

ASSURING ACCURATE and LEGAL PAYMENTS--

THE ROLES OF CERTIFYING OFFICERS IN FEDERAL GOVERNMENT

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Joint Financial Management Improvement Program

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WHAT IS JFMIP ?

The Joint Financial Management Improvement Program (JFMIP) is a joint and cooperative undertaking of the Office of Management and Budget, the General Accounting Office, the Department of the Treasury, and the Office of Personnel Management, working in cooperation with each other and with operating agencies to improve financial management practices. The Program was initiated in 1948 by the Secretary of the Treasury, the Director of the Bureau of the Budget, and the Comptroller General, and was given statutory authorization in the Budget and Accounting Procedures Act of 1950.

The overall objective of JFMIP is to improve and coordinate financial management policies and practices throughout the Government so that they will contribute significantly to the effective and efficient planning and operation of governmental programs. Activities aimed at achieving this objective include:

- Reviewing and coordinating central agencies' activities and policy promulgations to avoid possible conflict, inconsistency, duplication and confusion.
- Acting as a clearinghouse for sharing and disseminating financial management information about good financial management techniques and technologies.
- Reviewing the financial management efforts of the operating agencies and serving as a catalyst for further improvements.
- Undertaking special projects of a Government-wide nature to resolve specific problems.
- Providing advisory services in dealing with specific financial management problems.

The JFMIP plays a key role in mobilizing resources and coordinating cooperative efforts in the improvement of financial management practices, and relies on the active participation of Federal agencies to be successful.

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JOINT FINANCIAL MANAGEMENT

IMPROVEMENT PROGRAM

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FOREWORD

The Joint Financial Management Improvement Program is pleased to issue this report on "Assuring Accurate and Legal Payments--The Roles of Certifying Officers in Federal Government." The certifying officers (and disbursing officers in the Department of Defense) in aggregate authorize Federal payments amounting to about \$1 trillion annually.

This report provides a series of recommendations that will enable the certifying officers to fulfill their roles more effectively and with greater assurance. The recommendations cover steps to improve internal control over activities leading to Government payments, particularly in systems that have become very large, complex, and sophisticated using computer and telecommunication technology. They also suggest ways to monitor corrective actions when payment systems are found to be ineffective.

The importance of internal control in Federal Government cannot be overemphasized in view of continued criticisms concerning fraud, abuse, waste and mismanagement. We hope that our report will serve as a useful tool in strengthening the roles of the certifying officers and assuring legal, accurate, and correct Federal payments. We wish to emphasize that the internal control features of the payment systems proposed in this report should be an integral part of the departments' and agencies' overall internal control systems.

We wish to express our appreciation to the General Accounting Office, the Department of the Treasury, the Office of Personnel Management, the Department of Agriculture and the Department of the Navy for assigning staff persons to the project. We also thank the many officials of departments and agencies who supported and assisted us with patience and understanding. Without their thoughtful input and constructive suggestions, this project could not have been completed.

Susumu Uyeda
Executive Director

CONTENTS

	Page
FOREWORD	i
EXECUTIVE SUMMARY	1
PART I INTRODUCTION.	6
PART II HISTORICAL BACKGROUND	11
PART III STUDY RESULTS	17
A. System Diversity and Complexity	17
B. Roles of Certifying and Disbursing Officers.	26
C. System Design, Implementation, and Modification.	34
D. System Review and Audit.	37
PART IV RECOMMENDATIONS AND DISCUSSIONS	40
APPENDIX	
A STUDY TEAM MEMBERS.	56
B DEPARTMENTS AND AGENCIES STUDIED.	57

EXECUTIVE SUMMARY

During the 20th century, the Federal Government has grown rapidly in size and complexity. Federal disbursements, which barely exceeded one-half billion dollars in the early 1900's, now approach a trillion dollars. Today, sophisticated computers and telecommunications networks make millions of payments for contracts, grants, payrolls, etc. To keep up with this growth and technology, Government needs good financial systems and internal controls, including a strong policy to hold employees responsible and accountable for their actions. Accomplishing this objective will help ensure that the Government is efficient, effective, and free of waste, fraud, and abuse.

For many years, the law has held that those who approve payments of Federal funds are personally accountable and pecuniarily liable for their legality, propriety, and correctness. Currently, this responsibility rests with certifying officers in civilian agencies and disbursing officers in defense agencies. When laws governing certifying and disbursing officers were passed, computers were not invented. Clerks prepared vouchers, verified their accuracy, and compared the facts on the vouchers with those on supporting source documents. These clerks were supervised by certifying or disbursing officers who actually reviewed supporting documents prior to payment.

Today, much of the preparation and processing of vouchers is automated. Based on input from all over the Nation and sometimes from all over the world, computers now make decisions and generate magnetic tapes for thousands of payments totaling millions of dollars. Amounts on these tapes are certified by certifying officers and used by disbursing officers to write checks.

The complexity of today's systems and the volume of payments makes it impossible for these officers to personally review source documents and attest to the facts on every payment. Since they must rely on systems and the many individuals operating them to assure that payments are legal and accurate, it is unrealistic to hold only certifying and disbursing officers accountable for illegal, inaccurate payments. Other individuals responsible for key segments of systems should be held responsible and accountable when their actions cause illegal or inaccurate payments.

Processing of payments will become more automated with future changes in technology. As we stand on the threshold of the "cashless society," we need to revise our procedures for assuring legal and accurate payments.

Since certifying and disbursing officers can no longer examine and verify each payment, they must rely on the integrity and reliability of systems and those operating them. If these officers are to rely on the integrity of systems to attest to the legality and accuracy of payments, they must have assurance that all the internal operating controls (manual and automated) have been examined and verified and that total systems are operating properly. We make the following recommendations to accomplish these objectives.

RECOMMENDATION 1

We recommend that each department and agency develop and implement for each payment system an Assurance Plan and related procedures which will provide assurance to certifying and disbursing officers that the overall payment system (1) is properly designed, implemented, and subsequently modified, (2) is operated properly and in accordance with the approved design, and (3) can be relied on to process legal, proper and correct payments. The Plan and procedures should be an integral part of departments' and agencies' internal control systems and should as a minimum, include:

- a. Designation of a "System Assurance Officer," by the department or agency head, who will be responsible for preparing the Assurance Plan and monitoring the operation of the payment system. Monitoring will be done on the basis of the system confirmation process (see c. below), information from independent reviews and audits, and other available information. The System Assurance Officer will be primarily responsible for notifying the certifying and disbursing officers that the system is operating properly and can be relied on to process legal, proper and correct payments.
- b. Designation of key officials. These will be personnel presently responsible for major areas of the system. Such areas consist of systems design and testing, implementation, modification and operation. For operation in larger systems, separate key officials may be necessary for source data preparation, data input operations, data transmission, data processing, and output review.
- c. A process of confirmation in which key officials will provide periodic assurance to the System Assurance Officer that their areas of responsibility within the payment system are working properly, with

sufficient internal controls to ensure that legal, proper and correct payments will result.

- d. A provision that all employees, whether directly involved in the payment process or not, will be responsible for notifying the System Assurance Officer when the system is not operating correctly or when they know that payments are not legal, proper or correct.
- e. Procedures for specifying audit trails and for maintaining depositories of original documents in each payment system.
- f. Procedures for determining causes of payment errors and system deficiencies.
- g. Disciplinary sanctions to be imposed on the designated key officials and others, when it is found that they are responsible for illegal, improper or incorrect payments resulting from negligence and/or lack of due care in performing their duties.
- h. A requirement for the System Assurance Officer, in consultation with higher officials when appropriate, to prepare and monitor a corrective action plan when the system is not operating properly and cannot be relied upon to process legal, proper and correct payments. The corrective action plan should provide for making urgent payments, such as payroll and pension payments, while the system is being corrected. The System Assurance Officer, by designation of the department or agency head, will be responsible for certifying (disbursing) all payments made until the system is corrected and for recouping erroneous payments that may result before corrective action can be taken.

RECOMMENDATION 2

We recommend that the Inspectors General or internal audit organizations of departments and agencies be responsible for reviewing the development, implementation and use of the Assurance Plan and related procedures.

RECOMMENDATION 3

We recommend that departments and agencies independently review and/or audit total payment systems periodically.

RECOMMENDATION 4

We recommend that the General Accounting Office (GAO) endorse the concepts of the above recommendations and specify and clarify in its Policy and Procedures Manual for Guidance of Federal Agencies that:

- a. Certifying and disbursing officers should be permitted to rely on systems to make payments if the necessary assurances have been received that the systems are designed properly and operating effectively and can be relied on to compute legal, proper and correct payments.
- b. GAO should look to the establishment of System Assurance Officer positions and the development and implementation of Assurance Plans, where applicable, in granting relief to certifying/disbursing officers, as evidence of a proper approach to controlling payments. Accountability will be determined on the basis of reasonable and prudent review of documents provided by the system and other information available to certifying and disbursing officers.
- c. Certifying/disbursing officers will be held pecuniarily liable for negligent acts pursuant to existing laws, but other participants in the payment processes will also be held administratively accountable, in accordance with the department or agency Assurance Plans, for their actions and for maintaining the reliability and integrity of the portion(s) of the system that they manage and operate.
- d. Departments and agencies will develop systems to impose administrative sanctions on any participants in the payment processes whose neglect or lack of due care causes illegal, improper or incorrect payments. The types of administrative sanctions should include dismissal, suspension, reduction in grade, transfer to other duties, reprimand or any combination of the above.
- e. Departments and agencies should be permitted to establish, when economies will result therefrom, error tolerance levels for payment systems which can be accepted as a normal part of doing business. These levels must be established in consultation

with the GAO. Establishment of tolerance levels should not be interpreted as eliminating the departments' and agencies' responsibility for recouping erroneous payments.

RECOMMENDATION 5

We recommend that the Office of Management and Budget, with the assistance of the Department of the Treasury and the GAO, consider requiring agencies to develop and implement Assurance Plans and related procedures. This can be done as part of the Office of Management and Budget's guidance to departments and agencies on internal control systems.

RECOMMENDATION 6

We recommend that the GAO, through its accounting system approval process and audit work, determine if agencies have adequate Assurance Plans and related procedures as stated in the above recommendations.

RECOMMENDATION 7

We recommend that the Office of Personnel Management take the responsibility for assuring that appropriate training is made available to educate responsible Federal employees on the objectives and operation of System Assurance Plans and related procedures and on the roles of certifying and disbursing officers.

PART I

INTRODUCTION

The concept of holding specific Government employees accountable for Federal payments was established in 1789. Since then, laws concerning certification of payments and disbursement of public funds have changed, but the basic concept of personal accountability has stayed the same. That is, specific persons are responsible to attest to the legality, propriety and correctness of payments. These persons are accountable and liable for any illegal, improper or incorrect payments. In civilian agencies certifying officers have this responsibility. In defense agencies, disbursing officers perform both the certification and disbursement functions.

The Government has grown enormously and the use of the computer has significantly altered payment methods. In the past payments were processed manually. Large groups of clerks prepared vouchers, verified their accuracy and compared facts with those on supporting source documents. Certifying or disbursing officers certified vouchers on the basis of reviews made by examiners under their supervision. Today, much of the preparation and processing of vouchers is automated. Computers generate thousands of payments, for millions of dollars, which are encoded on magnetic tapes. These tapes are used to prepare checks. In the future, payment processing will become more mechanized as additional manual processes are automated and as computer technology improves.

In today's automated environment, most decisions and actions which make the Government liable for payments are made at scattered nationwide activities, however, the payments are processed and certified at central locations. For example, purchase orders are entered into a central computer via remote terminals at field offices. Later receiving reports and vendors' bills are entered into the computer by the same means, but at other locations. The central computer verifies and matches these transactions and prepares the payments. The legality, propriety and correctness of transactions affecting payments are actually determined by individuals at the field offices and/or by a computer. However, on the basis of computer-generated output, certifying officers must certify these payments.

Certifying and disbursing officers can no longer independently attest to the legality and accuracy of payments. They must rely on many other individuals and on payment systems.

A. STUDY PURPOSE

We undertook this study because of problems with accountability over payments. These problems were previously identified by the General Accounting Office (GAO) in its report, "New Methods Needed for Checking Payments Made by Computers, FGMSD 76-82," November 7, 1977, which discussed certifying and disbursing officers' responsibilities. The report stated:

"The age of the computer calls for a change in the approach to determining whether payments are accurate and legal. While the verification of transactions, performed by certifying and disbursing officers for the past 200 years, is a valuable function, the methods employed need to be revised to deal with automated payment systems. In this report we recommend that the Director, Office of Management and Budget, direct Federal agencies to review annually whether each automated payment system and its related controls are operating effectively and can be relied on to compute payments that are accurate and legal."

Because of the GAO report and the Joint Financial Management Improvement Program (JFMIP) Principals' concern with accountability, the JFMIP staff conducted an interagency study on the responsibilities of certifying and disbursing officers.

Our overall objective was to determine how financial accountability of these officers can be made more meaningful.

Our staff made a detailed examination of the manual and automated processes used to assure that the payments for goods or services received are legal, proper and correct. We sought ways to modernize the administrative procedures to help certifying and disbursing officers fulfill their responsibilities mandated by law and to develop reasonable and equitable standards of accountability for them in today's environment. Also, we reviewed existing controls to ascertain how they can be improved in a cost effective manner to minimize the possibility of fraud or abuse of funds.

Our specific objectives were to determine and recommend:

- How certifying and disbursing officers can more effectively ensure the legality, propriety and correctness of payments, especially in large volume operations.

- What additional organizational authority or realignment is needed by these officers to carry out their responsibilities effectively.
- What changes, if any, are needed to the responsibilities of these officers in a highly computerized environment.
- What duties these officers should have in different types of organizations and systems, e.g., manual versus highly automated systems.
- What types of systematic internal controls are needed to strengthen their roles, and how agencies must evaluate these controls.
- How the process and concept of personal accountability can work effectively today, especially in automated systems.
- What laws, methods, or procedures need to be changed, if any, to ensure personal accountability for payments.

B. SCOPE AND METHODOLOGY

To achieve the study objectives, we obtained a thorough understanding of how department and agency systems of accounting and internal (management) controls work from the start of payment transactions, through the processing of transaction data, to final certification and payment. This understanding permitted us to demonstrate, among other things:

- The scope and complexity (including geographical dispersion) of systems and the volume of transactions.
- The effect automation has on personal accountability.
- The effects of varying degrees of internal controls or the lack of controls.
- The effectiveness of accountability today, and what needs to be done to improve it.

We reviewed 36 systems or subsystems in 16 executive departments and agencies (See Appendix B). These organizations were selected because they represent a cross section of the many payment systems in the Federal Government, not only

because some have manual and some have automated processes, but also because they illustrate the diversity of the Government's total payment systems. In addition to the systems mentioned, we visited Treasury disbursing centers and the Air Force Data System Design Center.

Systems studied varied as to complexity, degree of automation, and volume of transactions processed. Some are small and use very little automation, while others are large, complex, highly automated systems. All use automation to some extent. We focused on larger automated systems, but also reviewed some smaller systems.

The value of payments processed by the 36 systems ranges from \$14 million to \$99 billion annually. The total value of payments made by these systems is \$200 billion annually. A wide variety of payments are processed, including annuity payments, payroll, administrative payments (contracts, purchase orders, travel, etc.), loans, grants, income tax refunds and others.

Our major areas of concern during the study were:

- To understand the certification and disbursement process in each system, identify the certifying and disbursing officers, establish where they fit into the payment process and what validations they make before certifying payments.
- To determine how each agency reviews its systems to ensure that they are adequately designed and are operated in accordance with the approved design and procedures.

During our visits, we talked with many department and agency officials and key operating personnel. We reviewed each system with them and solicited their ideas as to how accountability could be improved and strengthened in Government and in their organizations. Many of their ideas, as well as present procedures used in systems, are incorporated into the body and recommendations of this report. Without the tremendous support and input of these officials, our task would not have been achieved.

We also reviewed work done (including workpapers) by GAO for its report, "New Methods Needed for Checking Payments Made by Computers." Some of the information gathered was used in our study.

In addition, GAO regional personnel studied systems for us at four locations.

C. DEFINITION OF A PAYMENT SYSTEM
FOR THE PURPOSE OF THIS STUDY

A payment system encompasses all decisions and actions made by individuals, and those manual and automated processes which lead to disbursement of Government funds. For example, a payment system begins with a reasonable review and processing of contractual documents, receiving reports, and invoices, and ends with the issuance of a Treasury check.

Our definition of a "payment system" does not include decisions to purchase, loan, hire, fire, or award Federal assistance. But it does include all the manual examinations, computations and processing; as well as system design and testing, system implementation, system modification, system operations, source data preparation, data input operations, data transmission, data processing, output review, certification and disbursement.

D. DEFINITION OF A DISBURSING
OFFICER FOR THE PURPOSE OF
THIS STUDY

Disbursing officers referred to in this study are those within the Department of Defense and the military departments who, in effect, perform both disbursing and certification functions. The definition does not include the Treasury Department's Regional Disbursing Officers.

PART II

HISTORICAL BACKGROUND

It has long been a Government policy that those who approve payments of Federal funds are personally responsible for their accuracy and legality. Currently, this responsibility rests with certifying and disbursing officers in Federal departments and agencies. By law, these officers are:

- responsible for any errors in certified payments;
- responsible for existence and correctness of facts recited in the certified documents for payment;
- held accountable for and required to make good on any illegal, improper or incorrect payments resulting from any false, inaccurate or misleading certifications made by them; as well as for any payments prohibited by law which do not represent legal obligations under the appropriations or funds involved.

These officers may be relieved of this pecuniary liability by GAO if they relied upon official agency records; exercised due diligence in performing their duties; had no personal knowledge of any illegal, improper or incorrect payments and could not be expected to uncover them in the reasonable performance of their legally-mandated duties.

A. ORIGIN OF ACCOUNTABILITY

The concept of personal accountability for receiving, disbursing and controlling monies of the United States was established by an act in 1789. This act also established the Treasury Department and centralized disbursements in the Treasury. This arrangement later became impractical because it did not allow prompt payments to distant employees, vendors and contractors. To expedite these payments, Treasury advanced monies to local agency employees for disbursement.

Also, Government collection officers were authorized to disburse from monies collected. This necessitated the requirement that disbursing and collecting officers account for the advances and collections they received and show proof of payments made. Further efforts to strengthen accountability resulted in (1) the act of March 3, 1797, which allowed suits against any accountable persons who neglected or refused to pay sums or balances due to the United States,

and (2) the Act of March 3, 1809, which directed all officers, agents, or other persons receiving public monies to render distinct accounts of monies advanced.

Between 1817 and 1894, more stringent laws were enacted. They required accountable officers to properly handle and account for all monies, because (1) the banking and credit systems were unreliable, (2) financial transactions were usually made in cash, and (3) Federal employees were appointed through patronage and were generally immune from discipline or removal as long as their patrons remained in office.

B. THE DOCKERY ACT OF 1894

Problems still existed with the control over the collection and disbursement of Government funds. The Congress responded to these problems by passing the Dockery Act of 1894, which centralized accounting control of collections and disbursements in the Comptroller of the Treasury. Treasury disbursing officers drew advances against appropriations from which they then disbursed and for which they were personally accountable. Collecting officers were accountable for the collections they received.

The act established that if exceptions were taken to a voucher, disbursing officers had to either (1) submit additional evidence showing the transactions to be legal, proper and correct, (2) recover the payments from the payees, (3) make restitution from their own money, or (4) request relief from the Congress. If resolution was not made by these means, the Government could make demand on the sureties of fidelity bonds purchased by the disbursing officers.

To protect disbursing officers, the act allowed the officers and department and agency heads to request advance decisions from the Comptroller of the Treasury on any questions involving the legality, propriety and correctness of any payments.

C. THE BUDGET AND ACCOUNTING ACT OF 1921

This act established the General Accounting Office headed by a Comptroller General. Many of the powers and duties of the Treasury under the Dockery Act were transferred to it, including the keeping of personal ledger accounts with disbursing and collecting officers; the audit and settlement of these accounts; the collection of debts; and the prescription of the forms, systems, and procedures for appropriation

and fund accounting. The act also directed the Comptroller General to investigate all matters pertaining to the receipt, disbursement and application of public funds.

D. EXECUTIVE ORDER 6166

The certifying officer function as we know it today was established June 10, 1933, by Executive Order 6166. This order further centralized disbursing by transferring the disbursing functions from the domestic civil agencies to the Treasury. It states:

"The Division of Disbursement shall disburse monies only upon certification of persons by law duly authorized to incur obligations upon the behalf of the United States. The function of accountability for improper certification shall be transferred to such persons, and no disbursing officer shall be held accountable therefor."

Disbursing officers in the military departments and in other special situations were not affected by the order. Under the laws preceding the order, military disbursing officers are still held accountable and pecuniarily liable for the legality, propriety and correctness of all payments. In essence, military disbursing officers perform both certification and disbursement.

Because of the order, confusion existed as to the exact division of responsibilities between agency certifying officers and Treasury disbursing officers. The Comptroller General, in his 1940 Annual Report, recommended legislation that would hold the officials in the best position to know the facts, nature and validity of expenditures responsible for improper payments. On the basis of this recommendation, the following law was passed.

E. THE CERTIFYING OFFICERS ACT

Public Law 389, December 29, 1941, commonly referred to as the Certifying Officers Act, defined the roles of disbursing and certifying officers. It provided that disbursing officers disburse only on the basis of vouchers certified by duly authorized and bonded certifying officers and be held responsible, accordingly. The act also made certifying officers responsible for any errors in certification and for the existence and correctness of the facts in the document certified for payment. They also were made accountable for, and required to make good, any illegal, improper or incorrect payments resulting from any false, inaccurate or misleading

certifications made by them. This included payments prohibited by law which do not represent legal obligations under the appropriations or funds involved.

The act also provided for the Comptroller General to relieve certifying officers of liability for any payments when he finds

--that the certifications were based on official records and that such certifying officers or employees did not know, and by reasonable diligence and inquiry could not have ascertained, the actual facts, or

--that the obligations were incurred in good faith, that the payments were not contrary to any statutory provisions specifically prohibiting payments of the character involved, and that the United States has received value for such payment.

The act provided certifying officers the right to request advance decisions from the Comptroller General on any questions of law involved in payment vouchers presented to them for certification.

F. THE ACCOUNTING AND AUDITING ACT OF 1950

This act recognizes that systems are more complex, the role of the certifying officer is changing, and internal controls in systems are of great importance. It requires executive department and agency heads to establish and maintain systems of accounting and internal controls, including appropriate internal audit, to provide effective control over and accountability for all funds, property and other assets for which the agencies are responsible.

This act recognizes that systems of accounting and internal control are essential means of assuring legality, propriety and correctness of payments. It also retains the concept of an accountable officer.

G. OTHER CHANGES

The roles of accountable officers were further refined since 1950. These changes were included in laws and Comptroller General statements. The more important changes are summarized below:

--The Comptroller General is authorized to relieve accountable officers from liability when losses are

caused by subordinates and do not result from the accountable officers' negligence in discharging their duties.

--Agencies are allowed to examine low dollar payments using statistical sampling.

--Agencies are authorized to compromise claims up to \$20,000 and relieve accountable officers from liability for these claims.

H. SUMMARY

The basic Government policy of personal accountability was established in 1789. At that time, the number of payments made were few compared with the number made today. Disbursing consisted of a "quill pen and money chest" operation. Accountable officers knew when goods were ordered and what goods were delivered. Vendors were paid on the basis of this firsthand knowledge.

Over the years many laws were passed strengthening, refining and changing the methods by which the legality, propriety and correctness of payments were determined. However, the basic concept of personal accountability remained intact for almost 200 years. Since the Certifying Officers Act in the 1940's, Government has grown tremendously and technology and payment methods have changed.

In the 1940's, vouchers were processed entirely by hand. Large groups of clerks prepared and reviewed vouchers, verified their accuracy, and compared the facts on the vouchers with those on source documents. Certifying officers certified payments on the basis of reviews performed by examiners under their supervision.

In the 1970's, payment processing became heavily automated. Today, many payment schedules are computer-generated magnetic tapes. Certified vouchers are nothing more than cover sheets for the thousands and sometimes millions of payments included on the magnetic tapes. In many cases the preparation, certification and disbursement of payments are mechanical exercises.

Payment systems today are frequently centralized processing activities which are fed source data from decentralized locations. The final computed payments cannot be compared with facts on source documents before certifications are made because these documents are not readily available. If the documents were available, verifying them would be

physically impossible because of the volume of payments processed. As a result of these changes, certifying and disbursing officers can no longer independently determine the legality, propriety and correctness of every payment.

PART III

STUDY RESULTS

A. SYSTEM DIVERSITY AND COMPLEXITY

The Government has large networks of systems which make a wide variety of payments. Payments are made for retirement benefits (social security, civil service retirement, railroad retirement, etc.), employee payrolls, administrative payments (payments for contracts, purchase orders, travel, maintenance services, etc.), Government loans, grants-in-aid, and income tax refunds, to name some.

Many different processing methods are used. Some systems process payments manually, while other systems process payments by predominantly automated methods. Almost all the systems contain some automation. Also, all departments and agencies studied either plan to, or are in the process of, expanding the use of automation. Future improvements in technology will dictate even more automation. Manual systems and automated systems require different methods for assuring that payments are legal, proper and correct.

In manual systems, the examination of source documents cannot fully assure the legality and accuracy of payments but does provide a large degree of assurance that each transaction

--is processed through all the designated responsible and authorizing officials;

--is properly documented;

--is correctly computed in accordance with source documents; and

--is not improper, unreasonable, or fraudulent according to information available.

This review process provides a reasonably sound basis for final approval, certification, and payment. The responsible employees who sign or initiate the source documents (contracts, receiving reports, time and attendance reports, etc.), are in effect, determining the legality, propriety, and correctness of the payment transactions. The certifying and disbursing officers, on the basis of these signed documents, make their certifications and disbursements.

Automated systems pose special difficulties for certifying and disbursing officers in that they must attest to the legality and accuracy of millions of payments produced automatically. Some of the difficulties encountered in certifying payments made by these systems include the large volume of transactions, many locations initiating transactions, transaction entry by remote terminals, data transfer through telecommunications networks and central computer processing. Certifying and disbursing officers must have evidence that the systems are designed and operated properly to assure that payments are legal and accurate. Therefore, systems must have procedures which require that

- documents are properly authorized, approved and examined before they are transcribed into machine-readable form;
- transcriptions are complete and accurate;
- system specifications (which identify what the systems are required to do) are consistent with current legal and policy requirements; specify adequate controls over inputs, processing and outputs; and otherwise provide for processing all aspects of transactions properly;
- additions, deletions or changes to data or computer programs are authorized and controlled;
- equipment functions properly and operates in accordance with required procedures;
- physical access to documents and equipment is adequately restricted; and,
- source data received from outside the processing departments and agencies or from other computer systems are processed according to the above criteria.

Many systems we studied are very complex and have a wide variety of configurations. The following examples of payroll, retirement, administrative and grant payment systems emphasize the diversity and complexities of the payment systems observed.

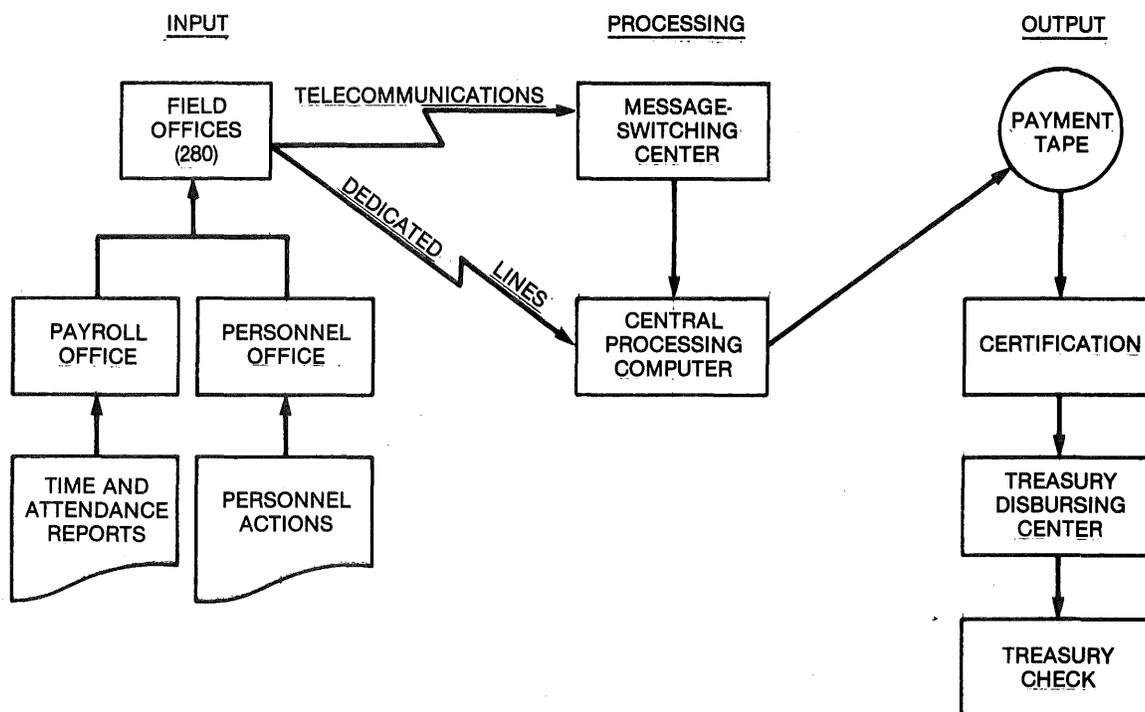
1. Payroll Systems

Over \$70 billion is spent each year to pay the 4.8 million Federal employees. The Government has many payroll systems, most of which are automated and pay thousands of employees.

Each automated payroll system we observed uses a central computer for processing. The computer maintains a file containing a master pay record for each employee. The file contains all the information (except hours entitled to pay) needed to (1) compute the employee's gross pay and deductions, (2) initiate checks for employees and recipients of deductions, and (3) prepare reports of earnings, deductions, and payments at year end. During each pay period, records are added, deleted, or changed to reflect hires, separations, promotions, etc. At the end of each pay period, the hours for each employee are entered into the computer which processes the data and prepares lists and reports needed to prepare paychecks, savings bonds, withholding allotments, control totals for accounting purposes, and other reports.

The following sections further explain two of the systems observed, and illustrate the difficulties encountered by certifying and disbursing officers in assuring legal and accurate payments.

a. Agency A



This payroll system has about 280 field stations reporting to a central computer site, which maintains master pay records for over 200,000 employees. The annual payments processed total over \$4 billion. The following paragraphs explain how the system works.

Each pay period, time and attendance reports, showing the hours for each employee's pay entitlement are signed by supervisors and forwarded to one of the 280 payroll offices for processing and encoding. Payroll offices transmit information to the central computer site by either of two means:

--By preparing a transaction tape of all payroll actions and sending the tape to another agency which transmits the data via its telecommunications network and prepares a transaction tape at the other end. This tape is hand-carried to the processing agency's central computer site where it is entered into the computer and processed.

--By using remote terminals at field stations to encode source data. These data are then transferred electronically over leased dedicated lines to the central computer which processes the data and prepares payment tapes.

Personnel actions to update master pay records also follow the same flow.

After each payroll is paid, earnings and leave statements and payroll reports are sent to the field stations for verification. Feedback from the field stations occurs after the payments are made, and adjustments are made in subsequent pay periods for erroneous payments.

The certifying officer at the computer center does not see any source documents. The officer certifies on the basis of computer generated control totals.

b. Agency B

Another agency has 2,300 locations reporting time and attendance and 10 personnel offices inputting to the central payroll system. Time and attendance reports and personnel action forms are mailed to the central payroll office. These documents are given to a private contractor to convert the data onto magnetic tapes. The data on the tapes are sent via a telecommunications network to a computer center at another location. This computer site processes the data and prepares a tape which is transmitted back to the central payroll office for certification.

Certification is based on review of computer generated control totals. The central payroll office then sends the certified payment tapes to the Treasury disbursing center which issues paychecks.

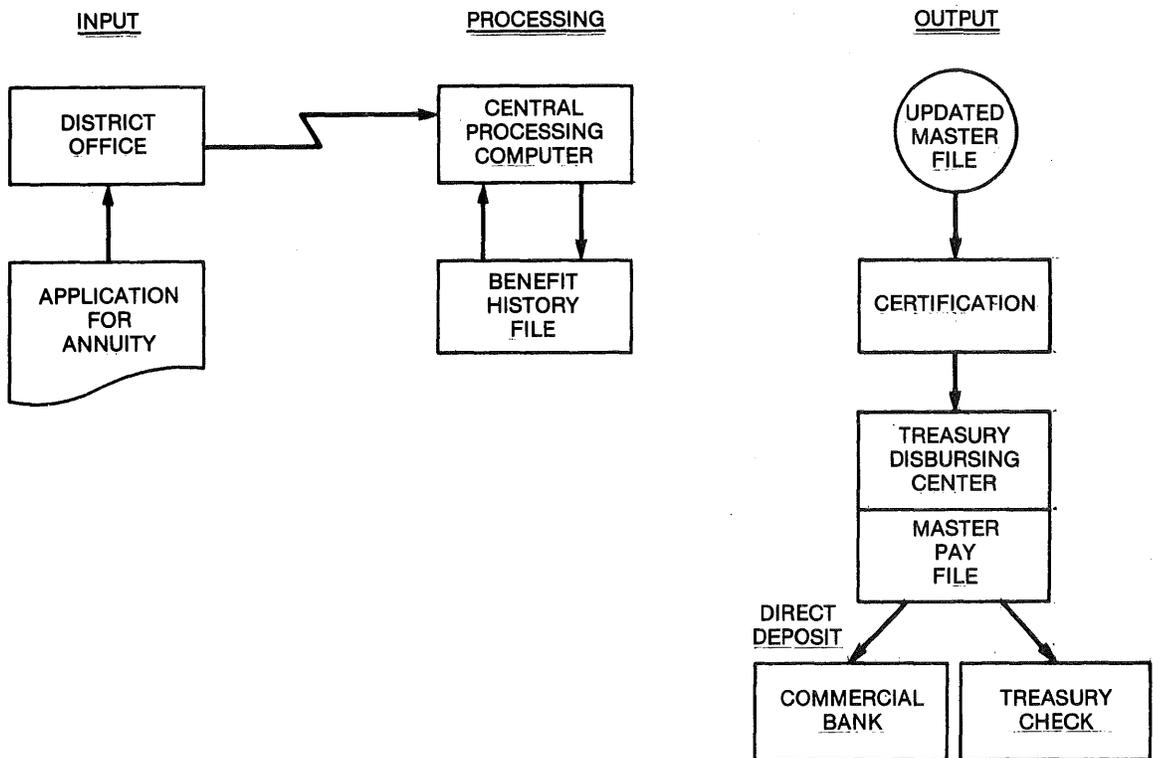
This agency also performs payroll processing for 11 outside independent organizations. The payroll time and attendance and personnel action information is prepared by the 11 organizations. These data are mailed to the above central payroll office and are processed in the same manner as the agency's payroll system. The 11 independent organizations' payrolls are certified by the servicing agency's certifying officer at the central payroll office.

2. Retirement Payment Systems

Retirement payments are usually made by automated systems. Records of annuitants' entitlements, payments, and deductions are usually maintained by a computer. Changes in entitlements, deductions, mailing addresses, and other data are processed updating computer files throughout or at the end of the month. Certified pay tapes are sent at the end of the month to Treasury disbursing centers.

Some of the larger retirement payment systems have special arrangements whereby the master pay files, in the form of magnetic tapes, are maintained by the Treasury disbursing centers. These files contain, for each payee, the name, address, amount of entitlement, and other information. During each month, the agency sends information to update the Treasury disbursing centers' master pay files. The Treasury master pay files must agree with the control totals of the agency's system before checks can be printed. When both systems' control totals agree, the payments are certified by the paying agency's certifying officer. The following sections further explain some of the complexities which certifying officers must deal with in retirement payment systems.

a. Agency A



The above process begins with a potential annuitant filling out an application at 1 of over 1,000 district offices. A claims examiner reviews the application to determine if the eligibility requirements have been met. This information is transmitted via a telecommunications network to a central data processing site. Here the computer determines the entitlement by going through various programmed decisionmaking processes to include calling up information in a benefit history file. When the monthly entitlement is computed, a magnetic tape is prepared and forwarded to the Treasury disbursing center to update its master pay file. Before certification, control totals from the annuitant pay system and the disbursing center master file must agree. Once a month the total amount of annuitants' benefits is certified by the certifying officer to the disbursing center if the control totals in both systems are in agreement.

b. Agency B

The payment process begins with the application for retirement, which generally originates at the employee's agency. This application is forwarded to a records center

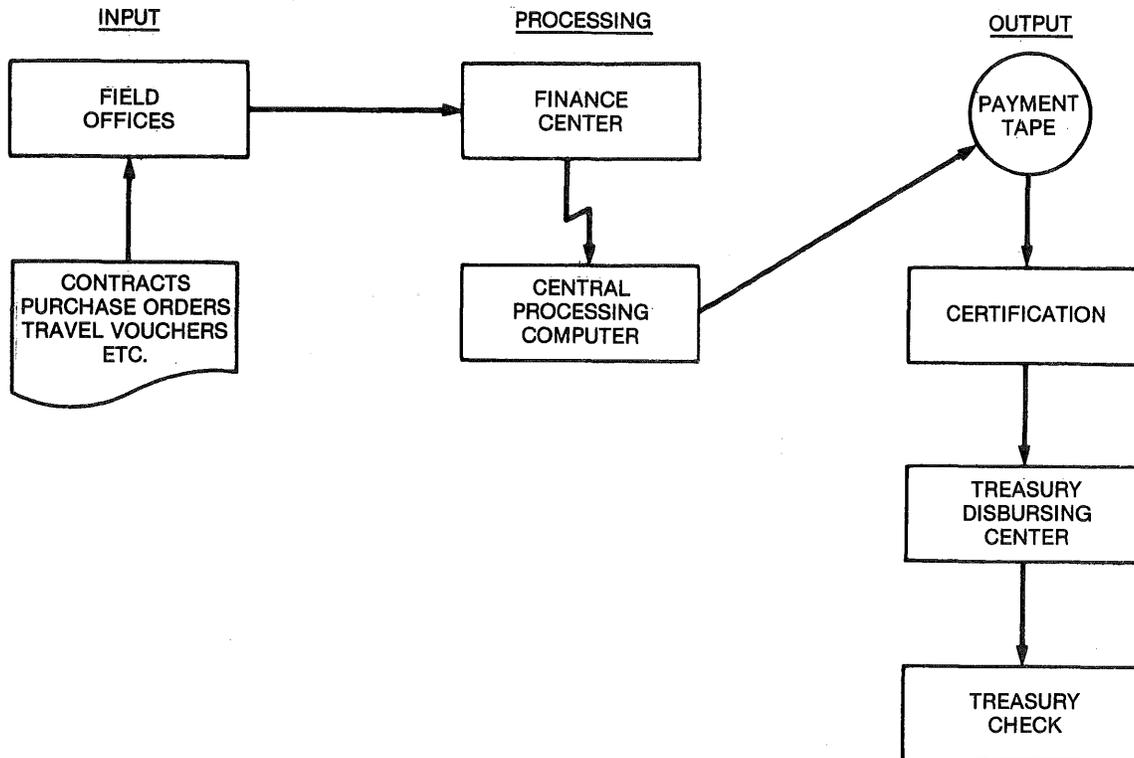
where a case file is established. Any related records, such as employment histories, are pulled and attached to the case file. The case file is sent to a central office where an adjudicator analyzes the information and computes the amount of the retirement benefit. A separate control unit inputs the recurring retirement benefit amount to the automated system. The computer prepares a tape of the computed entitlements, which is sent to the Treasury disbursing center to update its master pay file. The certifying officer reviews signatures to ensure that all previous processing steps have been completed, verifies that the source documents have been properly entered into the computer, and relies on the computer to compute payments accurately.

Interim catch-up payments are also computed by this system, using a separate minicomputer. These payments, which are not a part of the recurring payments, are sent separately to the Treasury disbursing offices on magnetic tapes. Certification is based on computer listing control totals.

3. Administrative Payment Systems

In many of these systems, source documents flow from numerous field offices to central processing sites. In some instances, hard copy source documents are maintained at field offices. Such systems process payments for contracts, purchase orders, travel, maintenance services, etc. The following sections show specifically what certifying officers must deal with in some of the systems we observed.

a. Agency A



This department has 31 agencies at about 12,000 locations submitting documentation (contracts, purchase orders, receiving reports, travel documents, etc.) to a finance center. The finance center processes over 4 million vouchers totaling about \$1 billion annually. The center uses batch processing, entering the data by terminal into the computer. The automated system matches, edits and verifies the data, computes the payments and encodes them on tape. These payments are certified within the accounting division certification branch. This branch tests and reviews the system, and controls the statistical sampling procedures used to review payments processed.

b. Agency B

This agency processes over 6 million payments totaling over \$32 billion annually. Its service centers receive source documents mailed from millions of people. Voucher examiners verify the documents and enter the data via remote terminals into a service center computer which matches, edits and verifies the data. The output is encoded on magnetic tapes. These tapes are air mailed to a computer center for further processing and preparation of payment tapes. The certifying officer verifies that computer control totals

agree with those on manually prepared payment vouchers. The certified vouchers and accompanying payment tapes are sent to the Treasury disbursing centers for check preparation.

c. Agency C

This agency has a contract payment system operating at nine regional locations. Contracts are awarded by numerous contracting offices at five agencies. The contracting agency enters basic contract information via remote terminal to a central computer. Receiving report information, from thousands of consignees, is transmitted to the appropriate regional office computer site over a telecommunications network. This network and most of the consignees are not under the control of the paying agency. Invoices from hundreds of contractors are sent directly to the nine regional locations. After this information is entered into the automated system, payments are computed automatically. The disbursing officer relies on the controls built into the system to certify and disburse.

d. Others

Some contractors are paid without signed receiving reports. In these cases, consignees must notify the agency paying office if the goods are not received.

Other agencies have procedures which allow invoices to be paid on contractors' statements that goods have been shipped. Receiving reports are not available until after payments have been made.

4. Grant Payments

Federal grants-in-aid to State and local governments for fiscal year 1980 are an estimated \$83 billion. Generally, the process of grant award, certification and payment is conducted in the following manner. The formal grant award is a signed agreement between a Federal department or agency and a grantee. This agreement states the amount of the award and the purpose for which the funds are to be used. The recipient obtains payment, depending upon the agreement, by either letter of credit, advances or reimbursements.

The letter of credit payment method provides for making cash available to recipients of grants and contracts quickly, while at the same time controlling the withdrawal of cash from the U.S. Treasury in order to minimize the impact on the public debt. During the grant award process, the Federal department or agency and grantee establish a schedule of

payments to meet the grantee's projected cash needs. The certifying officer, on the basis of the grant award and the payment schedule, prepares and certifies a letter of credit, and forwards it to the Treasury.

The letter of credit shows the total amount of the award and a quarterly limitation payment schedule to be followed by the Treasury disbursing center or Federal Reserve Bank. As the grantee requires funds for use, a drawdown voucher is prepared and submitted for payment either to a Treasury disbursing center or through the grantee's commercial bank to a Federal Reserve Bank. On the basis of the certified letter of credit and the drawdown voucher from the grantee, the disbursing center or Federal Reserve Bank pays the recipient. A copy of each executed drawdown voucher is then forwarded to the grantor department or agency and Treasury. In most cases these vouchers are available to certifying officers if they choose to check on payments after they have been made.

Other payment methods for grants include request for advance or reimbursement. Grant agreements usually specify the method of payment to recipients. For advances on small grants, predetermined payment schedules are followed, in some cases. For large grants, grantees prepare requests for advances or reimbursement which are forwarded to the grantor department or agency. These requests are reviewed usually by grant program managers and certifying officers. In all cases, the requested amounts must be certified by duly authorized certifying officers before payment can be made by Treasury disbursing centers. The following paragraph discusses a grant system we observed.

Grants-in-aids are awarded by the department's activities nationwide. When necessary, the grants are forwarded to a regional office for further processing. At this point, via remote terminal and leased lines, basic information from each grant is entered into a central computer. The manager at the central computer site, on the basis of information from the computer, issues and certifies letters of credit and/or prepares payment schedules for Treasury disbursing centers to use in making payments.

B. ROLES OF CERTIFYING AND DISBURSING OFFICERS

Under existing laws, certifying officers in civilian departments and agencies and disbursing officers in the Department of Defense are accountable for and required to reimburse amounts of any illegal, improper, or incorrect payments to the United States.

There are now over 14,000 certifying officers in civilian departments and agencies and 850 disbursing officers in the Department of Defense, who are accountable for about a trillion dollars in payments made by the Government annually.

In our modern age of large volume, highly automated, and complex systems, these officers are no longer in the best position to determine the legality and accuracy of payments. At best, especially in large automated systems, they try to determine the completeness, consistency, and accuracy of payment processing, and check the accuracy of payment control totals. At worst, they merely go through mechanical exercises which do little to assure the legality and accuracy of payments. Frequently, certification and disbursement is just a rubber-stamp process.

Certifying and disbursing officers are located at the very end of the payment processing cycle. In some instances, they are clerks, voucher examiners, and technicians in grades GS-4 through GS-9. They do not know, and are not in a position to know, the controls over decisions and manual functions that occur in processing payments, or the controls over automated data processing by computers. In most cases, they are powerless to question payments.

Because systems are so complex and the volume of transactions is so enormous, certifying and disbursing officers often have to rely on the integrity of the personnel who design and operate payment systems, and the reliability of the automated controls within each payment system. To attest to the accuracy and legality of payments, they must have some knowledge or be given some assurance that (1) the people operating the systems are processing legal transactions and accurate data, and (2) the computer is accurately processing this information.

Some agencies have methods to provide assurance that the automated portions of their payment systems are controlled and operating correctly. Also controls over manual procedures, such as receiving materials and preparing time and attendance cards, have been established for many years. However, in general, we found that departments and agencies have not evaluated total payment systems to assure certifying and disbursing officers that the systems have sufficient controls and procedures to assure legal and accurate payments.

1. Characteristics of Certifying
and Disbursing Officers

Certifying officers generally supervise a unit of some type within accounting or automated data processing organizations. In activities processing large volumes of payments, they are generally lower level employees who supervise a small element of the payment processing systems. In smaller volume systems with less automation, they tend to be higher graded and have more responsibility.

Military disbursing officers, in field installations, are usually in charge of accounting operations, while those in departmental finance centers are usually in charge of functions within the central processing centers.

Certifying officers' grades range from GS-4 to GS-16. Disbursing officers' grades range from 2d lieutenant to colonel or equivalent rank. The certifying officers' positions we reviewed are in the following classification series:

GS-301	General Clerical and Administrative
GS-330	Digital Computer Systems Administrative
GS-341	Administrative Officer
GS-501	General Accounting and Administration
GS-510	Accountant/Auditor
GS-525	Accounting Technician
GS-540	Voucher Examiner
GS-544	Payroll

The following list is representative of the positions and grades held by certifying and disbursing officers:

GS-4	Voucher Examiner
GS-7	Chief, Disbursing Division
GS-7	Payroll Supervisor
GS-7	Accounting Technician
GS-8	Voucher Examiner Supervisor
GS-9	Chief, Control Unit
GS-9	Accounting Branch Supervisor
GS-11	Chief, Programs Section, Accounts Payable Branch
GS-11	Assistant Branch Chief
GS-12	Chief, Disbursing Section
GS-12	Fiscal Officer
GS-13	Supervisory Operating Accountant
GS-13	Chief, Payroll
GS-14	Deputy Director
GS-15	Finance Officer
GS-16	Center Director
Major	Chief Disbursing Officer
Colonel	Program Director

Most organizations have a number of certifying or disbursing officers. In civilian departments and agencies, usually one or two individuals do the majority of the certifying and are in grades GS-7 through GS-12. Others in the organizations are designated as certifying officers but perform the duties only in the absence of the normal certifying officers. Some organizations have limitations on the dollar amounts that lower graded certifying officers may certify. Amounts over these limits are passed to higher graded persons for review and certification. If there are questions as to the legality, propriety and correctness of payments, they can be forwarded to the General Accounting Office for an official decision on the matter.

2. Certifying and Disbursing Officers' Duties

Certifying and disbursing officers' duties involve primarily supervision of accounting or payment processing functions--that is, getting the transactions processed and issuing payments and applying overall controls. These officers' accountability for the legality, propriety and correctness of transactions is merely incidental to their primary duties. Most are not in a position to control the incurrence of liabilities or to question the legality and propriety of transactions. Nor are they able to independently verify the facts and determine the legality, propriety and correctness of individual payments. The duties of certifying and disbursing officers in manual systems differ somewhat from those of officers in automated systems.

a. Manual systems

Certifying and disbursing officers in manual systems review, verify and compute basic source documents (contracts, grants, receiving reports, etc.).

They also check documents to determine if they are properly supported and approved, and if the payments are in compliance with pertinent laws and regulations. On the basis of these examinations, they certify and/or disburse payments. According to current law, certifications and disbursements can be made on the basis of these source documents, unless there is other knowledge that payments are illegal, improper or incorrect.

b. Automated systems

Certifying and disbursing officers rarely examine individual payments in automated systems. Certifying officers sign payment schedules showing the names and

addresses of payees, the amount to be paid to each and the total of the individual payments. When large volumes of payments are involved, the schedules show the number of payments and total amount to be paid. The individual payees and amounts are listed on magnetic tapes.

In several major systems, source documents are retained at remote locations and only data transmissions, magnetic tapes, or punched cards are sent to the central computer facilities for processing and certification.

With such a large volume of transactions, most certifying officers do not have the time or staff to review all the supporting documents at the time of certification.

Disbursing officers usually rely on deputies, other employees, and internal/external system controls. Generally, disbursing officers' signatures are machine-printed on checks and they sign only monthly statements of accountability.

We asked several certifying and disbursing officers in large automated systems how much time they spend on certification. Some examples are: (1) 15 minutes maximum per day, (2) one-half hour per day, and (3) very little time, not more than 5 percent. Another disbursing officer stated that he spends 50 percent of his time disbursing. He feels his job is to ensure that the automated portion of the system has the proper controls and procedures and is operating properly to process legal and accurate payments.

To fulfill their legal responsibilities, certifying and disbursing officers must know the total payment processes and maintain a degree of control over them (manual and automated). Yet, in automated systems, payments are made without their review of source documents, knowledge of the adequacy of the systems, or knowledge that systems are operating properly.

Certifying and disbursing officers in automated systems are no longer determining the legality, propriety and correctness of the payments but are reviewing output from systems such as listings, control totals, and the like. They stated they must rely on all employees involved and on internal/external system controls to perform their duties. They have little authority to correct problem situations which may develop in systems that affect payments. Generally, in automated systems, they are lower graded and have limited authority. Also, many of the manual and automated

processing functions are outside the scope of their supervision. In many instances, functions affecting the payment processes are outside the paying organizations.

3. Examples of Certifying and Disbursing Officers' Actual Duties

One agency's automated system produces 1.2 million payments monthly for a dollar value of \$350 million. The system prepares magnetic tapes and lists containing all the payments to be made. The certifying officer, a GS-4 records examiner, compares detailed listing totals with summary listing totals, and certifies the summary totals, if they agree. This is the extent of review and verification. The officer was not aware that certifying the summary totals was attesting to the legality, propriety and correctness of the payments or that certification imposed accountability and pecuniary liability for illegal, improper or incorrect payments.

Another agency operates a centralized automated payroll system paying over 200,000 employees biweekly. The payroll and personnel actions from over 200 locations are transmitted by service centers via a telecommunications network to other service centers, which make magnetic tapes of the data. These tapes are delivered to the agency's computer center where the data are processed. The computer generates a pay tape, which is certified by a GS-9 payroll supervisor at the center. Hard copy source documents (time and attendance and personnel action reports) are stored at the 200 inputting locations and are not readily available for examination and verification before certification.

4. Guidance and Training

Most disbursing officers are school trained in the finance and accounting fields and receive limited training in disbursing and certifying. However, the military services have detailed directives and regulations outlining their responsibilities. As a result, the feeling of accountability and threat of being pecuniarily liable for payments appears more prevalent in the military.

Some training is conducted for certifying officers in predominantly manual systems. Directives and regulations on certification are available. Training courses are usually conducted on voucher examination and auditing. As a result, certifying officers in such systems are more aware of their responsibilities, and the threat of personal liability provides a degree of control.

Formal training for certifying officers in automated systems is almost nonexistent. For all practical purposes, any training is received on the job. In most instances, regulations and directives on certification exist but are not always readily available to certifying officers. In two agencies, the certifying officers were not aware of any regulations or of their responsibilities.

5. Departments' and Agencies' Perceptions of Certifying and Disbursing Functions

We asked for department and agency views on the extent it is reasonable to expect certifying and disbursing officers to verify the legality, propriety and correctness of payments. The consensus was that these officers should retain their pecuniary liability, but only to the extent that they can (1) rely on the integrity of the systems and (2) reasonably review and verify the payment data available to them.

Generally, there is the feeling that with manual systems, certifying and disbursing officers serve a necessary role in the payment process. However, in highly automated systems, certifying and disbursing officers are often perceived as just another step in the process and not as the individuals who are accountable and liable for payments.

6. Certifying and Disbursing Officers Lack Complete Assurance That They Can Rely on Systems

For certifying and disbursing officers to attest to payments, they must have assurance that total payment systems (both manual and automated processes) are operating as designed. GAO's report, "New Methods Needed for Checking Payments Made by Computers," stated:

"In the days before the computer and today's large volume of transactions, certifying and disbursing officers could physically examine each supplier's invoice and the supporting documentation before payment. Today such an examination is virtually impossible for many of the disbursing systems that use computers extensively. To adapt to this change in operating procedures without losing essential controls over disbursements, agencies need to review periodically the details of how these systems operate so that certifying and disbursing officers will have assurance that internal controls reasonably protect against theft and error."

We asked responsible officials at 13 departments and agencies we visited; "Is the assurance process adequate from the certifying and disbursing officers' standpoint?" Seven stated it is inadequate. They said a great deal depends on the (1) legality and accuracy of the information on source documents, (2) controls over the inputting of documents from field or regional offices to the automated systems, (3) controls over the telecommunications networks, and (4) controls over the computer processing. The certifying and disbursing officers today have to assume that all information received and processed by all sources are legal and accurate, including some data received from other departments and agencies or other systems within the paying organizations. These officers do not have assurance that total systems are operating effectively and, as a result, are attesting to payments blindly.

7. Problems With Assuring That the System is Operating Effectively

Many departments and agencies have not clearly defined their total payment systems. They consider the computer operations to be their entire payment systems. Very little consideration is given to what happens before computer processing, such as source data preparation, input operations, and data transmission.

As a result, department and agency officials frequently view certification and disbursement as reviewing computer output and do not consider the many manual functions at the beginning of the payment process. This was true in several organizations observed. The certifying and disbursing officers verified cumulative payment data on computer lists and if the totals agreed, payment vouchers were prepared and certified and payments were made.

Departments and agencies do not have overall plans to assure that their total systems (both manual and automated processes) are operating effectively. The vast majority of organizations surveyed rely on manual controls and computer controls, such as batch controls, edits, etc. Also, they use statistical sampling, test decks, quality assurance teams, etc. Their system reviews are directed mainly toward the reliability of computer processing. We found that the controls over manual review and processing and data conversion are rarely reviewed, especially at field offices. In many cases, authorizing signatures on source documents are not checked and telecommunications networks are not examined for possible intervention into the system. These aspects of

systems need to be reviewed to ensure that data entered into computers are accurate. If inaccurate data are entered, the computers might make erroneous payments.

Most departments and agencies have had procedures for reviewing the various elements in their payment systems for many years. But very seldom are the payment systems reviewed from initiation of transactions through final payments, with the objective of assuring certifying and disbursing officers that the systems are designed properly with the necessary internal controls to process legal and accurate payments.

8. Total Payment Process Control

Supervision over all participants and functions in the payment system is at a very high level, sometimes the department or agency head.

However, many individuals who certify and disburse payments are located at central computer locations. They have very little authority over computer center operations and no control over processing of data before receipt. As mentioned previously, the certifying and disbursing officers review computer listings and totals to attest to payments. Except for some manual systems, most determinations for legality, propriety and correctness are made at field offices.

In some systems, data are received from other systems or other departments or agencies. The receiving organization's System Assurance Officer should work with the other System Assurance Officer(s) to fulfill his/her responsibility.

C. SYSTEM DESIGN, IMPLEMENTATION AND MODIFICATION

For certifying and disbursing officers to attest to the legality and accuracy of payments, they must have assurances that systems are operating effectively. These assurances must be provided by those designing, implementing, changing and operating the systems. This is not being done in all cases today.

The system design, including both manual and automated processes, is the key element in determining the usefulness and adequacy of any system. In automated systems, computers themselves do not provide control, but controls are incorporated into computer programs. Basically, automated processes replace manual functions. Therefore, it is extremely important, when automating functions, to tightly monitor the transition and assure that internal controls are not lost.

The following chart shows the life cycle of a system design and implementation.

INITIATION PHASE	DEVELOPMENT PHASE				OPERATION PHASE
	DEFINITION STAGE	DESIGN STAGE	PROGRAMMING STAGE	TEST STAGE	
	FUNCTIONAL REQUIREMENTS DOCUMENT	SYSTEM/SUBSYSTEM SPECIFICATION	USERS MANUAL		
		PROGRAM SPECIFICATION	OPERATIONS MANUAL		
	DATA REQUIREMENTS DOCUMENT	DATA BASE SPECIFICATION	PROGRAM MAINTENANCE MANUAL		
		TEST PLAN		TEST ANALYSIS REPORT	

One agency observed has a highly structured and disciplined approach to designing and implementing a payment system. After each stage of development until implementation, a group of key officials attest to the adequacy of the system and its internal controls. In the testing, as well as the implementation/operation stage, the system is operated using test or actual transaction data. Those involved in testing include program managers, system accountants, automated data processing analysts and system auditors, who are not involved directly in designing, programming, or operating the system. Before any system is fully implemented, this group must attest to its reliability.

Also, and probably equally as important, is the agency's method for modifying the system in operation. All changes are closely monitored and tightly controlled. When top management authorizes a change, the initial design group reprograms the system. However, before the change is implemented, a separate review group must fully test its overall effects on the system.

The original design documentation and subsequent changes are maintained by a design control group. This documentation is controlled and updated. A systems control group also periodically tests the system in operation to ensure that it is being operated as designed and that unauthorized alterations have not been made. This structured and disciplined approach to system design, implementation and change assures the agency that its system will process legal and accurate payments.

Another agency has a system audit division assigned to and physically located at its data processing center to help ensure that its system is adequate. This division is under the control of the central office in Washington, D.C. The system auditors at the center:

1. Perform comprehensive audits of new and modified automatic data processing programs to assure that the system provides proper internal and external controls, adequate audit trails and compliance with automated data processing standards prior to certification and installation.
2. Recommend program changes and improvements based on their reviews of new, modified and ongoing programs, systems and applications.
3. Provide continuous onsite monitoring of assigned programs and systems to assure desired and required results.
4. Insure that authorized changes (only by central office) have been properly validated and implemented.
5. Make periodic operational audits to determine that internal system controls are established and maintained to preclude fraudulent file manipulation.

One important point addressed in these above examples is that all program changes are controlled and authorized only by a central office. Before any new program or change is implemented at the data processing center, it is tested by the system audit division. Not only is the change tested, but the overall system, including the changes, are tested to insure that the change has not altered any other aspect of the total system. Only after such testing is completed to the system audit division's satisfaction is the change or new program implemented into the total system. This method is an excellent control for maintaining system integrity.

System documentation is a problem with many systems today. Most systems are adequately documented when designed and implemented; but as systems are changed, the documentation is not always updated. Many agencies stated that their systems' documentation is not current. In fact, one very large system observed is not documented, and no individual can define and explain it in detail. This condition is caused by changes being made to the system in an uncontrolled environment. Programers make changes which are not centrally monitored, controlled or documented. As a result, no one in the organization completely understands the system and management has lost control.

When a system is not adequately documented, it is next to impossible for an independent group to perform a review. System compliance personnel, system reviewers, auditors and other service groups must rely on documentation to know what the system is supposed to do and how it is designed.

To carry out their responsibilities, certifying and disbursing officers must (1) know the entire payment processing system, including manual and automated processes, or (2) have assurance from those designing, implementing, changing, and operating the system that it is designed and operating properly. We observed only two agencies where certifying and disbursing officers are involved in designing, implementing and modifying the systems. Unfortunately, in most agencies, certifying and disbursing officers are not involved in the design, development and operation of systems and are not given any assurance that systems will process legal and accurate payments.

D. SYSTEM REVIEW AND AUDIT

1. System Review

Independent system review is an extremely important function for management to ensure that systems are properly designed and operating correctly. As mentioned in the previous section, some agencies have groups who review the adequacy of systems' designs and operations. These groups are independent in that they are not part of the staffs designing, implementing, operating and modifying systems. An independent review and opinion is an extremely important aspect of internal control.

System reviews are usually given low priority, and some systems are so poorly documented that reviews would be virtually impossible. System documentation is usually given a very low priority also. Some systems are documented only

after they are operating, in some cases days and weeks after they are operational, and in others, months or years later or never at all. The National Bureau of Standards has developed standards covering system documentation. These standards are in the Federal Information Processing Standards Publication; however, they are not generally known to agencies or if known are ignored. Some agencies have these publications on hand but do not use them. Agency personnel stated that due to manpower limitations, procedures prescribed in these publications cannot always be followed.

Designers, implementers, operators and modifiers have a vested interest in implementing systems and in keeping them operating. In some cases, controls are circumvented to get the job done. Therefore, management must have so-called watchdog reviews of systems to ensure that they maintain system integrity and reliability. System review staffs can and should perform this function.

Managers at several agencies stated they do not have the staff to perform complete system reviews. Some agencies do not have sufficient expertise, especially in automatic data processing, to perform system reviews. Most agencies now review segments of systems, but the reviews are made on a piecemeal basis without a coordinated plan. Resources are always going to be a problem. However, if agencies assess the resources available and use a planned and coordinated approach to system reviews better results can be achieved.

2. Audit

Another important source of information and control is internal audit and Inspector General staffs. These organizations are essential tools to management, complementing other elements of management control.

The GAO Title 3 of the Policy and Procedures Manual for Guidance of Federal Agencies, in describing the nature of internal audit, states:

"The overall objective of internal auditing is to assist agency management in attaining its goals by furnishing information, analyses, appraisals, and recommendations pertinent to management's duties and objectives.

"Internal auditing is a staff and advisory function, not a line-operating function. Thus, the internal auditor should not have authority to make or direct changes in his agency's procedures or

operations. His job is to independently and objectively analyze, review, and evaluate existing procedures and activities; to report on conditions found; and, whenever he deems it necessary, to recommend changes or other actions for management and operating officials to consider.

"An internal auditor should not be given direct operating responsibilities. Rather, he should be expected to concern himself primarily with the performance of others, to retain an independent outlook in all of his work, and to direct particular attention to matters requiring corrective action. His function is to present his views and suggestions constructively in such a manner as to stimulate or encourage action on his suggestions by others."

Audit is an integral part of management control and should be used to help assure the reliability and integrity of payment systems. Audits should not be the only reviews performed on systems but should be used as a part of the management process to ensure legal, proper and correct payments. About half the agencies surveyed do not include the internal audit staffs in periodic system review.

PART IV

RECOMMENDATIONS AND DISCUSSIONS

During the twentieth century, the Federal Government has increased rapidly in size and complexity. Federal disbursements, which barely exceeded one-half billion dollars in the early 1900's, today approach a trillion dollars. The volume of transactions, geographical dispersion in which transactions are made, and the use of automated data processing methods make it impossible for certifying and disbursing officers to personally verify the legality and accuracy of each payment. Yet, existing legislation holds them accountable and pecuniarily liable for illegal, improper or incorrect payments.

These officers must rely on the integrity and reliability of payment systems and those operating them. Expenditures of today's magnitude require each department and agency to have adequate internal controls in their systems to safeguard against illegal and erroneous payments. Certifying and disbursing officers must have assurance that all the internal controls (manual and automated) and the total payment systems are operating properly. We make the following recommendations to accomplish this objective.

RECOMMENDATION 1

WE RECOMMEND THAT EACH DEPARTMENT AND AGENCY DEVELOP AND IMPLEMENT FOR EACH PAYMENT SYSTEM AN ASSURANCE PLAN AND RELATED PROCEDURES WHICH WILL PROVIDE ASSURANCE TO CERTIFYING AND DISBURSING OFFICERS THAT THE OVERALL PAYMENT SYSTEM (1) IS PROPERLY DESIGNED, IMPLEMENTED, AND SUBSEQUENTLY MODIFIED, (2) IS OPERATED PROPERLY AND IN ACCORDANCE WITH THE APPROVED DESIGN, AND (3) CAN BE RELIED ON TO PROCESS LEGAL, PROPER AND CORRECT PAYMENTS. THE PLAN AND PROCEDURES SHOULD BE AN INTEGRAL PART OF DEPARTMENTS' AND AGENCIES' INTERNAL CONTROL SYSTEMS AND SHOULD AS A MINIMUM INCLUDE:

- a. DESIGNATION OF A "SYSTEM ASSURANCE OFFICER," BY THE DEPARTMENT OR AGENCY HEAD, WHO WILL BE RESPONSIBLE FOR PREPARING THE ASSURANCE PLAN AND MONITORING THE OPERATION OF THE PAYMENT SYSTEM. MONITORING WILL BE DONE ON THE BASIS OF THE SYSTEM CONFIRMATION PROCESS (SEE c. BELOW), INFORMATION FROM INDEPENDENT REVIEWS AND AUDITS, AND OTHER AVAILABLE INFORMATION. THE SYSTEM ASSURANCE OFFICER WILL BE PRIMARILY RESPONSIBLE FOR NOTIFYING THE CERTIFYING AND DISBURSING OFFICERS THAT THE SYSTEM IS OPERATING PROPERLY AND CAN BE RELIED ON TO PROCESS LEGAL, PROPER AND CORRECT PAYMENTS.

- b. DESIGNATION OF KEY OFFICIALS. THESE WILL BE PERSONNEL PRESENTLY RESPONSIBLE FOR MAJOR AREAS OF THE SYSTEM. SUCH AREAS CONSIST OF SYSTEMS DESIGN AND TESTING, IMPLEMENTATION, MODIFICATION AND OPERATION. FOR OPERATION IN LARGER SYSTEMS, SEPARATE KEY OFFICIALS MAY BE NECESSARY FOR SOURCE DATA PREPARATION, DATA INPUT OPERATIONS, DATA TRANSMISSION, DATA PROCESSING, AND OUTPUT REVIEW.
- c. A PROCESS OF CONFIRMATION IN WHICH KEY OFFICIALS WILL PROVIDE PERIODIC ASSURANCE TO THE SYSTEM ASSURANCE OFFICER THAT THEIR AREAS OF RESPONSIBILITY WITHIN THE PAYMENT SYSTEM ARE WORKING PROPERLY, WITH SUFFICIENT INTERNAL CONTROLS TO ENSURE THAT LEGAL, PROPER AND CORRECT PAYMENTS WILL RESULT.
- d. A PROVISION THAT ALL EMPLOYEES, WHETHER DIRECTLY INVOLVED IN THE PAYMENT PROCESS OR NOT, WILL BE RESPONSIBLE FOR NOTIFYING THE SYSTEM ASSURANCE OFFICER WHEN THE SYSTEM IS NOT OPERATING CORRECTLY OR WHEN THEY KNOW THAT PAYMENTS ARE NOT LEGAL, PROPER OR CORRECT.
- e. PROCEDURES FOR SPECIFYING AUDIT TRAILS AND FOR MAINTAINING DEPOSITORIES OR ORIGINAL DOCUMENTS IN EACH PAYMENT SYSTEM.
- f. PROCEDURES FOR DETERMINING CAUSES OF PAYMENT ERRORS AND SYSTEM DEFICIENCIES.
- g. DISCIPLINARY SANCTIONS TO BE IMPOSED ON THE DESIGNATED KEY OFFICIALS AND OTHERS, WHEN IT IS FOUND THAT THEY ARE RESPONSIBLE FOR ILLEGAL, IMPROPER OR INCORRECT PAYMENTS RESULTING FROM NEGLIGENCE AND/OR LACK OF DUE CARE IN PERFORMING THEIR DUTIES.
- h. A REQUIREMENT FOR THE SYSTEM ASSURANCE OFFICER, IN CONSULTATION WITH HIGHER OFFICIALS WHEN APPROPRIATE, TO PREPARE AND MONITOR A CORRECTIVE ACTION PLAN WHEN THE SYSTEM IS NOT OPERATING PROPERLY AND CANNOT BE RELIED UPON TO PROCESS LEGAL, PROPER AND CORRECT PAYMENTS. THE CORRECTIVE ACTION PLAN SHOULD PROVIDE FOR MAKING URGENT PAYMENTS, SUCH AS PAYROLL AND PENSION PAYMENTS, WHILE THE SYSTEM IS BEING CORRECTED. THE SYSTEM ASSURANCE OFFICER, BY DESIGNATION OF THE DEPARTMENT OR AGENCY HEAD, WILL BE RESPONSIBLE FOR CERTIFYING (DISBURSING) ALL PAYMENTS MADE UNTIL THE SYSTEM IS CORRECTED AND FOR RECOUPING ERRONEOUS PAYMENTS THAT MAY RESULT BEFORE CORRECTIVE ACTION CAN BE TAKEN.

Discussion of Recommendation 1

Assurance Plan

The purpose of the Assurance Plan and related procedures is to assure certifying and disbursing officers that the overall payment system can be relied on to produce payments that are legal, proper and correct.

The Assurance Plan and procedures will provide a formal and systematic process whereby the System Assurance Officer and the certifying and disbursing officers can rely upon any and all assurances given to them by people designing, implementing, operating, and reviewing the payment system. It will also allow agency management to hold certain persons responsible through specified administrative sanctions should their assurances prove to be false, inaccurate or otherwise undependable. Under present law, certifying and disbursing officers will continue to be held accountable and pecuniarily liable for certifying and disbursing illegal, improper or incorrect payments. When illegal or incorrect payments are made through no fault of certifying or disbursing officers, the Assurance Plan and related procedures will provide better substantiation for requesting GAO to relieve these officers from pecuniary liability. The Assurance Plan will make it easier to identify who is responsible for the illegal and inaccurate payments and to take the necessary corrective action.

The development and implementation of an Assurance Plan and procedures formalizes, builds on and strengthens procedures existing in many agencies today. The process of determining if systems are properly controlled and operated and providing assurance to certifying and disbursing officers that the system is operating properly is nothing more than what should be included in systems now. The Plan merely defines the payment process and structures how departments and agencies can systematically determine the integrity and reliability of their payment systems in an organized manner. This process will give management a workable and systematic way to assure certifying and disbursing officers that systems are processing legal and accurate payments, and that they can rely on these systems to certify and disburse.

Department and agency heads are the individuals who have control over the many organizations and activities involved in the payment process; therefore, they will be ultimately responsible for the development and implementation of Assurance Plans. A key element in these plans is the designation of System Assurance Officers, by the department or agency heads, to be responsible for payment systems and to

coordinate, develop, and implement the Assurance Plans and related procedures. The System Assurance Officers will need a line of communication directly to department and agency heads when they are unable to resolve or correct problems in the payment systems.

The development and implementation of the Assurance Plans will differ for each organization depending on system configuration, interphase with systems in other organizations, and other variables. Departments and agencies should develop their own formats and order of presentation to accommodate internal organizational requirements and conditions. Top managers in departments and agencies should be free to exercise their discretion to achieve the objective of improved accountability through development and implementation of effective Assurance Plans. This approach provides the broadest possible latitude to managers and should eliminate any excuses for failure to achieve this objective.

The Assurance Plan and related procedures should incorporate the provisions of all existing legislation, regulations, directives, circulars, etc., concerning systems integrity and reliability; for example, OMB Circular A-71, Security of Federal Automated Information Systems. The Assurance Plan is not intended to duplicate existing procedures, functions, and requirements. The Assurance Plan should be a comprehensive document, pulling together all the necessary elements required to ensure the integrity and reliability of total payment systems.

Many departments and agencies already have many of the basic elements of a good assurance process, but in most instances these are fragmented and are not coordinated into a systematic process for assuring integrity and reliability of total payment systems. Periodic and complete reviews of total payment systems are also not being conducted. Coordinating these various elements, including various types of reviews, into a single Assurance Plan could enable departments and agencies to ensure systems integrity and reliability more effectively and efficiently.

Assurance Plans and procedures should not be voluminous documents. These Plans should be as simple, concise and direct as possible in order to (1) improve internal systems controls, (2) make individuals aware of the responsibility they already have, and (3) assure to certifying and disbursing officers that they can rely on the integrity and reliability of total payment systems to certify and disburse. The following paragraphs outline the key elements of an Assurance Plan.

a. System Assurance Officer

System Assurance Officers should be designated by the department or agency heads for each payment system or group of systems. As a practical matter these officials should be the controller or someone who has controller skills and responsibilities. There may be some instances where it would be appropriate for the System Assurance Officer to be the certifying (disbursing) officer if he/she is in a position of sufficient authority. However, this would usually exist in smaller, basically manual systems. In large, complex automated systems the function should be separate and distinct. Certifying (disbursing) officers in most of these systems are generally not of high enough grade or rank to fulfill the role of a System Assurance Officer.

System Assurance Officers will be responsible for the development and implementation of Assurance Plans and related procedures for assuring that overall systems are reliable. They will be the focal point to which systems problems and deficiencies are reported. They will be responsible for seeing that the problems and deficiencies are corrected. In large, complex systems, more than one System Assurance Officer may be required. Where this is necessary, Assurance Plans should clearly delineate each officer's responsibility.

Since System Assurance Officers are to determine system effectiveness, they must have procedures and tools to do the job. However, it is not normally intended that System Assurance Officers will have staffs to review and verify the payment systems. Rather, they must rely on a confirmation process (as discussed in c. below) which will assure that the systems are designed and operated properly. Also, Assurance Plans must spell out and coordinate the types of independent systems reviews and audits required to provide the necessary assurances to System Assurance Officers. In cases where it is suspected or known that systems are not working properly, or there is possible wrongdoing, System Assurance Officers must be authorized to request special reviews and audits.

System Assurance Officers are responsible for ensuring that system problems are corrected and for reporting suspected or known cases of wrongdoing to Inspectors General or other appropriate officials for investigation. System Assurance Officers should either have sufficient authority to direct the necessary corrective actions or have direct access to higher officials, including department or agency heads, who can direct corrective action if necessary.

In some cases, a payment system of one organization may receive basic payment information from another payment system. In these cases the System Assurance Officer of the receiving organization should work closely with the other System Assurance Officer(s) to carry out his/her responsibility.

Assurance Plans must clearly address the relationship between System Assurance Officers and the certifying and disbursing officers. System Assurance Officers must periodically assure the certifying and disbursing officers that systems are operating properly and can be relied on to process legal, proper, and correct payments. If these assurances are not received, certifying and disbursing officers should not certify or disburse payments. In such situations, certification responsibilities should be elevated to the System Assurance Officers. (See h. below.)

If, for any reason, certifying (disbursing) officers are aware of situations that may lead to illegal or improper payments, they must question the adequacy of the systems or the legality and accuracy of payments. They continue to have a legal right to secure advance Comptroller General decisions as a means of determining the legality and propriety of payments. If they have reason to believe that payments are questionable and do not exercise this right, they can be held accountable and pecuniarily liable for illegal, improper or incorrect payments.

b. Designation of key officials as responsible

The basis of Assurance Plans is founded on the concept that the officials who design, manage and operate the various segments of systems are primarily responsible. The Assurance Plan should look to these officials for proper processing and operation in their responsible areas. When Assurance Plans are being developed and implemented, total payment systems must be divided into responsibility areas and their managers designated as key officials. The key officials, in addition to being responsible for managing their operations, will be required to make periodic reviews to assure that their areas of the system are operating properly. The results of these reviews are tied into the confirmation process described in c. below.

c. Confirmation process

This section of the Assurance Plan and related procedures must address how departments and agencies will assure System Assurance Officers that systems are reliable,

designed properly and operating effectively to process legal, proper and correct payments. Many methods can be used. The methods used will depend upon programs and organizations involved and the configuration of payment systems. The confirmation process requires key designated officials to periodically attest to the System Assurance Officers that they have thoroughly reviewed their areas of responsibility within the system. They must indicate either (1) that they are satisfied that their areas are operating properly, or (2) their areas contain deficiencies which may cause illegal, improper, or incorrect payments.

The frequency of confirmations will depend on agency operations and the confirmation process used but should be made, at a minimum, annually and at the time of certain key events. Key events will include major modifications in systems or changes in key designated officials. Confirmations in these situations will ensure that the reliability and integrity of the system have remained intact through organizational and personnel changes. The Assurance Plan confirmation process should address mainly two areas in the life cycle of a payment system which are discussed below.

(1) System design, implementation and modification

Each system is somewhat unique and each requires an adequate network of internal controls. System designers and implementers are responsible for building these controls into the total payment systems. They must consider the controls necessary to (a) prevent unauthorized data from being processed, (b) ensure accurate processing of data and (c) prevent unauthorized tampering with the system. Many other aspects of internal control must also be considered.

Early coordination with Inspectors General or internal audit staffs is extremely important during this phase. These staffs should review and test the adequacy of internal controls and accuracy of processing.

Systems design modifications should follow the same processes as the initial design. Such changes must be tightly controlled. Generally, they should be made only by design personnel, and thoroughly tested and reviewed before implementation.

Another important aspect of system control is documenting systems designs and procedures. This is a continuous problem in many agencies. Systems documentation is necessary to describe the flow of data through systems and system

control mechanisms. Without adequate documentation, it is difficult for managers, reviewers, auditors and others to evaluate systems.

(2) Systems in operation

In addition to design and implementation or modification, the Assurance Plan must ensure that systems are operating properly. Specific areas of responsibility for operations within payment systems are assigned to the designated key officials who, as managers, are responsible for:

- (a) Assuring that systems are operated in accordance with all the internal controls and procedures built into the approved design;
- (b) Assuring to the best of their capability and knowledge that there are no inputs, actions or other events which may cause illegal or inaccurate payments; and
- (c) Reporting to System Assurance Officers system deficiencies and deviations which may adversely affect payments.

d. Responsibilities of all employees

The Assurance Plan should specify that all employees are responsible for notifying the System Assurance Officer if they know that the payment system is not working properly, or if they know of wrongdoing which may result in illegal, improper or incorrect payments. It should also include sanctions to be imposed on employees who neglect to notify the System Assurance Officer.

e. Audit trails and source document control

Many automated systems transmit payment data by various means to central computers from many different locations. The data are usually drawn from source documents which are maintained at field offices. The Assurance Plan must include procedures for controlling and maintaining these documents so they will be available for review and verification.

In any system, there must be the capability to trace transactions from their initiation, through processing, to final payment. Without this capability, systems reliability and integrity cannot be assessed. Only when each step in the process can be isolated and the controls over it (both manual and automated) examined can the total system be evaluated.

f. Review of system payment problems

A review must be made if there is an indication that illegal, improper or incorrect payments are being made. Two conditions can exist, (1) payments are made where there is suspected wrongdoing and (2) the system is processing inaccurate payments.

In either case, the problem should be reported to the System Assurance Officer. If there is suspected wrongdoing, the Inspector General or other appropriate officials should be notified to further investigate the matter.

If incorrect payments are resulting from system problems, rather than wrongdoing, an independent review should be conducted, by knowledgeable individuals who are not directly involved with the operation of the system. The Inspector General, internal audit, or other staff may be used. If the System Assurance Officer monitoring the review is not satisfied, he/she should be able to request further review or audit.

A review report should identify the problem; what needs to be or has been done to correct it; and who is responsible, if anyone. Also, the report must determine if improper payments were caused by someone in the system who did not faithfully carry out his/her responsibilities.

g. Sanctions

The accountability process is not working today because agencies view certifying and disbursing officers as the only accountable individuals.

Under current legislation, certifying and disbursing officers are the only individuals in the payment process who are accountable to the degree that they are required to make good (pecuniarily liable) for illegal, inaccurate, or improper payments. However, many other individuals are involved in the payment process and should be held accountable for their actions. The responsible key officials designing, implementing, operating, and reviewing the system are really controlling its integrity and reliability and should be held accountable for their actions as they affect payments.

The Assurance Plan will help ensure that these individuals are held responsible for their actions by imposing administrative sanctions on those who do not adequately carry

out their duties. Administrative sanctions, when publicized, will remind all employees that they have a serious stake in, and are responsible for, payments made.

In addition to administrative sanctions, penalties for criminal misconduct are always available. These penalties have been used generally when large dollar amounts are illegally or inaccurately paid.

Departments and agencies have various means to impose disciplinary actions against employees who are negligent and do not perform acceptably. The Civil Service Reform Act of 1978, Public Law 95-454, October 13, 1978, 92 Stat. 1111, strengthened existing authority to discipline negligent employees. Section 101 of the 1978 Act added a new subsection 2301(b)(6), which provides:

"Employees should be retained on the basis of the adequacy of their performance, inadequate performance should be corrected, and employees should be separated who cannot or will not improve their performance to meet required standards."

Section 203 of the 1978 Act amended 5 U.S.C. Section 4301 et seq. (1976) to provide for the reduction in grade or removal of an employee for unacceptable performance. Section 204 of the 1978 Act correspondingly amended 5 U.S.C. Section 7501 et seq. (1976), retaining the "efficiency of the service" standard.

Assigning responsibility and accountability to those who actually control payment systems, along with imposing disciplinary sanctions should they not fulfill their responsibilities, will help ensure the reliability and integrity of payment systems.

Sanctions should also address the responsibilities of other agency employees who may cause erroneous payments or know of them. As discussed in d. above, all employees are responsible for ensuring that payments are legal, proper and correct. If erroneous payments are made because these employees have not diligently carried out their duties, administrative sanctions should also be imposed on them. All employees need to be made fully aware of their responsibilities and the sanctions that may be imposed.

h. Action plan to correct system deficiencies

The Assurance Plan provides for department or agency heads to designate System Assurance Officers for payment systems.

When it is found that a system is making erroneous payments, it is the responsibility of the System Assurance Officer to develop and institute a plan of action to correct the problem and to notify the appropriate officials.

Stopping payments in some situations will create undue hardship on certain payees, such as recipients of pension payments. These payments cannot be stopped even though some may be erroneous. In such instances the System Assurance Officer, by designation of the department or agency head, will be responsible for certifying (disbursing) or authorizing certification (disbursement) until the system is corrected. The System Assurance Officer must initiate and monitor an action plan to correct the system deficiencies. In addition, the System Assurance Officer will be required to see that the necessary actions are taken to recoup any erroneous payments that may result.

The General Accounting Office should be informed of the situation and provided with the plan to correct the system and the procedures used to recoup erroneous payments. The General Accounting Office has stated that if these are provided, they will be considered when certifying and disbursing officers request relief from liability for illegal or inaccurate payments.

RECOMMENDATION 2

WE RECOMMEND THAT THE INSPECTORS GENERAL OR INTERNAL AUDIT ORGANIZATIONS OF DEPARTMENTS AND AGENCIES BE RESPONSIBLE FOR REVIEWING THE DEVELOPMENT, IMPLEMENTATION AND USE OF THE ASSURANCE PLAN AND RELATED PROCEDURES.

Discussion of Recommendation 2

Since department and agency heads are ultimately responsible for Assurance Plans and related procedures, they need to have an independent means to determine the effectiveness of the development and implementation of the Plans. Inspectors General and internal audit organizations are independent and are in the best position to give unbiased opinions on the adequacy and effectiveness of the Plans and procedures.

These organizations should review the Assurance Plans and related procedures and report the results to department and agency heads and System Assurance Officers. These independent reviews give management the additional assurance that Assurance Plans and related procedures are adequate.

RECOMMENDATION 3

WE RECOMMEND THAT DEPARTMENTS AND AGENCIES INDEPENDENTLY REVIEW AND/OR AUDIT TOTAL PAYMENT SYSTEMS PERIODICALLY.

Discussion of Recommendation 3

Independent review is essential to maintaining the integrity and reliability of any system. Some agencies we visited have groups whose role is to review systems designs, implementation and operations. Generally however, most reviews focus on automated portions of systems and not on the total systems.

Systems are reviewed by management analysts and specialists, internal auditors, Inspector General staffs and other groups. A common problem is identifying the scope and coverage each group performs and coordinating their efforts to provide systematic and complete coverage for the total payment system periodically. In the development of an Assurance Plan, managers must consider all the resources available and plan for the best use to achieve optimum systems reviews. Once this is done, the coverage and adequacy of the reviews can be determined.

The importance of this type of review is that it gives management, especially the Systems Assurance Officer, an independent opinion on the adequacy and reliability of systems. These opinions are part of the confirmation process.

System designers and implementers have a vested interest in completing the design and implementing the system. Because of the pressures to get the system in operation, necessary elements of control can be overlooked or circumvented. An independent group must examine, test and verify the systems processes and internal controls to assure total systems integrity and reliability.

Systems reviews should be conducted periodically and each department and agency should determine what is a reasonable review cycle. OMB Circular A-71, Security of Federal Automated Information Systems, states:

"Audits or evaluations and recertifications shall be performed at time intervals determined by the agency, commensurate with the sensitivity of information processed and the risk and magnitude of loss or harm that could result from the application operating improperly, but shall be conducted at least every three years."

RECOMMENDATION 4

WE RECOMMEND THAT THE GENERAL ACCOUNTING OFFICE (GAO) ENDORSE THE CONCEPTS OF THE ABOVE RECOMMENDATIONS AND SPECIFY AND CLARIFY IN ITS POLICY AND PROCEDURES MANUAL FOR GUIDANCE OF FEDERAL AGENCIES THAT:

- a. CERTIFYING AND DISBURSING OFFICERS SHOULD BE PERMITTED TO RELY ON SYSTEMS TO MAKE PAYMENTS IF THE NECESSARY ASSURANCES HAVE BEEN RECEIVED THAT THE SYSTEMS ARE DESIGNED PROPERLY AND OPERATING EFFECTIVELY AND CAN BE RELIED ON TO COMPUTE LEGAL, PROPER AND CORRECT PAYMENTS.
- b. GAO SHOULD LOOK TO THE ESTABLISHMENT OF SYSTEM ASSURANCE OFFICER POSITIONS AND THE DEVELOPMENT AND IMPLEMENTATION OF ASSURANCE PLANS, WHERE APPLICABLE, IN GRANTING RELIEF TO CERTIFYING/DISBURSING OFFICERS, AS EVIDENCE OF A PROPER APPROACH TO CONTROLLING PAYMENTS. ACCOUNTABILITY WILL BE DETERMINED ON THE BASIS OF REASONABLE AND PRUDENT REVIEW OF DOCUMENTS PROVIDED BY THE SYSTEM AND OTHER INFORMATION AVAILABLE TO CERTIFYING AND DISBURSING OFFICERS.
- c. CERTIFYING/DISBURSING OFFICERS WILL BE HELD PECUNIARILY LIABLE FOR NEGLIGENT ACTS PURSUANT TO EXISTING LAWS, BUT OTHER PARTICIPANTS IN THE PAYMENT PROCESSES WILL ALSO BE HELD ADMINISTRATIVELY ACCOUNTABLE, IN ACCORDANCE WITH THE DEPARTMENT OR AGENCY ASSURANCE PLANS, FOR THEIR ACTIONS AND FOR MAINTAINING THE RELIABILITY AND INTEGRITY OF THE PORTION(S) OF THE SYSTEM THAT THEY MANAGE AND OPERATE.
- d. DEPARTMENTS AND AGENCIES WILL DEVELOP SYSTEMS TO IMPOSE ADMINISTRATIVE SANCTIONS ON ANY PARTICIPANTS IN THE PAYMENT PROCESSES WHOSE NEGLIGENCE OR LACK OF DUE CARE CAUSES ILLEGAL, IMPROPER OR INCORRECT PAYMENTS. THE TYPES OF ADMINISTRATIVE SANCTIONS SHOULD INCLUDE DISMISSAL, SUSPENSION, REDUCTION IN GRADE, TRANSFER TO OTHER DUTIES, REPRIMAND OR ANY COMBINATION OF THE ABOVE.
- e. DEPARTMENTS AND AGENCIES SHOULD BE PERMITTED TO ESTABLISH, WHEN ECONOMIES WILL RESULT THEREFROM, ERROR TOLERANCE LEVELS FOR PAYMENT SYSTEMS WHICH CAN BE ACCEPTED AS A NORMAL PART OF DOING BUSINESS. THESE LEVELS MUST BE ESTABLISHED IN CONSULTATION WITH THE GAO. ESTABLISHMENT OF TOLERANCE LEVELS

SHOULD NOT BE INTERPRETED AS ELIMINATING THE
DEPARTMENTS' AND AGENCIES' RESPONSIBILITY FOR
RECOUPING ERRONEOUS PAYMENTS.

Discussion of Recommendation 4

The accountability roles of certifying and disbursing officers and others who process payments are unclear. In fact, the certification (disbursement) has become in many instances a rubber-stamp process.

As outlined in this report, new methods, policies and procedures need to be devised to strengthen the concept of accountability in today's large and complex automated systems. Certifying and disbursing officers must be able to rely on the system and the integrity of those operating it.

In most systems, individuals other than certifying and disbursing officers cause improper payments. Current policy on accountable officers does not specifically provide for others involved in the payment systems to be held accountable for causing illegal or improper payments. Therefore, the present concepts of accountability as they relate to certifying and disbursing officers, as well as others who process payments, need to be redefined and clarified in GAO's Policy and Procedures Manual for Guidance of Federal Agencies.

Error tolerance levels should also be addressed. Large and complex systems make honest errors. Some errors are made during manual processing, while others are made by machines. No system is perfect, and efforts to achieve perfection can be extremely costly, if not wasteful.

Current policy does not provide for levels of error which are tolerable as a normal part of doing business. Department and agency heads should be permitted, when economies will result, to establish acceptable error tolerance levels. We do not intend that dishonest errors, however small, be condoned or forgiven; they should be subject to prescribed sanctions and penalties. We also do not intend that normal recoupment efforts for any erroneous payments be abolished.

Acceptable tolerances will be different for each system. Risk analysis or other techniques should be used to establish and assess tolerance levels suitable to each system. The levels should be established in consultation with the GAO to ensure that they are proper and realistic.

RECOMMENDATION 5

WE RECOMMEND THAT THE OFFICE OF MANAGEMENT AND BUDGET, WITH THE ASSISTANCE OF THE DEPARTMENT OF THE TREASURY AND THE GAO, CONSIDER REQUIRING AGENCIES TO DEVELOP AND IMPLEMENT ASSURANCE PLANS AND RELATED PROCEDURES. THIS CAN BE DONE AS PART OF THE OFFICE OF MANAGEMENT AND BUDGET'S GUIDANCE TO DEPARTMENTS AND AGENCIES ON INTERNAL CONTROL SYSTEMS.

Discussion of Recommendation 5

Government-wide policy is necessary to formalize the process of systems assurance in departments and agencies. The Assurance Plan and related procedures must become a part of each department's and agency's management process and be an integral part of their system of internal controls. When the Office of Management and Budget directs the development and implementation of the Assurance Plan and procedures, they will become mandatory.

RECOMMENDATION 6

WE RECOMMEND THAT THE GAO, THROUGH ITS ACCOUNTING SYSTEM APPROVAL PROCESS AND AUDIT WORK, DETERMINE IF AGENCIES HAVE ADEQUATE ASSURANCE PLANS AND RELATED PROCEDURES AS STATED IN THE ABOVE RECOMMENDATIONS.

Discussion of Recommendation 6

GAO has an oversight responsibility given to it by law to audit and report on the effectiveness of Executive Department programs and operations. GAO's audits will provide additional assurance that the Assurance Plans and procedures are being developed and implemented properly.

Also GAO is authorized by law to review and approve departments' and agencies' accounting systems. In this work, GAO should review the adequacy of departments' and agencies' Assurance Plans and procedures.

RECOMMENDATION 7

WE RECOMMEND THAT THE OFFICE OF PERSONNEL MANAGEMENT TAKE THE RESPONSIBILITY FOR ASSURING THAT APPROPRIATE TRAINING IS MADE AVAILABLE TO EDUCATE RESPONSIBLE FEDERAL EMPLOYEES ON THE OBJECTIVES AND OPERATION OF SYSTEM ASSURANCE PLANS AND RELATED PROCEDURES AND ON THE ROLES OF CERTIFYING AND DISBURSING OFFICERS.

Discussion of Recommendation 7

The Office of Personnel Management has overall responsibility for assuring that adequate training is available for Federal employees to enable them to perform their jobs effectively. Employees will require training regarding the objectives of System Assurance Plans and what their respective roles will be in implementing and operating these Assurance Plans. System Assurance Officers and certifying and disbursing officers will need to be trained in how to use the Assurance Plans and related procedures in carrying out their responsibilities. Formal training of all certifying and disbursing officers will offer the opportunity to make sure that they are aware of their legal responsibilities and their pecuniary liability for illegal or inaccurate payments. Adequate training is a necessary ingredient to make the System Assurance Plans work effectively.

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In addition, assistance was provided by the GAO regional personnel who studied systems for us at Albuquerque, New Mexico; Cleveland, Ohio; Indianapolis, Indiana, and St. Louis, Missouri.

DEPARTMENTS AND AGENCIES STUDIEDPayment Systems Reviewed

- | | |
|--|---|
| 1. Department of Agriculture | |
| (a) National Finance Center
New Orleans, Louisiana | Payroll
Imprest fund
Gas credit card
Travel |
| (b) Farmers Home Administration
St. Louis, Missouri | Loans
Administrative payments |
| 2. Commodity Futures Trading Commission
Washington, D.C. | Financial management
system (payroll and
administrative pay-
ments) |
| 3. General Services Administration
Region # 6
Kansas City, Missouri | Direct Delivery Line
Item Billing (ADLIB)
Administrative costs
(NEARS)
Warehouse replenishment
(AUTO PAY)
Travel (TRIPS)
Payroll |
| 4. Department of Health, Education and
Welfare
Rockville, Maryland | Departmental Federal
Assistance Financing
System (DFAFS)-Grants |
| 5. National Endowment for the Humanities
Washington, D.C. | Grants |
| 6. Department of the Interior
Bureau of Indian Affairs
Albuquerque, New Mexico | Payroll
Administrative payments
Grants
Letters of credit |
| 7. Office of Personnel Management
Washington, D.C. | Civil service retirement |

DEPARTMENTS AND AGENCIES STUDIED

Payment Systems Reviewed

- | | |
|--|---|
| 8. Railroad Retirement Board
Chicago, Illinois | Retirement and survivor
benefits |
| 9. Smithsonian Institution
Washington, D.C. | Payroll and administra-
tive payments (Entrex) |
| 10. Social Security Administration
Baltimore, Maryland; Philadelphia,
Pennsylvania, and Camp Springs,
Maryland | Retirement, survivor,
and disability insur-
ance |
| 11. Department of the Treasury

Internal Revenue Service
Memphis, Tennessee, and
National Computer Center,
Martinsburg, West Virginia | Tax refunds |
| 12. Veterans Administration
Data Processing Center
Austin, Texas | Centralized Accounting
for Local Management
(CALM)
Personnel Accounting
Integrated Data (PAID)
Loan Guarantee (LGY)
Centralized Accounting
System Construction
Appropriations (CASCA) |
| 13. Department of the Air Force

Air Force Accounting and Finance
Center, Denver, Colorado | Joint Uniform Military
Pay System (JUMPS)
Base level accounting
and finance system |

DEPARTMENTS AND AGENCIES STUDIED

Payment Systems Reviewed

14. Department of the Army

Army Accounting and Finance Center
Indianapolis, Indiana

Joint Uniform Military
Pay System (JUMPS)

Transportation Disbursing
and Reporting System
(TD & R)

15. Defense Logistics Agency

(a) Alexandria, Virginia

Automated Payroll Cost
and Personnel System
(APCAPS)

(b) Defense Contract Administration
Service Region
Dallas, Texas

Mechanization of Con-
tract Administrative
Services (MOCAS)

16. Department of the Navy

(a) Pensacola, Florida

Integrated Disbursing
and Accounting (IDA)

(b) Navy Finance Center
Cleveland, Ohio

Joint Uniform Military
Pay System (JUMPS)

Treasury Regional Disbursing Centers visited

Chicago, Illinois
Philadelphia, Pennsylvania
Austin, Texas
Washington, D.C.

Other agency visited

Department of the Air Force
Air Force Data System Design Center
Montgomery, Alabama