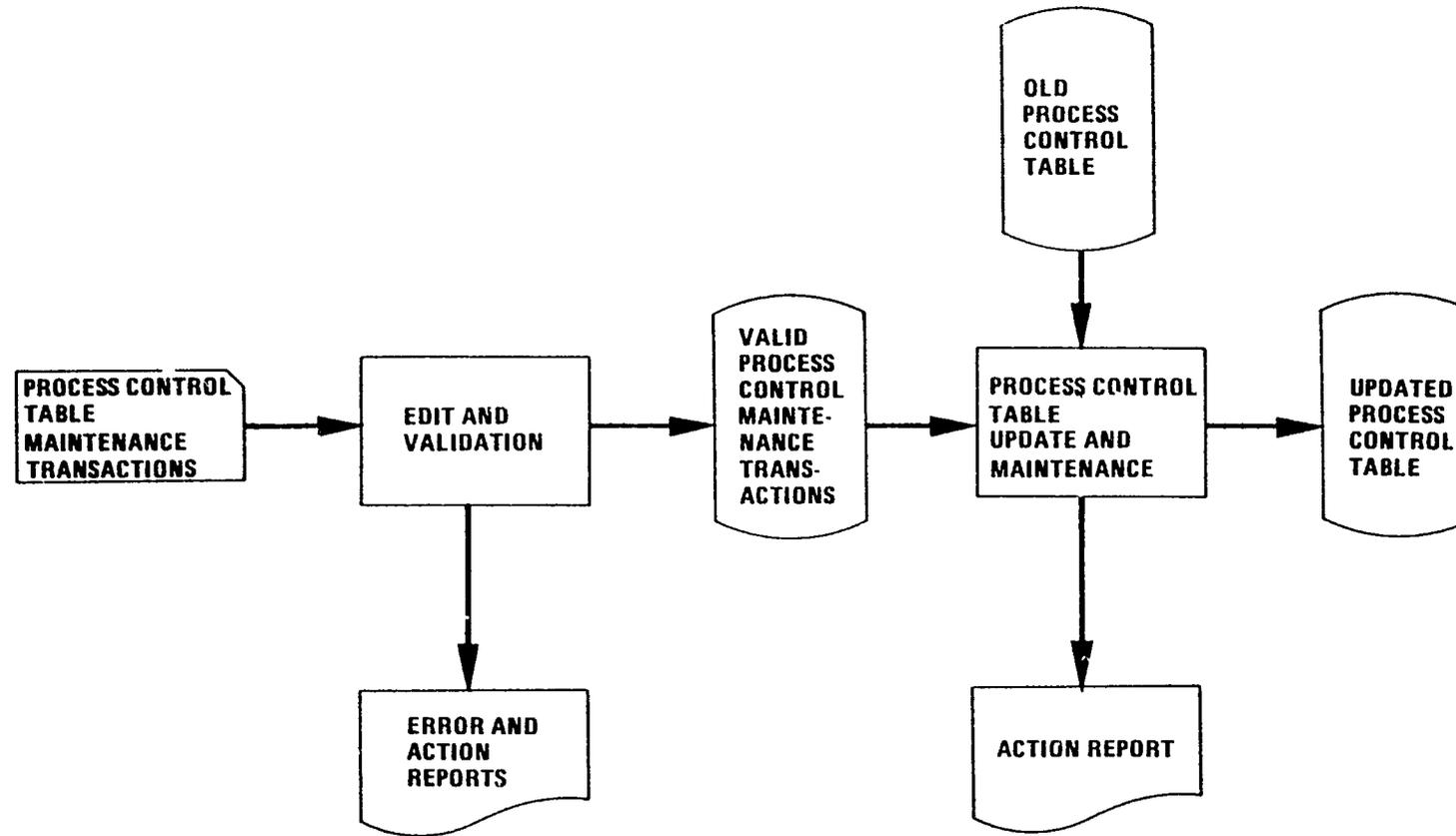
Maintenance of balances described in previous sections provides the ability to produce reports reflecting activity for the following accounting periods:

- . cumulative-to-date;
- . current year;
- . current month;
- . prior month; and
- . prior year.

The data will be accessible to all authorized users of the data base. An on-line information retrieval capability can be incorporated for information required in a "real-time" environment.

EXHIBIT IV-3

PROCESS CONTROL TABLE MAINTENANCE SUBSYSTEM



SECURITY CONSIDERATIONS

The capability to restrict access to the HGP financial data base is a significant feature of the financial management system. It is achieved through two methods:

- . system-supplied security procedures; and
- . a data base structure and system-incorporated checking feature.

The system-supplied security procedures consist primarily of providing the ability to create internal labels for each file created. The label then becomes the vehicle by which the file is addressed. The creator of the internal label is the only individual to whom the label is known. He or she may provide the label information to persons with authorized access to the file. The computer system verifies the internal label on the file with the label name supplied by the person wishing to access the file. If the label does not match, the unauthorized user's request is rejected. Labels can be changed as required to maintain this security.

The data base structure and system-incorporated features provide the capability to restrict access to a unique level of the structure. Certain users may be authorized to access general ledger level data only, while others may have authorized access to the entire data base or individual "views" of the data base. If a data base management package is used for the system, this capability is a built-in design component of that package.

AUXILIARY PROCESSES

The modules and features described in the preceding sections constitute the standard production processes. There are several time-dependent or auxiliary processes which may be executed periodically or as required. A brief description of these processes follows.

Monthly and Yearly Rollover

The ability to provide reports reflecting monthly, prior month, cumulative-to-date, and prior year activity is a feature of the automated system. This capability is provided by maintaining the five financial balances explained in prior sections. The monthly and yearly rollover process updates these

balances with the most current data. For example, assume the following balances contain the amounts indicated:

Cumulative-to-date	CM - 0	100,000
Prior month ending	CM - 1	90,000
Prior month beginning	CM - 2	80,000

The monthly rollover process performs the following operations:

- . Moves CM - 0 to CM - 1
- . Moves CM - 1 to CM - 2

Immediately after monthly rollover, the balances would be as follows:

CM - 0	100,000
CM - 1	100,000
CM - 2	90,000

As new charges are incurred, the CM-0 balance would be increased, while the CM - 1 and CM - 2 balances would remain static until the next monthly rollover.

The yearly rollover process effectively performs the same operation with the yearly balances except that there is an additional option: some balances may be closed out at year-end, so these are not rolled. The actual execution of the monthly and yearly rollover will depend on certain control indicators residing in the management statistics file.

In addition to "rolling" balances backward during the yearly rollover process, the system requires that certain expenditure balances and variance analysis information be set to zero. This feature is accomplished during the rollover process.

Recovery Procedures

The error recovery procedure incorporated into the financial management system is designed to facilitate efficient timely reconstruction of all critical master tables/files (descriptive and financial) in case a computer system failure occurs. The ability to recover quickly from a machine failure is an essential requirement of any automated financial system relying on computer

readable storage media for retention of data. These media are susceptible to damage from many sources, such as mishandling, environmental changes, and excessive use.

The ability to maintain the financial integrity of the system from the general ledger summary down to the lowest level of detail is provided through the transaction history file. This file contains the accumulation of every accounting transaction entered in the system since its conception.

The actual recovery procedure depends on two system features:

- . periodic backup copying of all master files and tables; and
- . history file maintenance.

The periodic saving of all master files involves saving the disc and tape resident files/tables on another magnetic tape which can be stored off-site. This process is executed on some predetermined schedule (daily, weekly, monthly). The normal procedure is to save the files and tables weekly. This means that in the event of system failures, only the current week's transactions need be reapplied. The files and tables would simply be recreated as of the last time they were saved.

The history file maintenance feature of the financial management system greatly facilitates the recovery procedure. The daily accounting transactions are accumulated in a weekly transaction history file. This weekly file becomes the basis for recreating the affected files and tables. Vendor-supplied utility procedures efficiently perform the file/table saving and recreation operations.

Mid-week destruction of the critical files/tables would require the following restoration procedures:

- . securing latest save-tape (from end of prior week);
- . executing utility program to recreate files/tables (with balances as of day files/tables were saved); and
- . applying weekly accumulation of transactions against recreated files/tables.

If the weekly transaction file becomes unreadable, either the original source document or the keypunched transactions can be used to recreate the lost data.

V. ORGANIZATIONAL ACCOUNTING RESPONSIBILITIES AND IMPACT OF THE SYSTEM DESIGN

Accounting for the transactions of the Housing Guaranty Program (HGP) provides the basis for financial management. It is the capacity to develop and maintain specific accounting data, effective channels of communication and information flow, and consistent methods of treating similar accounting events which determines the overall usefulness of a financial system to financial managers at all levels.

Currently, the HGP accounting function is performed primarily by three organizations: the American Security Bank (ASB), the National Savings and Loan League (NSLL), and the AID Loan Division (LD). In addition, a variety of Agency financial branches provide support to program accounting through the maintenance of various general and subsidiary ledgers in automated accounting systems used to control program activities at the appropriation level. Any accounting systems development effort can have a profound effect on the operations and responsibilities of participants in the existing accounting process. This is no less true for the systems concept and design recommended by this report.

During this study, detailed examinations were made of the functional responsibilities of primary participants in the HGP accounting process. This chapter presents an overview of these responsibilities and makes selected recommendations for improvement. The impact considerations of the system design were also examined and recommendations were developed to assist AID in assessing the basic design features and in selecting a course of action for implementation.

Information used to describe ASB and NSLL activities is extracted from detailed functional analyses appearing in Appendices B and C, respectively.

ORGANIZATIONAL ACCOUNTING RESPONSIBILITIES

American Security Bank

ASB serves as the fiscal agent for the HGP and, in this capacity, receives payments from borrowers or administrators, makes disbursements to investors, and maintains the central reserve fund. The central reserve fund was established as an interest-bearing demand account to ensure prompt, accurate payments in full to participating investors. Funds were initially provided by centralizing cash reserves and trust funds which had accumulated under older loan agreements. Reserves are either restricted to specific projects or pooled for the use of all participating projects.

Approximately 64 housing guaranty projects are administered through the central reserve: 27 requiring monthly disbursements; 19 quarterly; and 18 semiannually. These require approximately 32 monthly, 3 quarterly, and 35 semiannual disbursement transactions to investors. Monthly disbursements total approximately \$300,000, whereas quarterly and semiannual disbursements may amount to several million dollars. The average balance of the central reserve fund is approximately \$1 million.

ASB Function

Payments are received from borrowers by check, wire, or money order. These generally are forwarded through various international banking institutions before arriving at ASB. In order to receive expedient, proper credit in the reserve, payments must identify the AID account number, project loan number, and originating country. Payments are credited to the central reserve with a credit advice notification to NSLL.

Disbursements to investors are made based on a payment authorization schedule developed by NSLL. Total amounts of principal, interest, fees, and prepayments are itemized. A debit advice is returned to NSLL to evidence the transactions. Disbursements are generally made by check, although two large investors receive payment by wire.

ASB closely monitors the balance of the reserve to avoid overdrafts. Delays in borrower payments may cause temporary cash shortages in the reserve. This is normally only encountered at semiannual or quarterly payment periods, but it may result in delayed or partial payments to investors.

ASB is generally not involved in the internal operations of the HGP. However, two situations have arisen which have required its participation beyond its traditional role as a banker:

- . the certification of prepayments; and
- . the verification of payment amounts for large investors.

Under the terms of some loan agreements, prepayments are required to be certified by the fiscal agent as being made in accordance with specific agreement provisions. In lieu of the contract-specified certification, however, ASB uses a broader, less definitive certification. Its justifications for this alternative practice are ASB's lack of knowledge of actual prepayment transactions other than AID-specified amounts and the unknown degree of risk incurred should any of the required certifications prove false.

Two of the large investor banks forward account statements to ASB prior to payment, asserting amounts deemed due. ASB compares these notices with the payment schedule provided by AID. Although no corrective action is undertaken by ASB, notification of variance is forwarded to the two investors at the time of payment.

ASB produces a quarterly account statement reflecting balances and transactions of the central reserve fund during the reporting period.

Findings and Recommendations

ASB occupies a largely traditional banking role in the HGP financial management and accounting process: it accepts deposits, issues disbursements, and forwards detailed transaction notices and periodic statements to its account holder. It exercises certain internal responsibilities such as ensuring sufficient funds to cover disbursements. Several findings and recommendations can be made, however, which will improve control, expedite payments to borrowers, and better define the role of ASB.

Mode of Disbursement. It has been observed that a large majority of disbursements are made to investors by check. This process is time consuming and does not employ state-of-the-art fund transfer techniques. Since all disbursements to investors are made to banks (or to investors using banks as depositories) which are accessible by electronic fund transfer techniques, all transactions should be made by wire. The data required to effect this procedure are minimal (investor name, bank number, account number, etc.). Significant advantages accrue under this concept because of rapid (same day) transaction. ASB has indicated strong support for this concept. It is believed that investors will also provide support due to the improved timeliness of payments.

Mode of Receipt. Receipt of payments from borrowers takes many forms and routes. As in the case of disbursements, the use of a single mode of payment will achieve a more efficient transaction. Similarly, the use of wire transfers for all receipts will improve the timeliness of payments, will help relieve cash flow problems in the reserve, and will add to the interest yield of the account. To enhance this concept, an established network of institutions to channel payments by the most expedient route should be employed. ASB has supported the universal use of wire payments to the reserve. It has indicated interest both in providing correspondent network schemes for existing programs and in assisting to establish repayment routes during the origination of new projects.

The study of ASB revealed that borrowers do not consistently provide basic information required for crediting payments to AID's account or to

specific project accounts. Irrespective of a decision to use wire transfers and correspondent networks, AID must insist that borrowers provide basic payment data to ensure control of funds.

Preapproval of Disbursements by AID. Basic financial control requires that disbursements be approved by a designated official who is cognizant of the transaction and its propriety. The study revealed that as an apparent expedient, ASB receives an unsigned advance copy of investor payment schedules from which it prepares disbursements. Although a signed copy is subsequently forwarded and there were no cases of discrepancy between the signed and unsigned documents cited, the practice is not considered capable of providing the necessary degree of fund control. It is recommended that all disbursement documents be approved by a cognizant AID official prior to disbursement.

Certification of Prepayments. As a contractual matter, the difference between the required certification of prepayments and the actual certification used by ASB is best addressed by legal counsel. The justification for non-compliance by ASB does not seem unreasonable, given the amount of data provided it to substantiate prepayments. It is recommended that a resolution of this matter be achieved quickly to protect the interests of all parties involved. One solution may be the issuance of a statement by AID relieving ASB of any responsibility due to false claims beyond its reasonable control.

Validation of Investor Account Statements. This practice appears to clearly exceed the responsibilities of ASB as a banking agent. In concept, however, the issuance of a "billing document" by investors can be beneficial. Its verification is more properly performed by AID or NSLL, however, both of which have the records to compare amounts due and amounts claimed.

National Savings and Loan League

NSLL performs a wide variety of financial and project management services under two contracts with the Office of Housing. As a brief amendment to one of these contracts, NSLL provides general accounting services to AID by:

- . monitoring transactions in the central reserve; and
- . reporting transactions to AID.

NSLL Function

Through apparently mutual interpretation of the amendment by AID and NSLL, NSLL performs the following specific accounting services:

- . maintains individual account records for each project included in the central reserve fund (CRF).
- . monitors the performance and status of the CRF. This includes keeping a running balance, reporting monthly to DS/H, and reconciling the quarterly bank statement, prepared by American Security Bank (ASB).
- . prepares Monthly Payment Schedules for approval by DS/H and disbursement by ASB.
- . maintains a file of current and historical records for each project. This file includes administrator reports, borrower reports, investor reports, and all project-related correspondence or analysis.
- . provides DS/H with monthly reports of projects needing immediate attention or projects that are delinquent in submitting payments.
- . prepares special reports or analyses at the request of DS/H. Most of these reports deal with forecasting and potentially minimizing the losses incurred by currency devaluation or defaults. Examples include current value studies, regression analyses, income projections, and forecasts of loss potential on devaluation projects.

NSLL applies four people full-time to the performance of AID HGP services, including routine accounting, reporting, analytical, and site work.

NSLL serves as the principal interface between much of the HGP project activity and AID. It is the primary recipient of debit and credit advices from ASB and maintains project files for both central reserve and noncentral reserve projects. NSLL appears to have considerable flexibility in the allocation of personnel resources between the strict accounting and research or "troubleshooting" functions.

NSLL produces a variety of regular reports for AID, including:

- . Central Reserve Status Reports;
- . Monthly Payment Schedules;

- . Alert Status Reports; and
- . Reports of Payments Due/Not Received.

Additionally, a Central Reserve Fund Management Analysis Report is generated for internal use by NSLL.

Findings and Recommendations

There were no significant findings regarding the general accounting role of NSLL in support of the HGP. The system of information flow and accounting appears to be appropriate. However, two findings of significance are offered to help streamline the flow of data to NSLL and provide better control over the contractor function for AID.

Investor and Administrator/Borrower Reports. Due to variations in loan agreement provisions, the reports received by NSLL use varying formats, are provided with irregular frequency (or not at all), and may be provided in either English or Spanish. The pertinence, value, and accuracy of any accounting system is directly contingent on the quality of the source data used. The employment of numerous and variant reporting media in the NSLL accounting mission greatly inhibits the current accounting system's ability to fully control the program. This becomes particularly critical in projects external to the central reserve, where no cash transaction documents are available for cross-checking borrower or investor reports.

The impact of irregular reporting is two-fold, involving:

- . additional expense in project accounting tasks; and
- . loss of strict control over the accounting process.

The cost of accounting services increases as a result of the additional contractor labor effort required to locate, interpret, and reconcile various reports. The loss of control results from the required interpolation or extrapolation of data to compensate for erroneous, irregular, partial, or missing reports. The implications of these problems are manifest in two conditions noted during the study:

- . There are numerous unreconciled or irreconcilable balances in project accounts which were noted on an NSLL report prepared approximately 2 years ago. Progress on researching these discrepancies has not been significant due to the required allocation of resources to current accounting operations and shorter-term problems.

- . The "finer points" of the accounting process have been reported by NSLL to have been progressively deferred due to the needed application of NSLL resources to researching near-term problem areas.

Although some of the causes of these conditions are believed to be due to the current status of the NSLL contract (as discussed below), a great deal of the accounting difficulties can be ascribed to the underlying poor quality of input reports.

It is recommended that AID make a concerted effort to achieve consistency, accuracy, and regularity in the investor and borrower/administrator reports. Whether or not the accounting function remains with a contractor or is absorbed by AID and whether or not it remains manual or is automated, effective control over project-level transactions can only be achieved by ensuring the quality of input data.

Contract Definition and Control. As stated above, the accounting services performed by NSLL are very broadly defined by a brief amendment to one of the basic service contracts with AID. Over the years, interpretations of this amendment have expanded the scope of the NSLL mission without benefit of contractual definition. There are several implications of this condition:

- . NSLL has considerable flexibility in its allocation of resources to varying aspects of HGP contracts;
- . AID has no positive, binding control over NSLL activities; and
- . the responsibilities and liabilities of NSLL for nonperformance or poor performance of unspecified accounting tasks is unclear or minimal.

Clearly, it is vital to protect the interests of the Federal Government under contractual actions by specifying legally binding requirements, responsibilities, and liabilities of contractors. This is of particularly critical importance when addressing accounting functions which lead to the disbursement of federal or entrusted private party funds. Similarly, an ongoing effort to monitor and control the contractor function during the term of the agreement should be established with a cognizant Agency official functioning as contract monitor.

This recommendation should not be construed as an implied indictment of wrongdoing or irresponsibility by NSLL. Rather, the emphasis in this area is to recommend adequate control over the contracted function in order to protect the interests of the Federal Government and other parties to the HGP loan agreements.

As an auxiliary finding to the NSLL accounting function, an apparent reluctance on the part of NSLL to increase the level of effort used to perform its responsibilities appears to have led to the decline of attention directed at pure accounting tasks in deference to needed troubleshooting. The cause of this was not specifically identified. However, the future role of NSLL in HGP operations has been somewhat tenuous in recent months due to the use of temporary contract extensions. The unsure future of the contract may cause this reluctance. Whatever course of action is pursued by AID with respect to NSLL, it is recommended that the contractor role be well defined to preclude any further deterioration of the accounting function.

Loan Division

The AID Loan Division is responsible for maintaining the official Agency accounts for the HGP. In this role, it must provide necessary interfaces and control between the fiscal agent, NSLL, and the overall Agency accounting system.

LD Functions

In its capacity as AID accountant for HGP, the Loan Division is directly responsible for:

- maintaining accounting records on each contract and for the total program;
- managing the collection of fees under outstanding guaranties, including the receipt, verification, and deposit of remittances;
- ensuring that funds apportioned by the Office of Management and Budget are not overobligated or overexpended;
- furnishing information for use in preparing budget estimates and in requesting apportionments;
- providing information on the status of contract issuance authority to ensure compliance with statutory limitations;
- ascertaining that charges to the program fund are compatible with statutory specifications on the use of fee income for administrative and operating expenses;
- preparing reports on the financial status of the program and results of operation for internal use; and

- . preparing other fiscal, financial, and special reports, satisfying OMB, U.S. Treasury, and other Agency requirements.

The Loan Division maintains the accounts of the HGP on the accrual basis. Specific functions performed by the Loan Division are described below.

Accrual of Income. The Loan Division uses the monthly payment schedule prepared by NSLL to accrue fee income on those loans administered through the central reserve fund. The Monthly Payment Schedule is prepared from the amortization tables and the prepayment record for each note. The accrued income on all other loans is computed from a detailed schedule showing the prior month's principal outstanding balance. Because the AID fee is computed on the outstanding principal balance, this detailed schedule is prepared from investor and/or administrator reports. The Loan Division does not maintain a complete set of amortization tables as a source for the computation of fees or for any other use.

Accrued Expenses. The Loan Division maintains detailed schedules supporting all accrued expenses payable. "Agency support costs" represent administrative support costs which benefit the Housing and Other Credit Guaranty Programs. The support costs charged to the Guaranty Programs are accrued monthly based on the annual budgeted amount. At the end of the fiscal year, "actual" support costs will be computed using a variation of an allocation formula established in a prior year. The Guaranty Programs are to be charged the lesser of "actual" or budgeted amount of support costs. A study has not been made to determine if current or prior year amounts charged for support costs are reasonable.

Cash Receipts and Disbursements. The Loan Division maintains hand-posted journals for both cash receipts and disbursements. Actual receipts and disbursements are processed through the Central Accounting Division. Monthly reconciliations are then made using the computerized Cash Transaction Journal provided by the Central Accounting Division. Monthly reconciliations are also made on payroll, regional office expenditures, and the funds held with the Treasury.

Guaranty Ledger. A Guaranty Ledger Card is maintained for each project. All essential data are recorded on this ledger, such as:

- . loan disbursements made;
- . principal balance outstanding;
- . principal payments made;
- . balance in reserve fund;

- . AID fee receivable; and
- . total AID fee income.

The information in the Guaranty Ledger is a complete history of loans guaranteed, which is updated as often as payments are required to be made.

The Guaranty Ledger provides the information needed when reporting items such as:

- . contingent liability;
- . projects authorized and under contract;
- . reserve fund balances; and
- . disbursements.

Budgeting. The Office of Housing is responsible for the actual preparation of the budget, after receiving input from the Loan Division, RHUDOS, and NSLL. Budgetary accounts are provided for and are maintained in the General Ledger. Each month, the Central Accounting Division provides the Loan Division with an Allotment Status Report, which monitors the status of all expenditure items.

Reporting. The Loan Division issues the Financial Summary: Housing and Other Credit Guaranty Programs (W-239) on a monthly basis. Specific information needed to accurately prepare the Financial Summary has not been recently available. The Housing Monthly Report has apparently not been received by the Loan Division for the past 5 months. The reserve fund balance on a loan made to Venezuela has not been updated since March 1977.

The Loan Division issues a Delinquency Report on a quarterly basis. The information shown on this report is not current, since a number of delinquencies have not been updated since 1976.

Findings and Recommendations

As the focal point of the HGP accounting operation, the Loan Division has been the subject of many of the findings and recommendations contained throughout this report. In addition, the LD's role has intricately involved it in financial management system definition. Augmenting these observations, this section addresses three specific LD functional responsibilities and one overall responsibility which will enhance the accuracy and efficiency of the accounting function and improve the general effectiveness of program financial management.

Agency Support Costs. Because the Housing Office has indicated a general desire (rather than a firm policy) to achieve self-sufficiency, the strict application of fee income as a balanced offset to operating expenses is only suggested, not required. There is little doubt, however, that the operating expenses of the program are funded from the revolving appropriation account initially established at \$50 million. It is therefore important to ensure that AID is not funding HGP operations improperly by providing nonreimbursed support from appropriations designated for other purposes. In this context, however, the current practice may unnecessarily provide justification for criticisms of overall program viability and reflect unfavorably on program financial management. It is recommended, therefore, that a formal method of estimating, collecting, and reimbursing Agency support costs be established and employed. The development of such a method may entail the use of reasonable hypotheses, refined empirically to achieve greater future accuracy. But it is felt to be a far more justifiable, defensible position to be able to demonstrate a high degree of control and accuracy in most support cost areas and to identify areas for refinement than to rely totally on an overall estimate which will be open to subjective criticism.

Amortization Tables. The use of amortization tables is an important part of any accounting operation dealing with long-term interest-bearing loans. LD should have the amortization tables for all loan agreements available to optimize the accuracy of the accrual process.

Reporting. The basic difficulties with reporting accuracy and timeliness appear to be largely attributable to the complexity of individual projects, decentralization of the accounting function, and dissimilarity of information requirements, timeliness, and flows. Many of the basic system recommendations contained in this report address the underlying causes of these conditions and, if implemented, can be expected to significantly improve the reporting function.

Throughout the study, many observations were made to indicate dissatisfaction with the content of reports received by the Office of Housing. This too can be expected to improve under a more efficient system of input standardization and flow. However, the specific formatting and content of reports can only become satisfactory through the close cooperation of LD and the Office of Housing in the evaluation of specific reporting needs and LD's capability to meet those needs with available data and resources. Unlike that of most other Agency operations, HGP reporting is not required to be a part of a broad scheme which addresses a widely varied user base. The cooperative evolution of effective reporting, therefore, can allow considerable customization and provide a high degree of report target precision.

Accounting Policy and Control. The Loan Division is tasked with the responsibility for accounting for HGP operations. Included in this role is the development of proper, consistent accounting treatments for all transactions and the development of financial statements which fairly present the status and operations of the program. Insofar as HGP is unique in the Federal Government, the accounting principles and standards for government agencies and the general chart of accounts for AID may not always accommodate program accounting needs or prescribe proper treatment for unusual transactions. In lieu of government guidance, the use of the Generally Accepted Accounting Principles (GAAP) for similar industries seems appropriate.

The current staffing of the Loan Division includes at least two certified public accountants (CPAs) who are directly involved in the Housing Guaranty operation. These individuals provide the necessary input to accounting policy matters from the perspective of GAAP. Similarly, current contractual agreements between AID and such commercial financial organizations as NSLL and ASB provide necessary input from the perspective of contemporary mortgage and banking industries. The considerable advantages offered by these circumstances, however, are not fully inherent in the LD or HO operations. That is, in the event of departure by the available CPAs or the complete termination or substantial reduction of contractual arrangements with organizations such as NSLL, the related benefits of GAAP and industry expertise may be lost.

It was observed during the study that the interpretation, application, and propriety of alternative accounting practices have been the subjects of numerous and lengthy discussions between the Housing Office and Loan Division staffs. This condition is not uncommon wherever administrative management, financial management, and accounting processes are all affected by a decision regarding proper accounting treatment which will eventually reflect program performance or status to external organizations. The relative uniqueness of HGP augments this situation in that directly applicable accounting precedents are not always available. The discussions which occur appear driven by genuine interests in fairly and properly accounting for HGP operations. The ultimate authority and responsibility for making policy determinations rests with and is exercised by the Chief of LD. The reasons for these discussions between LD and HO are attributable to two factors:

- . The detailed accounting policies and procedures are not fully documented and are therefore subject to interpretation.
- . There is no institutionalized procedure or forum for raising, discussing, and defending points of view on accounting policy questions.

The findings dealing with accounting policy and control dictate the following integrated set of recommendations:

- . AID should ensure the continued availability of readily available expertise in GAAP such as that vested in current LD personnel.
- . AID should ensure the continued availability of a source of expertise in contemporary mortgage and banking industries which is cognizant of HGP operations.
- . Detailed accounting policies and procedures should be augmented to provide for the treatment of all foreseeable conditions such as liquidation or default.
- . An assignment should be made of responsibility and authority for making final accounting policy determinations.
- . A procedure should be established to allow organized discussions of accounting policy issues by interested parties, thereby fostering expedient, orderly decisions.

It was noted during the review that HO and LD have initiated positive steps which address the latter two recommendations.

IMPACT OF THE SYSTEM DESIGN

The system design presented in this report is a comprehensive methodology of financial management, accounting, and control which affects the total spectrum of HGP financial operations. The design encompasses the traditional financial management aspects of an automated accounting and reporting system and the program support operations which enhance the effectiveness of information flow, consistency, and control. The design spans the entire life of a project, from initial contact by a potential borrower through liquidation. Within the context of the "10 situations" and the associated complexities of existing loan agreements, the system design accommodates projects internal or external to the central reserve, with or without intermediary fiscal agents, and paid on a monthly, quarterly, or semiannual basis.

The development and implementation of any major financial system can have a profound effect on organizational elements responsible for data transmission, accounting, and reporting. Given the broad base of the HGP financial design, the potential impact on the existing structure is substantial.

The recommendations made in this report are designed to enhance the total financial management process of HGP. Although the implementation of

recommendations is expected to reduce the effort currently expended in many areas, some changes can be expected to increase workloads for certain organizations. Increases in effort may be one-time in nature (such as the development of correspondent networks for the wire transfer of payments and receipts) or ongoing (such as the maintenance of an integrated accounting system).

This section raises a number of considerations for AID in assessing the impact of the system design on affected elements of the current HGP accounting financial management structure.

American Securities Bank

The provisions of the system design which directly affect the AID fiscal agent include:

- . making all disbursements by wire;
- . receiving all borrower payments by wire through expedient correspondent networks;
- . increasing the cash balance of the reserve to meet disbursement requirements;
- . preauthorizing payment schedules;
- . requiring basic payment information from borrowers; and
- . establishing a payment routing for loan agreements during the origination phase.

In each case, recommendations should be expected to reduce workload and responsibility for ASB. Some initial effort will be required to establish payment networks. In the long run, sufficient economies may be achieved to warrant a reduction in the servicing fees currently charged AID by ASB.

National Savings and Loan League

As the organization primarily performing the project accounting function, NSLL would bear a major portion of the impact of the new system. However, consideration must be given to the role NSLL or a similar contractor would play if full implementation is achieved.

Many of the key features of the system design address problems of complexity in monitoring borrower transactions. It is felt that a large part of

this complexity will become transparent to the manual accounting function and will be allocated to the high-speed capabilities of an automated process. Similarly, improvements in data quality and flow should reduce the effort required of NSLL to monitor project accounts. This, in turn, raises the question of utilizing a contractor at all in this function. The integrated design concept is built upon consolidation of operations and ease in maintenance. From a purely functional standpoint, therefore, there do not appear to be any substantial reasons to prevent AID from assuming major segments of the accounting, analysis, and reporting activities now performed by NSLL.

Loan Division

The potential impact of the new system design is greatest for the Loan Division, where responsibility lies to correlate accounting data from the projects with that of the program and to satisfy the needs of the Agency accounting systems. It is expected that the streamlined data flow will provide a better accounting environment for LD, whether or not the system is fully implemented. If, however, the integrated design is enacted intact, much of the burden for developing, maintaining, and operating the system will probably be placed on LD.

A consideration which must be addressed prior to estimating the eventual impact of the system on LD is whether the accounting functions now performed by NSLL will be absorbed by AID. As indicated above, the integrated system concept promotes centralized control of functions. There is technically no reason why AID could not fully assume the accounting, monitoring and reporting functions of HGP. In fact, any use of contractors in this regard will necessitate additional channels of communication, continue the maintenance of duplicative records, and counteract the unified nature of the recommended control systems.

The primary impact consideration for LD must be the effect the new system will have on available personnel resources. This applies equally to the case of full assumption of accounting from NSLL or the use of contractor services augmented by an AID HGP financial management system. Currently, NSLL applies four people full-time to supporting the HGP needs. This does not mean, however, that four additional LD personnel would be required. There are five reasons for this:

- . NSLL uses its four personnel to perform additional services to HGP in excess of pure accounting but including some error/problem research.
- . The current AID-NSLL relationship adds communication channels and unavoidably creates a need for some duplication of files or functions.

- The integrated system concept greatly reduces the current need for manual recordkeeping.
- The recommended system design includes many labor-saving features which will increase routine processing efficiency for many functions.
- The recommended system design includes many features to improve data accuracy and should therefore reduce time spent reconciling and researching errors.

The net impact of these factors cannot be precisely predicted. However, once implemented, the fully integrated automated accounting system with its auxiliary features and data flow enhancements can probably be operated without a significant increase in LD personnel resources.

An important consideration with regard to personnel impact is the one-time application of accounting and data processing resources required for assuming the accounting function from NSLL and implementing the automated system at AID. Mechanically, taking over the accounting function entails the collection of project files from NSLL and the modification of communication channels. What cannot be absorbed, however, is the knowledge and experience of NSLL gained through years of monitoring transactions and researching errors at a detailed level. This can be expected to produce some temporary increase in workload for LD unless a careful transition is planned. The development of the automated financial system will require the acquisition of professional-level data processing expertise capable of designing, implementing, and testing the system.

Office of Housing

The major impact of the system design for the Housing Office will be the use of project-level control and analysis to drive the program and appropriation-level financial management process. A distinct shift in management focus may result from the increased availability of data through the features of an integrated data base.

Organizationally, the system design requires the assignment of responsibility and authority for accounting policy determination to a single point. Although designation of this function is an internal policy decision for AID, it would seem reasonable that this responsibility should be placed in LD. Logically, an individual(s) would be designated in the Office of Housing to represent program management interests and interface with the accounting functions of LD. Similarly, the assumption of the NSLL activities by AID would not be totally accomplished by LD. Some of the NSLL functions transcend

HGP financial management and accounting, particularly in the area of ascertaining the reasons for delinquent payments. A distinction of responsibilities between LD and HO is indicated. HO, therefore, would be required to provide a point of contact to assume responsibility for followup and investigative actions.

Office of Data Management

The impact of developing a new, automated financial management system on the Office of Data Management (DM) may occur in several ways, contingent on the degree of integration achieved and the hardware facilities used. Such impact can be characterized by the various levels of D. ↑ support required to:

- . analyze the system design;
- . develop, implement, and test the financial system;
- . maintain and operate the system;
- . define/effect system interfaces with other A.D accounting systems;
- . provide time-sharing capabilities for remote inquiry/update through interactive terminals;
- . provide processing time and automated file space for the HGP operation; and
- . provide technical support to an external (minicomputer) hardware configuration.

The one-time impact of developing and implementing the system is contingent largely on available resources and the Agency's willingness to apply these resources to HGP system development. The ongoing support requirements entail peak HGP system usage at month-end, a time at which many of the Agency's other automated systems may also be at peak processing.

VI. IMPLEMENTATION PLAN

An effort such as the development and implementation of a financial management system can be a complex and disruptive process. The scope of the HGP system design, addressing both the automated accounting and manual support requirements of the Agency, adds to the additional potential for implementation complexity. Compounding this problem is the pending assumption of major NSLL operations by LD. These circumstances highlight the vital need to undertake modifications to HGP financial management practices in an orderly, structured manner. To accomplish this requires the development and use of a comprehensive implementation plan.

The implementation plan must be a defined course of action for affecting desired changes to HGP operations. It should set out specific tasks, objectives, and goals and be correlated to a target or milestone time schedule. Specific responsibilities for accomplishing these milestones should be assigned to an individual or group designated to coordinate, monitor, control, and evaluate overall efforts. The plan for AID must be developed in a cooperative, cohesive manner which addresses the needs of all participants including, but not restricted to the:

- . Office of Housing;
- . Loan Division;
- . American Securities Bank;
- . National Savings and Loan League;
- . Office of Data Management;
- . Office of Financial Management;
- . AID General Council;
- . AID Auditor General;
- . General Accounting Office: and
- . Department of the Treasury.

The Office of Housing and the Loan Division will be most involved in system development. Other agencies and activities, however, will be involved at various times and to various degrees in the implementation, operation, or approval aspects of the complete system design. The considerations of

these entities must be included in the initial stages of the development process, including the formulation of the implementation plan.

The general structure for implementation of the new HGP system has two tiers:

- . background, preparation, and analysis; and
- . implementation of specific features.

BACKGROUND, PREPARATION, AND ANALYSIS

The first tier involves the formulation of the detailed implementation plan. The features of the recommended system should be analyzed and an assignment of organizational responsibilities made. An initial time schedule should also be developed.

An important aspect of the background work is the thorough analysis of each project currently active in the HGP. This analysis should categorize projects within as many classifications of financial data as possible, such as duration, reporting practices, fee rates, subordinate guaranties, and participation in the central reserve. It is only through the detailed understanding of all project provisions and characteristics that the system design will be fully successful. Adjunct to this analysis should be a study of all pending agreements, to ensure their provisions fall within the concepts asserted by the system design.

IMPLEMENTATION OF SPECIFIC FEATURES

The recommendations contained in this report suggest the following three-pronged approach to the implementation of specific program features:

- . General Program Improvements - including those elements of the system's design which can provide increased control or efficiency irrespective of the development of automated systems or the assumption of NSLL activities by AID;
- . Phased Assumption of NSLL Activities by AID - including those considerations to ensure a smooth, orderly transition; and
- . Development of Automated Systems - including those considerations of planning the development and implementation of an integrated system.

The primary advantage of the three-pronged approach is that activities within each group can be conducted largely independent of activities in other groups. This can yield a faster return on the effort and a faster path to full implementation. There is a vital requirement to strictly control, coordinate, and monitor group activities under this concept to avoid wasted efforts and ensure a consolidated overall end product.

General Program Improvements

This report recommends several enhancements to current HGP financial practices which can be of great value irrespective of any other system developments. This group includes recommendations such as:

- . development of uniform accounting practices;
- . assignment of authority for final accounting policy determinations;
- . use of wire transfers for all central reserve payments and receipts, including the development of correspondent networks;
- . the establishment of minimum reserve balances;
- . development of uniform reporting formats; and
- . encouragement to investors to participate in the central reserve.

These and other activities will prove beneficial to overall HGP financial control and efficiency. They also lend themselves to individual task assignments which distribute the workload required.

Phased Assumption of NSLL Activities by AID

The assumption of accounting, monitoring, analytical, and reporting functions from NSLL must be carefully planned and executed. Of primary importance is accomplishing this transfer with minimum disruption to the borrower/investor payment process. This action involves more than the mechanics of establishing AID files and ledgers. NSLL has accumulated a great deal of knowledge and experience in dealing with HGP operations and researching errors at a detailed level. This experience, if not captured, may result in significant functional disruptions and inefficiencies.

Naturally, an important part of this implementation group must be the AID decision regarding the use of contractor services in the HGP accounting function. This decision should be preceded by an assessment of the impact on AID staffing and the desirability of totally gaining in-house control over the activities involved. If the decision is reached to eliminate contractor support, a plan must be developed to guide and control the assumption process.

The contents of this plan must address the mechanical considerations of scheduling the transfer, establishing internal files and ledgers, setting up internal procedures, assigning responsibilities, and modifying current communication networks. In addition, the plan must realistically address the conditions which surround the current activities such as:

- . the ongoing nature of the payment cycle;
- . the current status of error research and analysis;
- . the current imbalances in reserve accounts;
- . the significant complexity of the existing projects; and
- . the knowledge and experience of NSLL.

All of these factors suggest a phased implementation plan. This plan may reflect the varying payment cycles of individual projects (i.e., monthly, quarterly, semiannually) or the varying provisions of individual projects (i.e., internal/external to the central reserve, use of administrator or borrower, existence of an intermediary fiscal agent). Other bases for scheduling the transition may become apparent following the detailed project analysis. Whatever scheme is used, it should give credence to the ongoing payments of transitioned projects. That is, it would probably be more difficult to transition a semiannual project at the end of December when a payment is due than in the middle of a repayment period.

A distinct advantage to phased implementation is that it allows for a period of transition during which continuity with NSLL can be maintained. This provides an opportunity for project records to be prepared for transfer and audited, if desired, prior to acceptance by AID.

The transition period should not be long. There is an inherent control difficulty in maintaining project files and responsibilities in two locations. A precise period cannot be specified without knowledge of specific project file conditions and the desirability of audit, but a reasonable time frame appears to be approximately 3 or 4 months.

Development of Automated Systems

The development of the automated aspects of the system design involves several sequential steps:

- . assess the impact on the current data processing environment;
- . identify system needs for hardware, software, and programming support;

- . develop general systems design;
- . develop detailed system design and programs;
- . schedule implementation; and
- . test system, convert files, and implement system.

This group of tasks is of a technical data processing nature and should be coordinated with the Office of Data Management. The sequence follows the manual chronology of major system development efforts.

LD and HO should be actively involved in the system automation effort to ensure at all times that the developed automated processes meet their needs and are within the system conceptual design. Specific involvement should occur during the identification of data processing needs, in particular for the selection of hardware alternatives, processing location, and software features.

VII. ALTERNATIVE MODEL CONCEPT

Over the years, the AID Housing Guaranty Program has been modified to satisfy congressional mandates and to correspond to the needs and characteristics of both lenders and borrowers. The result is that there is great variety in the borrower/investor relationship among the 100 plus active projects. Perhaps the only constant is that AID has provided a direct guaranty of principal and interest to the investor. Borrowers are of many types, and include homeowners, developers of major housing projects, and financial institutions. Investors include major financial institutions that hold the entire investment for a project, Federal Home Loan Banks that have subdivided the investment among many savings and loan institutions, and individual investors who have only a small interest in the total project. In some cases the borrower makes payments directly to the investor, while in other cases payment is made through the American Security Bank; in still other cases, payment is made through the American Security Bank to another paying agent before being made to the investor.

The payment cycle, as well, is not standardized. Some borrowers pay monthly, some quarterly, and some semi-annually. Most projects have been established so that the timeliness of payments is guaranteed by a central reserve fund administered by the American Security Bank. However, the cash balances in the central reserve fund have not been adequate to promptly cover all late borrower payments, and American Security has had to use its discretion in determining which investors are paid on time.

The complex set of arrangements between the borrower and investor has resulted in a financial management system that is equally complex. Because some records are maintained by borrowers and investors, some by the American Security Bank, some by AID, and some by the National Savings and Loan League under contract by AID, there is no single point from which AID can determine the status of specific investor accounts or the status of specific projects. The preceding chapters of this report contain the conceptual design of a system which essentially calls for the centralization of the financial management system under AID's control. In our opinion, such centralization is necessary given the diverse investor borrower/investor relationships that have evolved during the 17 years the program has been in effect.

This chapter presents a "model" program for financial management. The term "model" is not meant to convey an idea of perfection, but rather that the program structure suggested not only fulfills the objectives of the program but also makes possible uniform, straightforward financial management. In assessing the viability of the program structure presented below, it must be borne in mind that a minimum of 17 years of consistent use of the "model"

program would be required before the consistency envisioned in its design could be fully effective. For this reason, we believe that the financial management system proposed in earlier sections will continue to be appropriate for many years. Use of the program structure recommended below will, however, introduce over time a number of improvements in the overall Housing Guaranty Program.

PROGRAM OBJECTIVES

The major objectives of the Housing Guaranty Program under this model system concept are:

- . to regularize and facilitate the transfer of funds from borrowers to investors;
- . to permit AID to know the status of its accounts and react quickly in the case of defaults; and
- . to accomplish the foregoing in a way that provides a mechanism to maximize the exposure of lesser developed countries to the rigors and benefits of the U.S. capital market.

At first glance, these objectives appear at first to be much broader than might be warranted by the nature of the program, which is restricted to the guaranty of loans made by U.S. organizations or individuals to support housing developments in eligible countries. However, the program is structured so as to minimize the risk to the U.S. government, and fees are charged to defray administrative costs and the expected costs of settlements. In fact, borrowers are required to observe most of the same conventions that are observed by other major borrowers in the marketplace. These are the factors through which we believe the goal of the program (i.e., to introduce lesser developed countries to the U.S. capital market) is demonstrated.

BORROWER/INVESTOR RELATIONSHIPS

Typically, when very large sums are borrowed for long periods of time in the U.S. market, the "issue" is subdivided into a large number of relatively small "bonds" or "notes." This subdivision is made to make it possible for the initial investor to sell all or part of the investment and for subsequent buyers to resell the investment, all with relative ease. The marketability of these investments has given rise to institutions which serve as registrars and paying agents, keeping official records of the ownership of the securities and acting as conduits of payments from borrower to lender. These arrangements

simplify the set of transactions for the borrower, who makes all payments to a single party. In most cases, the investors have sought to have the registrar and paying agent made a trustee possessing the legal rights and obligations to protect the investment.

A variation of this commercial concept has recently been introduced to HGP financial management through the use of a paying agent. Under this procedure, a commercial banking institution (i.e., Morgan Guaranty Trust) makes subdivisions of an overseas loan to an indeterminate number of borrowers. Once this is accomplished, however, the paying agent relinquishes its responsibility for channeling payments or processing claims. Individual investors are relegated the tasks of full loan accounting and claims processing, which AID is given the responsibility of dealing with many investors. Because no formal limit to subdivisions has been set, AID potentially could be dealing with a very large number of small investors for the duration of such agreements. The administrative burden of this paying agent concept and the associated costs of subdivision issues or future maintenance are currently difficult to define. Clearly, however, these may well impact on the current AID fee structure and the interest rates paid by borrowers.

The model program developed here focuses on the standard U.S. capital market borrower/investor relationship described above. In many ways, it also expands on the "paying agent" concept discussed above.

MODEL PROGRAM

The Housing Guaranty Program is structured so that borrowers need not be of any specific organizational type; they must only serve to channel the funds to incoming housing in their particular countries. Investors also need not be of any particular type. Virtually all types of borrowers and investors have become associated with the program since its inception and this variety can be expected to continue. AID has facilitated the borrower/investor relationship by guarantying the investor principal and interest (and has sought to reduce its own risk by having the host country also insure the investment). The attractiveness of AID's guaranty is somewhat diminished, however, by the fact that the investor must make whatever claim to which it is entitled directly to AID. While this requirement constitutes no particular problems to major institutional investors, it would be a burden to small financial institutions and to individuals. This reduced attractiveness of the guaranty would be expected to be translated by the market into a higher interest rate, a result that runs counter to the goals of the program. The appointment of a trustee that could make claims on behalf of the investor would eliminate this problem area in the program.

The trustee is the keystone of the model system. In addition to making claims to AID on behalf of investors, the functions of the trustee would include the following:

- receiving all payments from borrowers;
- serving as official transfer agent/registrar for sales/purchases of segments of the investment;
- making all principal and interest payments to investors;
- maintaining official records of the status of each investor's account; and
- maintaining official amortization schedules and reporting all delinquencies and defaults to AID.

Many major financial institutions are capable of providing these services. While it is normal for the borrower to select the trustee, it is appropriate in the Housing Guaranty Program for AID to select the trustee so that there is a single trustee for all projects in the program.

One function for which the trustee should not be responsible is the control of a pooled or general reserve fund composed of reserves from several projects that is used to guaranty the timely payment of all projects. The individual integrity of each project and its related reserves should be maintained. The trustee should be responsible for notifying AID of each payment shortage of each project, and AID should provide sufficient funds to the trustee to pay the investors. Notification by the trustee and payment by AID can be accomplished in a very short period, and this arrangement should not be the cause of delayed payments to investors.

With the trustee maintaining detailed records for investors, AID would only require summary records for the program as a whole and detailed records of those projects that are delinquent or that have defaulted. Direct program costs and the total amount of outstanding investments guarantied could be constructed in a system from amortization tables as modified by actual payments received. AID would also be required to account for revenues (fees) received and for administrative expenses. Financial management under such a system would be greatly simplified due to uniformity from project to project and simplification of required accounting. It cannot be overemphasized, however, that use of the "model" system will not in fact simplify AID's financial management except in the very long run. In the meantime, AID must develop a financial management system to cope with the program as it exists today and will exist for several years in the future.

APPENDIX A
ACCOUNTING ISSUES

This appendix will address nine specific accounting issues. Each accounting issue will contain the following:

- . a description of the current practice;
- . problems with the current practice; and
- . recommendations.

The nine accounting issues are:

- . Accounting and reporting reserves;
- . Reporting treatment of nonrecoverable claims in the operating statement;
- . Accounting and reporting of fees waived;
- . AID's contingent liability make-up and source for update; financial statement reporting;
- . Assessment of penalty on borrower's late payments under guaranteed loans under central reserve;
- . Allowances for losses on subrogated claims, particularly those without host country guaranty;
- . Cash management practices in conformance with the Treasury Fiscal Requirements Manual;
- . Make-up of subrogated claims; and
- . Criteria for reporting Latin American housing guaranties under Section 222(b) (1) of the FAA, subject to \$325 million limitation [(Section 222 (c)].

1. ACCOUNTING AND REPORTING TREATMENT OF RESERVES

Current Practice

AID's financial statements do not recognize any of the reserve funds as either an asset, liability, or a part of net worth. The financial statements do disclose the following in a footnote:

- . amount of reserve funds held by various agents;
- . a statement that reserve funds are either fungible or restricted to a particular project depending on the provisions contained in the guaranty agreements; and
- . a statement that any remaining funds upon repayment of the particular investor's loan will either revert to AID or return to the homeowners of that particular project.

The amount shown as the balance in the central reserve fund does not include prepayments.

Problems With Current Practice

- . Do we have full disclosure with regard to the funds held in the various reserve funds?
 - . Disclosure of the dollar amount of reserve funds that are restricted has not been made.
 - . Disclosure has not been made with regard to the central reserve balance being adjusted for the amount of prepayments.
- . Are prepayments being used properly? Should prepayments be available to cover delinquencies and/or deficiencies in general or should their use be restricted?
- . Does AID have a liability to these reserve funds? In some instances, delinquencies and/or deficiencies may be paid out of the reserve fund on behalf of a project which has depleted all or more than its individual reserve fund balance.

Recommendation

For proper accounting and reporting treatment of the reserve funds, we recommend the following:

- . At any one point in time, the balance in the reserve fund should reflect at a minimum, the total of actual unused restricted fund balances plus prepayments of principal. Any differences in this amount and ending balance would represent AID's liability to these reserve funds.
- . Full disclosure be made of the portion of the reserve fund considered:
 - . restricted;
 - . prepayments; and
 - . unrestricted or fungible.

This accounting and reporting treatment would comply with full disclosure and would indicate the dollar amount of restricted funds and prepayments used to cover deficiencies for which no individual reserve balance was available. The latter would be indicated by the amount due from AID.

2. REPORTING TREATMENT OF NONRECOVERABLE CLAIMS IN THE OPERATING STATEMENT

Current Practice

Nonrecoverable claims are treated as a nonoperating expense and are deducted from the net results of current fiscal year operations to arrive at net income or loss for the current fiscal year.

AID's annual budget includes a provision for the expenditure of nonrecoverable claims.

Problems with Current Practice

The presentation of nonrecoverable claims as a line item separate from operating expenses tends to indicate to the reader of the financial statements that nonrecoverable claims were totally unrelated to the operations of the HGP.

Recommendation

In order for the financial statements to provide a more meaningful presentation, we recommend that nonrecoverable claims be deducted from income before operating expenses.

Fee Income	xxx
<u>less</u> - Nonrecoverable claims	<u>xxx</u>
Subtotal	xxx
Operating Expenses	<u>xxx</u>
Net Results of Current Fiscal Year Operations	<u>xxx</u>

3. ACCOUNTING AND REPORTING OF FEES WAIVED

Current Practice

AID's accounts were designed to be maintained on the accrual basis, which is a requirement for federal agencies. The accrual basis of accounting requires that revenue be recognized when earned and expenses when incurred.

On four housing projects in Peru, AID is applying an inconsistent treatment and is waiving the fee income. The purpose of the waiver is to allow the investor to keep the fee for shortages resulting from devaluation. The financial statements do include a footnote which indicates the dollar amount of fee income waived and the corresponding amount of claim which has been offset.

Problems With Current Practice

AID is not maintaining a consistency in its accounting and reporting treatment of fee income and nonrecoverable claims.

Recommendation

To comply with the accounting treatment requirements for federal agencies and to maintain a consistency in the accounting and reporting treatment of fee income and nonrecoverable claims, we recommend:

- recognition of fee income when earned and nonrecoverable claims when incurred; and
- discontinuance of the practice of "waiving" fees.

4. AID's CONTINGENT LIABILITY MAKE-UP AND SOURCE FOR UPDATE; FINANCIAL STATEMENT REPORTING

Current Practice

The outstanding principal balance for all loans at any one point in time is considered by AID to be its contingent liability. This information is being disclosed in separate schedules labeled "projects authorized" and "under contract." However, this reference to "contingent liability" is only made in the Monthly Financial Summary and is not found in AID's Annual Report.

Problems With Current Practice

AID, in defining its "contingent liability," has only considered the outstanding principal balance. A more meaningful presentation would be to consider factors such as reserve funds available and projects which have a host country guaranty and AID's right of foreclosure.

Recommendation

Generally accepted accounting principles require the following:

- . Disclosure of a contingency will be made when there is at least a reasonable possibility that a loss may be incurred. Loss contingencies which have the characteristic of a guaranty will be disclosed even though the possibility of loss may be remote.
- . In the case of a guaranty, the disclosure will include the nature and amount of the guaranty.
- . Consideration should be given to disclosing the value of any recovery that could be expected to result, such as from the guarantor's right to proceed against an outside party.

To comply with the above, we recommend that AID disclose the amount of loan guaranties, available reserves, and amounts guaranteed by a host country in its financial statements.

5. ASSESSMENT OF PENALTY ON BORROWER'S LATE PAYMENTS UNDER GUARANTIED LOANS UNDER CENTRAL RESERVE

Current Practice

AID has some contracts which include a provision for an assessment of penalty for late payments and some which do not contain this provision. AID

is currently considering an assessment of penalty on borrowers' late payments under all guaranteed loans under the central reserve.

Problems With Current Practice

Effective cash management practices cannot be established, since AID has created contracts which may or may not contain a late payment penalty provision.

Recommendation

To ensure that funds available in the central reserve fund are sufficient to meet periodic principal interest and fee payments, we recommend that:

- all new contracts contain a provision for an assessment of penalty on borrowers' late payments;
- all contracts not containing a provision be reviewed by legal counsel to determine if an assessment of penalty can be added to the contract; and
- all contracts that contain a late payment penalty be enforced.

6. ALLOWANCES FOR LOSSES ON SUBROGATED CLAIMS, PARTICULARLY THOSE WITHOUT HOST COUNTRY GUARANTY

Current Practice

AID's financial statements do not have a provision for losses on subrogated claims since the balance represents payments made by AID to an investor on loans having a host country guaranty.

The financial statements include a Statement of Subrogated Claims Incurred and Outstanding. This statement presents the total activity in the Subrogated Claim Account.

All claims paid by AID are first posted to the Subrogated Claim Account. Claims paid on deficiencies which are a result of devaluation are then written off since the right of subrogation will not apply.

Problems With Current Practice

Subrogated claims are only those claims paid on deficiencies which were not a result of devaluation. The posting of all other paid claims to this account is not considered necessary and is misleading.

Recommendation

The Statement of Subrogated Claims Incurred and Outstanding should be modified to show activity from one reporting period to another and to include only those payments on loans which have deficiencies not resulting from devaluation.

Should there ever exist subrogated claims which are not host country guaranteed, we do not recommend the establishment of an allowance for losses because (1) it would be difficult to estimate any potential loss (prior experience is not available) and (2) the HGP has the right of foreclosure.

7. CASH MANAGEMENT PRACTICES IN CONFORMANCE WITH TREASURY FISCAL REQUIREMENTS MANUAL

Current Practice

The policy regarding cash management practices within the Federal Government requires that agencies conduct financial activities so as to make available to the Treasury the maximum amount of cash in order to allow for investment and to avoid unnecessary borrowing.

Problems With Current Practice

AID has not established effective cash management practices in order to maximize available cash balances to meet periodic principal interest and fee payments.

Recommendations

To establish a system which can provide for prompt collection of amounts due, we recommend that:

- all foreign administrators and/or foreign borrowers be encouraged to send remittances by wire transfer;
- all new contracts require remittances by wire transfer;
- all new contracts contain a late penalty assessment provisions; and
- contracts which contain a late penalty provision be enforced.

8. MAKE-UP OF SUBROGATED CLAIMS

Current Practice

Principal and interest payments made to an investor by AID are considered subrogated claims if the following are met:

- . the borrower has failed to make required payment(s); and
- . the payment deficiency was not a result of devaluation.

The AID fee to be collected on a subrogated claim is included in accrued fees receivable.

Problems With Current Practice

The accounting treatment of subrogated claims appears proper since principal and interest payments are the only rights that have been acquired from the investor when payment was made. However, no disclosure is made that the AID fee to be collected on subrogated claims is included in accrued fees receivable.

Recommendation

For purposes of full disclosure, we recommend the following presentation:

Accrued Fees Receivable	\$	xxxx
(including \$50,000 relating to subrogated claims)		

9. CRITERIA FOR REPORTING LATIN AMERICA HOUSING GUARANTIES UNDER SECTION 222(b) (1) OF THE FAA, SUBJECT TO \$325 MILLION LIMITATION [SECTION 222(c)].

Current Practice

AID is not disclosing in its financial statements the amount of loans made which would qualify under Section 222(b) (1) of the Foreign Assistance Act.

Problems With Current Practice

AID does not know if the limitation imposed by Section 222(c) (\$325 million limitation) is being complied with, since loans which would qualify under Section 222(b) (1) are not known. Adequate records have not been maintained on types and classifications of loans made for private housing projects in Latin America.

Recommendation

To comply with the legal requirements as specified by Section 222(b) (1) and 222(c), we recommend that:

- all loans made in Latin America be reviewed to determine if they are subject to limitation. Opinion from legal counsel may be necessary as contracts may not be easily classified.
- full disclosure be made in the financial statements, indicating number and dollar amounts of loans that would be subject to the \$325 million authority limitation.

APPENDIX B

AMERICAN SECURITY BANK

The ASB serves as fiscal agent for the HGP and, in this capacity, receives all payments from borrowers, disburses them appropriately to lenders, and is responsible for the maintenance of the central reserve fund. The central reserve fund, a savings account in the ASB, was established to ensure that timely and accurate payments are made to lenders. The monthly, quarterly, and semiannual payments from borrowers are credited to this account. Exhibits B-1 and B-2 depict the ASB function.

RECEIPTS AND POSTING OF RECEIPTS AND CREDITS

Approximately 64 housing projects are administered through the central reserve fund--27 monthly, 19 quarterly, and 18 semiannually. Remittances received from borrowers are in the form of checks, mail payment orders, or wire transfers.

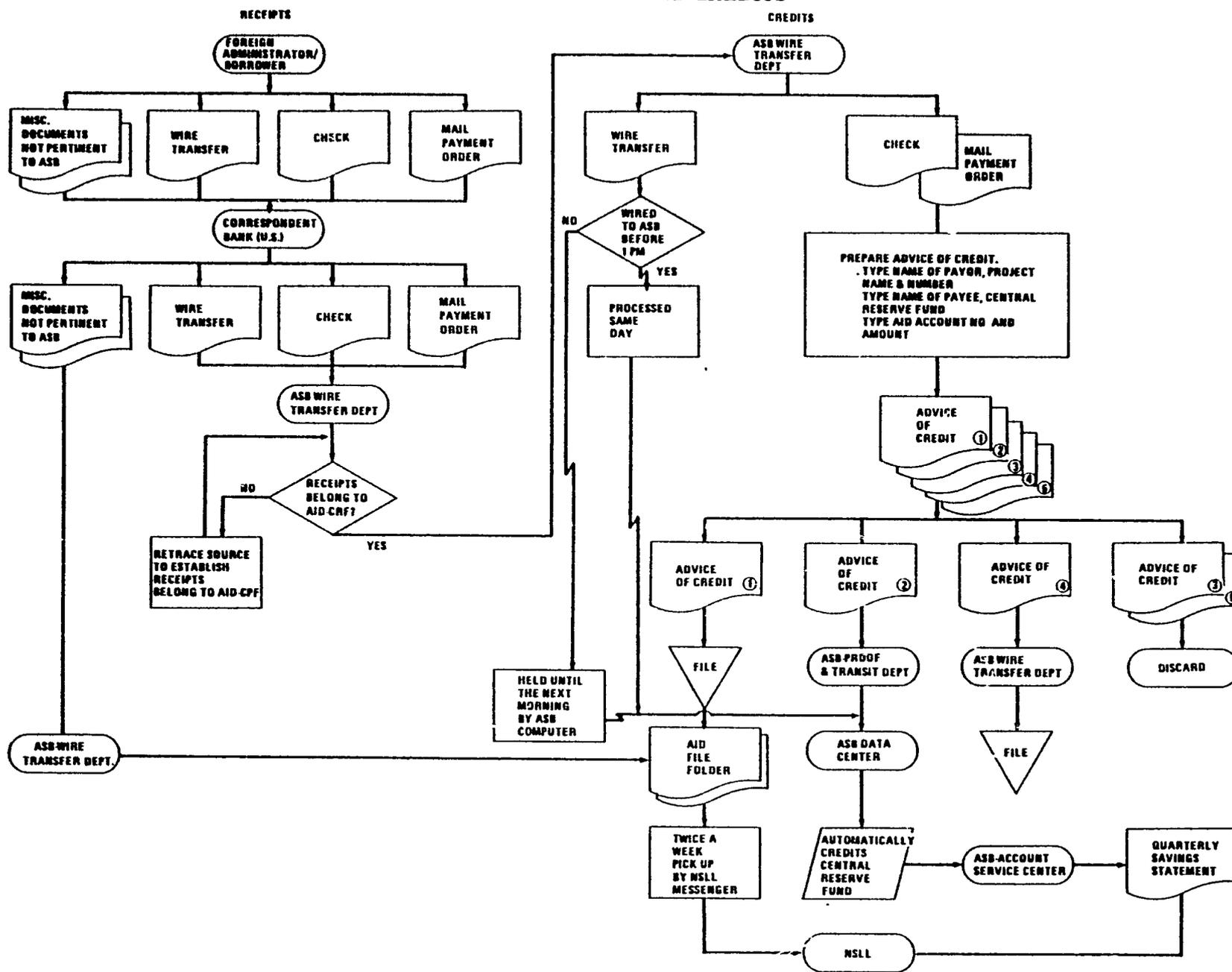
To ensure proper and timely credit, remittances must show the AID account number, project loan number, and originating country. Upon receipt of payment, the wire transfer department prepares a five-part credit advice that lists:

- . name and country of the remitter;
- . housing project number; and
- . interest, prepayment, and reserve fee.

Information is listed on the credit advice on an "if given" basis. The original copy of the bank wire or transmittal letter is attached to the original copy of the completed credit advice. These copies are held by the wire transfer division for semiweekly pickup by a messenger of the NSLL. One copy of the credit advice is forwarded to the proof and transit department of ASB to ensure proper credit to the central reserve fund: one is retained in the files of the wire transfer department and the remaining two copies are discarded. Remittances received by wire are automatically credited to the central reserve fund on the same day if the transfer is made before 1:00 p.m. However, wire transfers made after 1:00 p.m. are held by the ASB computer system, and the central reserve fund is not credited until the following day.

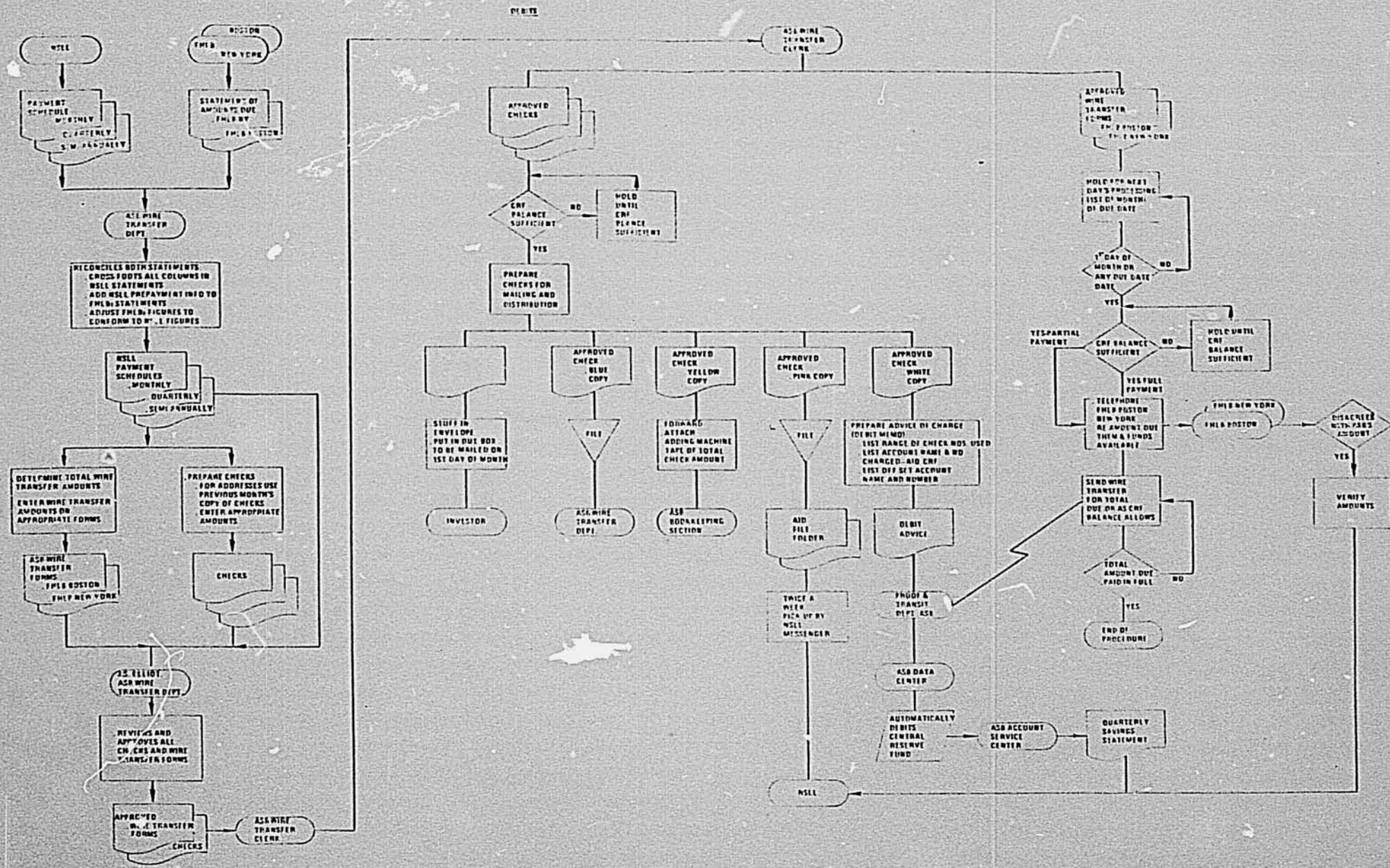
EXHIBIT B-1

THE AID CENTRAL RESERVE FUND
AS ADMINISTERED BY THE AMERICAN SECURITY BANK (ASB)--
RECEIPTS AND CREDITS



B. 2

EXHIBIT B-2
THE AID CENTRAL RESERVE FUND
AS ADMINISTERED BY THE AMERICAN SECURITY BANK (ASB) - DEBITS



PAYMENTS AND POSTING OF PAYMENTS AND DEBITS

Prior to the end of each month, ASB receives an unsigned, advance copy of a payment schedule from NSLL. This schedule indicates, by housing project, the:

- . names of U.S. investors (lenders);
- . amounts of interest, principal, and prepayments, if any;
- . AID fee; and
- . outstanding loan balance as of that payment date.

The unsigned payment schedule is the source document used in the preparation of the 32 monthly, 3 quarterly, and 35 semiannual checks. Wire transfer payments are made each month to the Federal Home Loan Bank (FHLB) of New York and the Federal Home Loan Bank (FHLB) of Boston. A total of 1,022 bank transactions a year are performed by ASB at a fee fixed by contract at \$2.50 per transaction.

Payments by Check

All checks are dated the first of each month and are mailed and debited to the central reserve fund account on the preceding business day. The pink copies of the checks are attached to the original copy of the debit advice and are held at the wire transfer department for pickup by an NSLL messenger. The white copies are retained by the wire transfer division to facilitate the preparation of next month's checks. The total dollar amount for the monthly checks is usually under \$300,000, whereas wire transfer payments are usually between \$2 and 6 million.

Payments by Wire Transfer

The payments made to the FHLBs of Boston and New York are made through wire transfers on the first of each month. The FHLB of Boston is paid by credit to its account with the First National Bank of Boston and the FHLB of New York through the Manufacturer's Hanover Trust Co., World Trade Center Branch. Prior to the end of each month, ASB receives from both banks a statement of principal and interest due to them for each housing project financed by their creditors. These amounts of principal and interest are reconciled to the payment schedule prepared by NSLL. Total amounts paid to both banks are based on statements prepared by NSLL. In the event of variance, each bank is advised by telephone of the adjusted amount wired. On the same day, a standard letter is mailed to both banks advising them that

payments in excess of principal and interest are prepayments. The central reserve fund account usually has a sufficient balance to cover payments due on a monthly basis. However, quarterly and semiannual payments are sometimes delayed because of their relatively large size and the late receipt of remittances. Since the ASB will not wire funds or mail checks unless there is a sufficient balance in the account, partial payments equal to the available balance may be sent. Once there is a sufficient balance in the account, the remaining amount due will be paid.

AID Fees

Once all payments have been made to lenders as specified on the NSLL payment schedule and there is a sufficient balance in the account, a check is issued to the order of AID for guaranty fees. Payment represents the total of the service fees that AID receives for each guaranteed loan under central reserve as reflected in the payment schedule.

APPENDIX C

NATIONAL SAVINGS AND LOAN LEAGUE

The NSLL performs a variety of services on contract to the Office of Housing (DS/H). This section deals only with those services involving accounting and financial management. Specifically included are the NSLL responsibilities to:

- . maintain individual account records for each project included in the central reserve fund (CRF).
- . monitor the performance and status of the CRF. This includes keeping a running balance, reporting monthly to DS/H, and reconciling the quarterly bank statement, prepared by ASB.
- . prepare Monthly Payment Schedules for approval by DS/H and disbursement by ASB.
- . maintain a file of current and historical records for each project. This file includes administrator reports, borrower reports, investor reports, and all project-related correspondence or analysis.
- . provide DS/H with monthly reports of projects needing immediate attention or projects that are delinquent in submitting payments.
- . prepare special reports or analyses at the request of DS/H. Most of these reports deal with forecasting and potentially minimizing the losses incurred by currency devaluation or defaults. Examples include current value studies, regression analysis, income projections, and forecasts of loss potential on devaluation projects.

Exhibit C-1 illustrates the NSLL function.

RECEIPT AND POSTING OF CREDIT AND DEBIT ADVICE

NSLL staff members pick up the following information twice per week from the International Department of ASB:

- . credit memos;
- . copies of the wires authorizing the credit memos or originals of the transmittal letters accompanying the checks;

- . debit memos;
- . any administrator or investor report erroneously submitted to the bank; and
- . any other literature or reports submitted to the bank with HGP payments.

Credit memos are reconciled against the letter or wire accompanying the memo. Photocopies are made of credit and debit memos and any supporting documentation. The copies are permanently retained at NSLL. Originals are forwarded monthly to DS/H. In addition to being reconciled against the supporting letter or wire, credit memos are reconciled to the administrator report. This provides for the correct posting of prepayments or cancellations. Credit memos are posted to a receipts journal. Also, credit and debit memos are both posted to the individual account ledgers and the CRF reconciliation. Detail for the credit postings, where necessary, is ascertained from the administrator reports and from written or verbal correspondence with the administration.

MONITORING THE CENTRAL RESERVE FUND

The status of the central reserve fund is monitored on a regular basis through the CRF Reconciliation. All credit and debit memos are posted to this ledger on receipt by NSLL. Shown on this ledger is all activity in the fund, as well as whether the activity was for regular payments or prepayments. Separate balances are computed for each and the total value of the fund is shown separately.

NSLL REPORTING

NSLL regularly produces five separate reports. These are the:

- . Central Reserve Fund Status Report;
- . Monthly Payment Schedule;
- . CRF Management Analysis;
- . Alert Status Report; and
- . Report of Payments Due/Not Received.

The CRF Management Analysis Report is for NSLL's internal use. The other reports are for distribution to the Offices of Housing and Financial Management at AID.

Central Reserve Fund (CRF) Status Report

The CRF Status Report is prepared monthly. This report shows the ending balances of each individual program included in the fund. Balances are broken down between actual reserves and prepayments. The total of the individual balances is reconciled to the CRF Reconciliation before the Status Report is finalized. Once complete, the CRF Status Report is used internally to prepare the CRF Management Analysis Report. It is also submitted to the Housing and Financial Management offices at AID/W.

In addition to being reconciled to the CRF Reconciliation maintained by NSLL, the CRF Status Report is reconciled quarterly to the quarterly bank statement prepared by ASB.

Monthly Payment Schedule

Each month, NSLL prepares a schedule, called the Monthly Payment Schedule, of payments to be made from the central reserve fund. This schedule includes any regular payments that are due and any prepayments that have been received and which, under the terms of the loan agreement, may be disbursed. It is broken down into monthly, quarterly, and semiannual groupings. Also included are prepayments which, though not yet received, have been submitted by the administrator and must be paid to avoid paying additional interest. The Payment Schedule is prepared from the amortization tables and the prepayment record for each note. Once complete, the Payment Schedule is submitted to DS/H for review and approval. A photocopy of the schedule is submitted to ASB.

CRF Management Analysis

NSLL also uses the current Monthly Payment Schedule, along with the CRF Status Report, to prepare the CRF Management Analysis. This report shows the net funds available in the reserve for each note and the amount due in the next payment on that note. The ratio of these two numbers is the "reserve fund adequacy coefficient," defined as the percentage of the next payment that is currently available in the fund. A coefficient is computed for each individual program and for the fund as a whole. When the coefficient has dropped substantially in the previous month, the administrator report is examined for a sudden increase in delinquencies or some other variable which may affect the fund. The findings are included in the Alert Status Report.

Alert Status Report

The Alert Status Report, published monthly and submitted to DS/H, is designed to provide a listing of all programs requiring the immediate attention of AID personnel. Posted to the report are any programs in which:

- . the number of delinquencies more than 4 months old has increased substantially;
- . the borrower's remittance to the fund was less than the amount disbursed by the fund; or
- . the investor report for projects not included in the CRF indicates that payment has not been received.

The Alert Status Report is one of two "warning" reports submitted to DS/H.

Report of Payments Due/Not Received

The other warning report is the Report of Payments Due/Not Received. This report is produced as of the seventh of each month. It is developed by comparing the credit postings to the individual ledgers against the Monthly Payment Schedule. Any project for which payments were issued on the first and for which there was no remittance from the project by the seventh is included in the report, which is submitted to DS/H.

PROCESSING THE QUARTERLY BANK STATEMENT AND OTHER RECEIPTS FROM ASB

In addition to the credit and debit memos and related supporting documentation, NSLL also receives a quarterly bank statement and several miscellaneous reports from ASB. As mentioned above, the quarterly bank statement is reconciled to the CRF Reconciliation and the CRF Status Report. The miscellaneous reports include administrator reports that are erroneously submitted to the bank and other requests that administrators have submitted to the bank. The administrator reports are received and filed in the same manner as the reports received directly from the administrators. Other requests from administrators are submitted to DS/H for review or action, as appropriate.

SPECIAL REPORTS AND SERVICES BY NSLL

In addition to the reports regularly produced for DS/H, NSLL also generates a variety of special reports, analyses, or services at the request of

DS/H or on its own initiative. All such services are supported by a request for services submitted by AID. About 25 percent of the time spent by NSLL in providing services under the financial management contract is spent on these special studies.

Reports

The special reports tend to be more in the area of financial management or budgeting than in that of regular accounting. Although any project may be the subject of these reports, most of them deal with the older projects in which there is no host government guaranty. Such projects are subject to substantial loss if the host country's currency is devalued. In such cases, the NSLL report will deal with forecasting losses and developing strategies for loss minimization. One report, for example, was produced to advise AID on the potential cost or value of different actions with respect to a non-host government guaranteed loan in a country that has had a substantial currency devaluation. The report addressed the current and projected losses from the devaluations. It then determined the costs and potential benefits of two options: prepaying or paying off the loan or merely continuing regular payments to the investor.

Other NSLL reports deal with the performance and adequacy of the CRF as a whole. One such report was prepared at the end of the last fiscal year. It projected the next year's budget requirements with respect to the CRF. It also projected the 5-year loss potential on projects with currency devaluations.

Services

DS/H may submit service requests to obtain any of a variety of services which NSLL is prepared to render. The bulk of the special services provided, however, involve field work to be performed by NSLL staff members. Such field work may include an on-site audit of an existing HGP. The audit would review the accuracy of records and reports and the conformance of the project to the standards set by the programs.

In certain cases, a field review will be prompted by problems encountered in a particular program. One assignment was to assist in resolving the increasing delinquency problems being encountered on one older project. NSLL staff members traveled to the site and performed a complete review and analysis of the administrator's records. From the results of this review, NSLL developed alternative solutions and made a recommendation to the Regional Housing and Urban Development Office (RHUDO). After approval of the recommendation by AID/W and the RHUDO, NSLL assisted the administrator in implementing corrective measures.

REPORTS RECEIVED BY NSLL

In addition to the information received from ASB, NSLL regularly receives reports from three other sources. These reports are the:

- . Administrator monthly financial report;
- . Borrower report; and
- . Investor report.

Administrator's Monthly Financial Report

This report is submitted on older notes in which a local administrator received a fee for acting as an agent between individual borrowers and the U.S. investor. The report may be used to reconcile any differences between payments received and expected. It provides information on collections and disbursements; the status of any funds held by the administrator; delinquencies and prepayments; a summary of the units under guaranty; and the currency exchange rate.

Most administrator reports are submitted monthly, quarterly, or semi-annually, depending on when payments are due on the note. A few of the reports are submitted late or not at all. There does not appear to be a common reason for the delinquent reports.

Several standard forms may be used for the administrator report. Although they provide the same basic information, they each provide it in a different format and at a different level of detail. Generally, the reports received from Latin America are in Spanish; others are in English.

Borrower Report

In the recent iterations of the HGP, funds are remitted to the investor or the fiscal agent directly from the borrower. The borrower will typically be a bank or savings and loan institution in the host country. This borrower receives the loan from the American investor and then makes smaller loans to local projects or mortgages meeting the standards of the HGP. The borrower is responsible for full remittance to the U.S. investor or fiscal agent.

Normally, borrower reports are due with each payment on the note. Specific loan agreements may, however, alter this requirement. The borrower report includes a breakdown of the amount transmitted in the current payment. When the loan agreement specifies that the borrower post collateral on the mortgage, the borrower report will also include a Certificate of Mortgage

Collateral. The certificate shows the value of any mortgage collateral. The collateral must be no less than the outstanding balance on the note. The certificate also shows any changes made to the makeup of the collateral in the current reporting period.

The borrower report is used by NSLL to verify that the borrower is paying according to the same amortization table as is used by NSLL.

Investor Report

The investor report is a regular report of loan status for each investor. It acts as a confirmation of receipt or notification of nonreceipt of payment. It is also a source against which to reconcile the program records kept by NSLL. There are frequent differences of a few cents between the investor reports and NSLL records. This is caused by investors using a different amortization table or otherwise allocating the payment differently than NSLL. Many investors do not submit the report regularly. This is often true of the older notes in which the investors are earning a very low return on the loan, and, therefore, are not inclined to process additional paperwork. Except in cases in which there are frequent delinquency problems, no follow-up is normally performed when the report is not received. Generally speaking, as long as the report is received and reconciled at least once per year, DS/H is satisfied that sufficient records exist.

NON-CRF HOUSING GUARANTY PROJECTS

About one-third of the HGP projects are not handled through the CRF. These projects are generally under older agreements where an escrow agent or the administrator maintains the reserve fund. The only new project not using the CRF is in Israel. In that project, arrangements for direct payment were made between Israel and the investor. NSLL receives administrator and investor reports for the non-CRF projects. It does not, however, maintain accounting records for the projects.

NSLL FILES

NSLL maintains a file for all HGP projects, of all reports, analyses, correspondence, or other relevant data. Records are kept for CRF and non-CRF projects. The file is used as a historical "archive" of all activity on any given project. Additionally, for non-CRF projects, it is the source against which findings may be reconciled when a field review of the project is conducted.