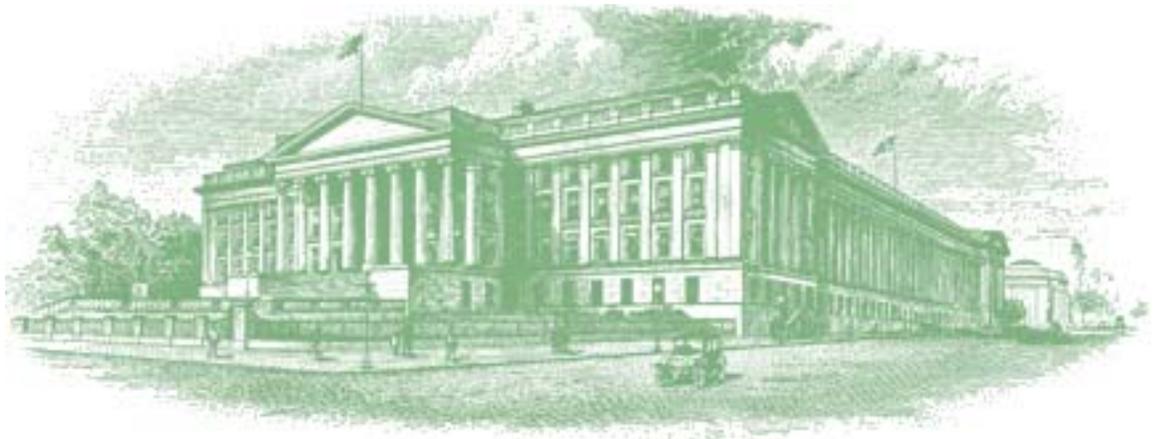




Audit Report



OIG-07-046

Report on Controls Placed in Operation and Tests of Operating Effectiveness for the Bureau of the Public Debt's Federal Investments Branch for the Period August 1, 2006 to July 31, 2007

September 11, 2007

Office of
Inspector General

Department of the Treasury

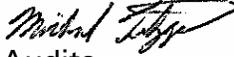


DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

OFFICE OF
INSPECTOR GENERAL

September 11, 2007

**MEMORANDUM FOR VAN ZECK, COMMISSIONER
BUREAU OF THE PUBLIC DEBT**

FROM: Michael Fitzgerald 
Director, Financial Audits

SUBJECT: Report on Controls Placed in Operation and Tests
of Operating Effectiveness for the Bureau of the
Public Debt's Federal Investments Branch for the
Period August 1, 2006 to July 31, 2007

I am pleased to transmit the attached Report on Controls Placed in Operation and Tests of Operating Effectiveness for the Bureau of the Public Debt's (BPD) Federal Investments Branch for the period August 1, 2006 to July 31, 2007. Under a contract monitored by the Office of Inspector General, KPMG LLP, an independent certified public accounting firm, performed the examination of the general computer and investment/redemption processing controls related to BPD's transactions processing of investment accounts for various Federal Government agencies (Fund Agencies) for the period August 1, 2006 to July 31, 2007. The contract required that the examination be performed in accordance with generally accepted government auditing standards and the American Institute of Certified Public Accountants' Statement on Auditing Standards Number 70, *Reports on the Processing of Transactions by Service Organizations*, as amended.

The following reports, prepared by KPMG LLP, are incorporated in the attachment:

- Independent Service Auditors' Report; and
- Independent Auditors' Report on Compliance with Laws and Regulations.

In its examination of BPD's controls, KPMG LLP found:

- the *Description of Controls Provided by the BPD* presents fairly, in all material respects, the relevant aspects of BPD's controls that had been placed in operation as of July 31, 2007,
- that these controls are suitably designed to provide reasonable assurance that the specified control objectives would be achieved if the described controls were complied with satisfactorily and Fund Agencies and sub-service organizations applied the controls contemplated in the design of BPD's controls,

- that the controls tested were operating with sufficient effectiveness to provide reasonable, but not absolute, assurance that the control objectives were achieved during the period from August 1, 2006 to July 31, 2007, and
- no instances of reportable noncompliance with laws and regulations tested.

In connection with the contract, we reviewed KPMG LLP's reports and related documentation and inquired of its representatives. Our review, as differentiated from an audit in accordance with generally accepted government auditing standards, was not intended to enable us to express, and we do not express, an opinion on BPD's description of controls, the suitability of the design of these controls and the operating effectiveness of controls tested or a conclusion on compliance with laws and regulations. KPMG LLP is responsible for the attached auditors' reports dated September 10, 2007 and the conclusions expressed in the reports. However, our review disclosed no instances where KPMG LLP did not comply, in all material respects, with generally accepted government auditing standards.

Should you have any questions, please contact me at (202) 927-5789, or a member of your staff may contact Mark S. Levitt, Audit Manager, Financial Audits at (202) 927-5076.

Attachment

**U.S. Department of the Treasury
Bureau of the Public Debt**

**Federal Investments Branch
General Computer and
Investment/Redemption Processing Controls**

**Report on Controls Placed in Operation and
Tests of Operating Effectiveness
For the Period August 1, 2006 to July 31, 2007**

**U.S. DEPARTMENT OF THE TREASURY
BUREAU OF THE PUBLIC DEBT
FEDERAL INVESTMENTS BRANCH**

**REPORT ON CONTROLS PLACED IN OPERATION AND
TESTS OF OPERATING EFFECTIVENESS**

Table of Contents

<u>Section</u>	<u>Description</u>	<u>Page</u>
I.	Independent Service Auditors' Report Provided by KPMG LLP	1
II.	Description of Controls Provided by the Bureau of the Public Debt	3
	Overview of Operations	4
	Relevant Aspects of the Control Environment, Risk Assessment, and Monitoring.....	10
	Control Environment.....	10
	Risk Assessment.....	10
	Monitoring.....	11
	Information and Communication	12
	Control Objectives and Related Controls	
	<i>The Bureau of the Public Debt's control objectives and related controls are included in Section III of this report, "Control Objectives, Related Controls, and Tests of Operating Effectiveness." Although the control objectives and related controls are included in Section III, they are, nevertheless, an integral part of the Bureau of the Public Debt's description of controls.</i>	
	Fund Agency Control Considerations	14
	Sub-service Organizations	16
III.	Control Objectives, Related Controls, and Tests of Operating Effectiveness	17
	General Computer Controls	18
	System Software.....	18
	Vendor Software	22
	Program Change Control.....	24
	Physical Access	26
	Logical Access	30
	Computer Operations	33
	Network Performance Monitoring	35

Investment/Redemption Processing Controls	36
Item Processing Security	36
Item Capture.....	38
Confirmations.....	43
Fund Balance Adjustment	45
Recordkeeping.....	46
Segregation of Duties	48
Interest Calculation and Payments	50
Statement Rendering	53
IV. Other Information Provided by Bureau of the Public Debt.....	55
Contingency Planning	56
V. Independent Auditors' Report on Compliance with Laws and Regulations	57

**I. INDEPENDENT SERVICE AUDITORS' REPORT
PROVIDED BY KPMG LLP**



KPMG LLP
2001 M Street, NW
Washington, DC 20036

Independent Service Auditors' Report

Inspector General, U.S. Department of the Treasury
Commissioner, Bureau of the Public Debt
Assistant Commissioner, Office of Public Debt Accounting

We have examined the accompanying description of the general computer and investment/redemption processing controls related to the Federal Investments Branch (FIB) of the Bureau of the Public Debt (BPD). Our examination included procedures to obtain reasonable assurance about whether (1) the accompanying description presents fairly, in all material respects, the aspects of BPD's controls that may be relevant to a Fund Agencies' internal control as it relates to an audit of financial statements; (2) the controls included in the description were suitably designed to achieve the control objectives specified in the description, if those controls were complied with satisfactorily, and Fund Agencies and sub-service organizations applied the controls contemplated in the design of BPD's controls; and (3) such controls had been placed in operation as of July 31, 2007. BPD uses services provided by other organizations external to BPD (sub-service organizations). A list of sub-service organizations is provided in Section II of this report. The accompanying description includes only those controls and related control objectives of BPD, and does not include control objectives and related controls of sub-service organizations. Our examination did not extend to controls of sub-service organizations. The control objectives were specified by the management of BPD. Our examination was performed in accordance with standards established by the American Institute of Certified Public Accountants and applicable *Government Auditing Standards* issued by the Comptroller General of the United States and included those procedures we considered necessary in the circumstances to obtain a reasonable basis for rendering our opinion.

In our opinion, the accompanying description of the aforementioned controls presents fairly, in all material respects, the relevant aspects of BPD's controls that had been placed in operation as of July 31, 2007. Also, in our opinion, the controls, as described, are suitably designed to provide reasonable assurance that the specified control objectives would be achieved if the described controls were complied with satisfactorily and Fund Agencies and sub-service organizations applied the controls contemplated in the design of BPD's controls.

In addition to the procedures we considered necessary to render our opinion as expressed in the previous paragraph, we applied tests to specific controls, listed in Section III, to obtain evidence about their effectiveness in meeting the control objectives, described in Section III, during the period from August 1, 2006 to July 31, 2007. The specific controls and the nature, timing, extent, and results of the tests are listed in Section III. This information has been provided to Fund Agencies of BPD and to their auditors to be taken into consideration, along with information about the internal control of Fund Agencies, when making assessments of control risk for Fund Agencies. In our opinion, the controls that were tested, as described in Section III, were operating with sufficient effectiveness to provide reasonable, but not absolute, assurance that the control objectives specified in Section III were achieved during the period from August 1, 2006 to July 31, 2007.



The relative effectiveness and significance of specific controls at BPD and their effect on assessments of control risk at Fund Agencies are dependent on their interaction with the controls, and other factors present at individual Fund Agencies. We have performed no procedures to evaluate the effectiveness of controls at individual Fund Agencies.

The description of controls at BPD is as of July 31, 2007, and the information about tests of the operating effectiveness of specific controls covers the period from August 1, 2006 to July 31, 2007. Any projection of such information to the future is subject to the risk that, because of change, the description may no longer portray the controls in existence. The potential effectiveness of specific controls at BPD is subject to inherent limitations and, accordingly, errors or fraud may occur and not be detected. Furthermore, the projection of any conclusions, based on our findings, to future periods is subject to the risk that changes made to the system or controls, or the failure to make needed changes to the system or controls, may alter the validity of such conclusions.

The information in Section IV of this report is presented by BPD to provide additional information and is not a part of BPD's description of controls placed in operation. The information in Section IV has not been subjected to the procedures applied in the examination of the description of the controls applicable to the processing of transactions for Fund Agencies and, accordingly, we express no opinion on it.

This report is intended solely for the information and use of the management of BPD, its Fund Agencies, the independent auditors of its Fund Agencies, the U.S. Department of the Treasury Office of Inspector General, the Office of Management and Budget, the Government Accountability Office, and the U.S. Congress, and is not intended to be, and should not be, used by anyone other than these specified parties.

KPMG LLP

September 10, 2007

II. DESCRIPTION OF CONTROLS PROVIDED BY THE BUREAU OF THE PUBLIC DEBT

OVERVIEW OF OPERATIONS

Treasury Directive 27-02, Organization and Functions of the Fiscal Services, dated May 23, 1997, established the Bureau of the Public Debt's (BPD) responsibility to invest, approve schedules for withdrawals, and maintain accounts for the Federal Trust and Deposit Programs as directed by statute, and certify interest rates determined by the Secretary of the Treasury.

BPD has assigned these responsibilities to the Division of Federal Investments (DFI), with the exception of interest certification, which is assigned to the Debt Accounting Branch. DFI manages two functional areas: Trust Fund Management Branch (TFMB) and Federal Investments Branch (FIB). FIB is responsible for processing investment transactions for 232 Federal funds, authorized by law or the Secretary of the Treasury, that comprise the balances of the Government Account Series (GAS). FIB processes these investment transactions based on direction provided by the Federal agencies, which have programmatic responsibility for the use of the fund balances (the Fund Agencies). FIB employs ten personnel and processes an average of 150 transactions daily. FIB more specifically:

- Analyzes provisions and limitations of public laws relating to investments for each account.
- Establishes and controls the record keeping of Fund Agencies' accounts by receiving and issuing investment documents: Request for Investment and Redemption of Securities, Investment Confirmations and Monthly Statement of Account.
- Provides daily and monthly reports to Fund Agencies reflecting account activities and balances.

Investment and redemption transaction records are maintained in both paper and electronic form. Confirmations and Monthly Statements of Account are published on the FedInvest website for retrieval and review by Fund Agencies. FIB maintains and operates the InvestOne accounting system to perform the activities stated above. The InvestOne accounting system is a transaction-based accounting system for recording and processing security transactions for each of the accounts and provides information to the Public Debt Accounting and Reporting System (PARS) and the Intragovernmental Payment and Collection System (IPAC). The InvestOne accounting system computes daily, monthly, quarterly, semiannual, and annual interest income for each account for each security held. It also calculates amortization, investment discount and premium for investment and redemption transactions, Inflation Compensation Earned on the Treasury Inflation Protection Securities (TIPS), and maintains summary account balances for each account as well as balances by type of security.

FIB processes investment transactions based on requests from Fund Agencies regarding security type, maturity, and amount. Fund Agencies having access to the FedInvest On-line system can submit the investment/redemption requests via the Internet while those few Agencies having no access submit the investment/redemption requests via fax, and email. The Investment and Redemption Request processing for Fund Agencies is summarized as follows.

Investment Request Processing

To establish access to FedInvest, the Fund Agency completes a FedInvest Logon-ID Request form and a BPD Logon Request Form and provides these forms to a supervisor for approval. The

supervisor reviews and approves the Forms and submits the forms to FIB. FIB verifies that the information is complete and then forwards the forms to the Division of System and Program Support (DSPS). Using the approved forms, DSPS establishes a user account and communicates user ID and temporary password to the Fund Agency. FIB then coordinates FedInvest system training with the new user. When a FedInvest user is terminated, the Fund Agency uses the above stated forms to revoke access and submits the approved forms to FIB. FIB submits the forms to DSPS, who removes access for the requested user.

Fund Agency users access the FedInvest system using their User ID and password. The Fund Agency user selects the Account Fund Symbol (AFS), date, security type, and investment amount in the FedInvest system.

Before Prices Loaded – The FedInvest user may enter investment requests before prices are loaded in the systems for up to 10 business days in the future except for Zero Coupon Bonds. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number and generates an on-line confirmation on the FedInvest website (available to FedInvest users). When prices are loaded by the FIB accountant into the InvestOne and FedInvest systems, the price/rate is applied to the investment transaction and an on-line confirmation of results after pricing is available on the FedInvest website to FedInvest users.

After Prices Loaded – The FedInvest user may enter investment requests after prices are loaded in the InvestOne and FedInvest system except for Zero Coupon Bonds. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number, applies the price/rate, and generates and posts an on-line confirmation on the FedInvest website (available to FedInvest users).

Zero Coupon Bonds – The FedInvest user authorized to purchase Zero Coupon Bonds pursuant to a Memorandum of Understanding (MOU), may enter investment requests by 11:00 am EST. The request is then sent by email from the FedInvest system to the FIB accountants who forward the request to Office of Debt Management (ODM) for pricing. ODM prices the purchase of the Zero Coupon Bond at approximately 12:00 pm EST and forwards the results to FIB via email. The FIB accountant enters the price into InvestOne, posts the transaction, forwards the memo number to the FedInvest User, and then an on-line confirmation of results is available on the FedInvest website.

Processing for Agencies without FedInvest access

FIB may receive investment requests via fax or email from Fund Agencies without FedInvest access. A FIB accountant enters the request into InvestOne. Then two FIB accountants review and initial each investment request. InvestOne automatically applies the price/rate and posts confirmations that describe the amount and terms of the investments on the FedInvest website (available to FedInvest users) the same day. For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction.

On the following business day, the fourth FIB accountant compares the InvestOne Spectra report (Prior Day Review) to the Investment Request form to ensure the transaction was properly entered into the InvestOne accounting system.

Redemption Request Processing

To establish access to FedInvest, the Fund Agency completes a FedInvest Logon-ID Request form and a BPD Logon Request Form and provides these forms to a supervisor for approval. The supervisor reviews and approves the Forms and submits the forms to FIB. FIB verifies that the information is complete and then forwards the forms to DSPTS. Using the approved forms, DSPTS establishes a user account and communicates user id and temporary password to the Fund Agency. FIB then coordinates FedInvest system training with the new user. When a FedInvest user is terminated, the Fund Agency uses the above stated forms to revoke access and submits the approved forms to FIB. FIB submits the forms to DSPTS, who removes access for the requested user.

Fund Agency users access the FedInvest system using their User ID and password. The Fund Agency user selects the AFS, date, inventory method First-In First-Out (FIFO), Specific ID, or Par Value), security type, and redemption amount in the FedInvest system.

Before Prices Loaded – The FedInvest user may enter Market-based bill, note, and bond redemption requests using the FIFO inventory method before prices are loaded in the systems for up to 10 business days in the future. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number and generates an on-line confirmation on the FedInvest website (available to FedInvest users). When prices are loaded by the FIB accountant into the InvestOne and FedInvest systems, the price/rate is applied to the investment transaction and an on-line confirmation of results after pricing is available on the FedInvest website to FedInvest users.

After Prices Loaded – The FedInvest user may enter Market-based bill, note, bond and TIPS redemption requests using the FIFO or Specific ID inventory methods after prices are loaded in the InvestOne and FedInvest systems. If Fund Agencies have a tax lot (a group of the same securities purchased on different dates) for market based securities and decide to apply the Specific ID method rather than FIFO to redeem some of the securities from the tax lot, Fund Agency users need to select “Specific ID – Market Based” inventory method to override the InvestOne accounting system default setting-FIFO, and enter the redemption amount into the tax lot. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number, applies the price/rate, and generates and posts an on-line confirmation on the FedInvest website (available to FedInvest users).

Par Values - Special par-value securities have unique redemption rules that require the InvestOne accounting system to redeem them based on the order of earliest maturity date, lowest prevailing interest rate, and FIFO. The FedInvest user may enter Par Value redemption requests for up to 10 business days in the future. The FedInvest user receives an on-line confirmation on the FedInvest website with a message that the Redemption rules will be applied in accordance with Treasury Fiscal Policy, the Transaction will be posted and Memo number assigned at close of business on the effective date. At close of business (after 3:00 pm EST) on the effective date of the redemption, the FIB accountant will run a Utility that will process, post, and assign memo numbers to the redemption requests in InvestOne using the unique redemption rules and post on-line confirmations on the FedInvest website (available to FedInvest users).

Zero Coupon Bonds – The FedInvest user authorized to purchase Zero Coupon Bonds pursuant to an MOU, may enter redemption requests by 11:00 am EST. The request is then sent by email from the FedInvest system to the FIB accountants who forward the request to ODM for pricing. ODM prices the redemption of the Zero Coupon Bond at approximately 12:00 pm EST and

forwards the results to FIB via email. The FIB accountant enters the price into InvestOne, posts the transaction, forwards the memo number to the FedInvest User, and then an on-line confirmation of results is available on the FedInvest website.

Processing for Agencies without FedInvest access

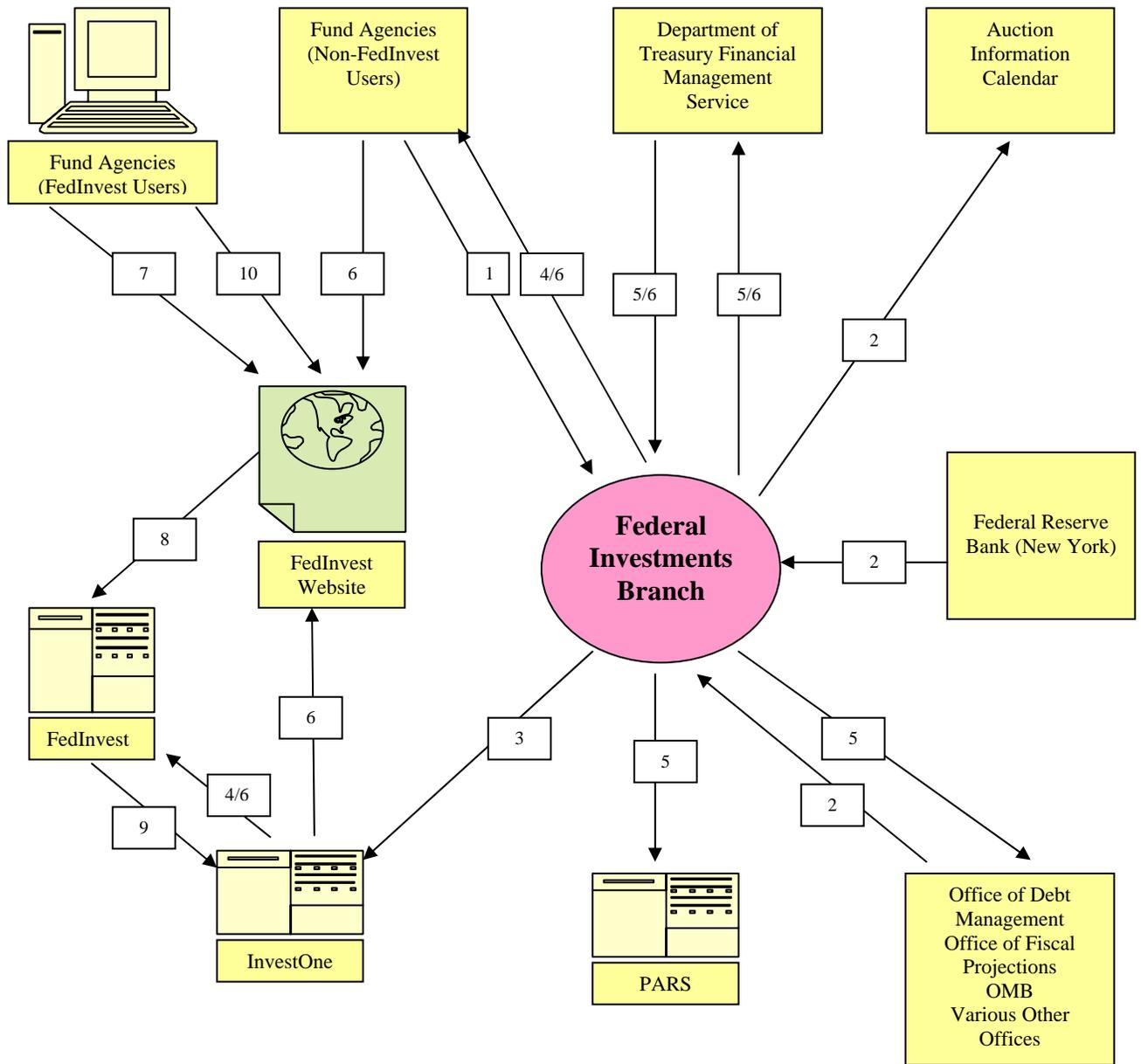
FIB may receive redemption requests via fax or email from Fund Agencies without FedInvest access. A FIB accountant enters the request into the InvestOne accounting system. Then two FIB accountants review and initial each redemption request. InvestOne automatically applies the price/rate and posts confirmations that describe the amount and terms of the redemption on the FedInvest website (available to FedInvest users) the same day. For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction.

On the following business day, the fourth FIB accountant compares the InvestOne Spectra report (Prior Day Review) to the Redemption Request form to ensure the transaction was properly entered into the InvestOne accounting system.

FIB obtains and applies open market prices for securities negotiated by brokers and dealers of government securities from the U.S. Department of the Treasury's ODM and the Federal Reserve Bank of New York.

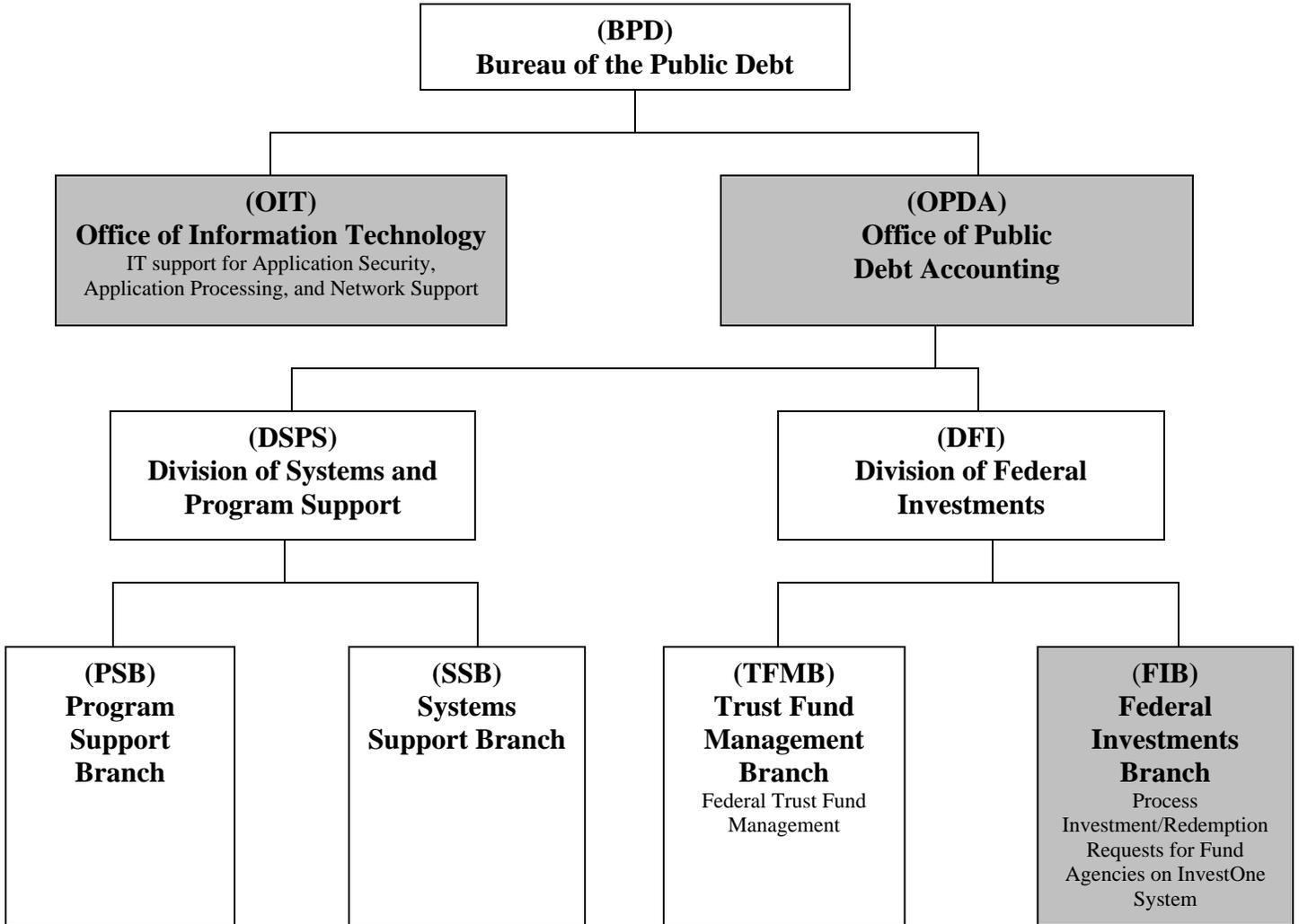
FIB functions do not encompass monitoring or determining rates, types and maturities of government marketable securities. The Office of Information Technology (OIT) provides application security (including passwords), processing, and report programming support to FIB including regular maintenance programming and user-requested program enhancements.

A depiction of the FIB workflow process and organization chart follows:



1. Investment/Redemption requests received from Fund Agencies (Non-FedInvest users) via fax/telephone.
2. Receive overnight rate from FRB (NY) via email. Verify existence of securities from AIC. Retrieve security pricing from Treasury.
3. Input investment/redemption into InvestOne for processing.
4. Confirmations posted in FedInvest for Fund Agencies (FedInvest Users) or faxed (Non-FedInvest Users).
5. Daily reports from FIB to PARS, FMS, and Treasury.
6. Monthly reports to Agencies and FMS from InvestOne and FIB.
7. Access to FedInvest Website to log on the FedInvest system.
8. Log on the FedInvest system to submit the investment/redemption request and to view FedInvest confirmations and monthly reports.
9. Investment/redemption requests transmitted to InvestOne through the interface of FedInvest with InvestOne.
10. Fund Agencies (FedInvest users) access to FedInvest Website to view FIB monthly reports.

ORGANIZATIONAL CHART



RELEVANT ASPECTS OF THE CONTROL ENVIRONMENT, RISK ASSESSMENT, AND MONITORING

Control Environment

Operations are primarily under the direction of the Office of the Director of the DFI and the Director of the DSPS, which represent the functional areas listed below:

- *Administrative development:* Coordinates various aspects of FIB operations. Identifies areas requiring internal controls and implements those controls. Performs systems planning, development, and implementation. Reviews network operations and telecommunications and performs disaster-recovery planning and database administration.
- *Fund support:* Supports end users (fund agencies) in all aspects of their use of the application system including research and resolution of identified problems.
- *Operations:* Manages daily computer operations, production processing, report production and distribution, and system utilization and capacity.

The DFI and DSPS hold weekly management meetings to discuss special processing requests, operational performance, and the development and maintenance of projects in process. Written position descriptions for employees are maintained. The descriptions are inspected annually and revised as necessary.

References are sought and background, credit, and security checks are conducted for all BPD personnel when they are hired. Additional background, credit, and security checks are performed every three to five years. The confidentiality of user-organization information is stressed during the new employee orientation program and is emphasized in the personnel manual issued to each employee. BPD provides a mandatory orientation program to all full time employees and encourages employees to attend other formal outside training.

All BPD employees receive an annual written performance evaluation and salary review. These reviews are based on goals and objectives that are established and reviewed during meetings between the employee and the employee's supervisor. Completed appraisals are reviewed by senior management and become a permanent part of the employee's personnel file.

Risk Assessment

BPD has placed into operation a risk assessment process to identify and manage risks that could affect FIB's ability to provide reliable transaction processing for users. This process requires management to identify significant risks in their areas of responsibility and to implement appropriate measures to manage these risks.

Additionally, all mission-critical systems and general support systems are subject to an internal risk-based review every three years. This review identifies assets and possible threats to these assets, provides a measure of vulnerability of the system to these threats, and confirms control or protective measures are in place.

Monitoring

BPD management and supervisory personnel monitor the quality of internal control performance as a normal part of their activities. To assist them in this monitoring, BPD has implemented a series of “key indicator” management reports that measure the results of various processes involved in providing transaction-processing services to Fund Agencies. Key indicator reporting consists of PARS posting summary reports to validate accuracy. All exceptions to normal or scheduled processing through hardware and software, or procedural problems are also logged, reported and resolved daily. These reports are inspected daily and weekly by appropriate levels of management, and action is taken as necessary.

INFORMATION AND COMMUNICATION

Information Systems

InvestOne Accounting System Description

The InvestOne accounting system is a vendor supplied accounting package used to record and report investment fund activity processed by FIB. InvestOne is licensed by SunGard Investment Systems, Inc. The InvestOne accounting system resides on BPD's mainframe, which uses an IBM z/OS operating platform. OIT provides the primary support for maintaining the InvestOne accounting system. This includes mainframe operations (batch processing and reporting), custom report writing, application change management, data management, tape backup and recovery, user access security, remote access, and continuity management. InvestOne is accessed through the network using an application called P-Com, a PC-based terminal emulator software product that enables communication with OIT mainframe applications. InvestOne also provides a report writer package called Spectra that provides users with the ability to create their own reports. FIB uses Spectra to create reports, which provide functionality not included in the standard InvestOne reports.

FIB also receives supporting documentation/reports on a daily basis from "In-House" developed programs created by programmers. Members of the DSPS team created these programs on their individual PCs located in the Hintgen Building and then migrated them to a server in the OIT data center. These programs read the data from the InvestOne accounting system and create various reports to assist in FIB's daily processing. Specifically, data is downloaded from the InvestOne accounting system to a data file located on the servers where the programs execute. Data is not sent from these programs to the InvestOne accounting system.

FedInvest System Description

FedInvest is a BPD developed, web-based application that provides Internet access to the federal investments information managed through the InvestOne system. The system allows federal investment fund managers to assume direct responsibility for managing their respective accounts. Federal agencies are able to input transactions into InvestOne, as well as view account statements and transaction information over the Internet. Additionally, FedInvest provides a simpler, more meaningful interface to InvestOne for internal fund managers in BPD's Division of Federal Investments. FedInvest includes edits that serve to enforce federal investment program policies resulting in improved data quality in InvestOne.

FedInvest also includes a Maintenance Facility feature that is used to manage FedInvest users and their associated investment account information. The facility is used to create and post broadcast messages (announcements) that are seen by users signed onto the system, and establish e-mail communication to all system users and their agency Chief Financial Officers.

Communication

BPD has implemented various methods of communication to ensure that all employees understand their individual roles and responsibilities over transaction processing and controls. These methods include orientation and training programs for newly hired employees, and use of electronic mail messages to communicate time sensitive messages and information. Managers also hold periodic staff meetings as appropriate. Every employee has a written position

description that includes the responsibility to communicate significant issues and exceptions to an appropriate higher level within the organization in a timely manner.

FUND AGENCY CONTROL CONSIDERATIONS

BPD's general computer and investment/redemption processing controls related to FIB were designed with the expectation that certain internal controls would be implemented by Fund Agencies. The application of such controls by the Fund Agencies is necessary to achieve all control objectives identified in this report, since FIB is a servicing organization that processes transactions that directly affect Fund Agencies.

This section describes certain controls that Fund Agencies should consider for achievement of control objectives identified in this report. The Fund Agency control considerations presented below should not be regarded as a comprehensive list of all controls that should be employed by Fund Agencies. Fund Agencies should establish controls to:

- Ensure that access to the FedInvest system is restricted to properly authorized individuals.
- Provide applicable legislation to FIB, and any subsequent legislation revision, that authorizes the Fund Agency to invest.
- Verify the authority to invest prior to submitting the Investment/Redemption Request forms.
- Ensure that only authorized personnel sign requests or submit transactions in FedInvest.
- Ensure that the submission of Investment/Redemption Requests in the FedInvest system is accurate and completed prior to 3:00 pm EST (11:00 am for Zero Coupon Bonds).
- Notify FIB if the Investment/Redemption Request forms have been processed incorrectly so that correcting transactions may be processed.
- Review investment/redemption/maturity/interest confirmations and Monthly Statements of Account to ensure that each Request was processed accurately, timely, and in accordance with their instructions.
- Track investment/redemption confirmations to ensure that the Fund Agency user correctly processes all requests.
- Review and reconcile all transaction confirmations to determine that they are accurate and complete, and report discrepancies to FIB so that correcting transactions may be processed before 3:00 pm EST.
- Review adjustments and make prompt and appropriate journal entries to the accounting records, to adjust the investment and interest account balances.
- Review Monthly Statements of Account to verify that adjustments were processed completely and accurately.
- Ensure that the requested investment returns the appropriate amount of interest to meet investment income goals.
- Reconcile interest payments received as presented in the confirmations and Monthly Statements of Account and recalculate interest for accuracy.

- Approve reinvestments of interest after review for accuracy, completeness, and compliance with instructions.
- Not rely on FIB for advice on appropriateness of investment/redemption decisions.
- Recalculate interest accrual and amortization of premium and/or discount and compare the results to the BPD provided monthly Accrual Confirmation and Activity Reports.
- Report any interest accrual discrepancies noted on the monthly Accrual Activity Reports to BPD for resolution.
- Report any premium and/or discount discrepancy noted on the monthly Accrual Confirmation Reports to BPD for resolution.
- Review investment activity from Financial Management Service application Governmentwide Account Statements to the FIB provided Monthly Statements of Account to ensure that investment activity is being properly reported by FIB on the Fund Agencies' behalf.
- Review FIB provided Monthly Statements of Account to ensure that transactions are recorded accurately and timely, and report discrepancies to FIB so correction processes may occur.
- Review investment activity reported by FIB on the SF224 for consistency with receipts and disbursements information prepared by the Fund Agency (August 1, 2006 through October 31, 2006 - Only).

Specific Fund Agency control considerations are provided for Control Objectives 5, 8, 9, 10, 11, 13, 14, and 15 in the Control Objectives, Related Controls, and Tests of Operating Effectiveness section of this report.

SUB-SERVICE ORGANIZATIONS

In order to provide investment/redemption processing services, FIB relies on systems and services provided by other organizations external to BPD (sub-service organizations). The following describes the sub-service organizations used by FIB that are included in this report. KPMG LLP's examination did not extend to controls of these sub-service organizations and associated systems.

Name of Sub-service Organization	Function/Responsibilities
Federal Reserve Bank (FRB) of New York	On a daily basis, FIB receives a daily repurchase rate for one-day certificates from the FRB of New York.
Office of Debt Management (ODM)	On a daily basis, the ODM provides FIB the daily security price files for market-based transactions. Additionally, as needed, ODM provides FIB with the Zero Coupon Bond pricing.
Treasury - Financial Management Service (FMS)	Treasury's FMS provides daily and monthly reports to FIB, including IPAC reports, and SF-224s. FIB uses these reports to verify the accurate posting of transactions and data.

**III. CONTROL OBJECTIVES, RELATED CONTROLS, AND
TESTS OF OPERATING EFFECTIVENESS**

GENERAL COMPUTER CONTROLS

Control Objective 1 – System Software

Controls provide reasonable assurance that implementation and changes to system software are authorized, tested, approved, properly implemented, and documented.

Description of Controls

Bureau of the Public Debt (BPD) has documented procedures for the authorization, testing, approval, implementation, and documentation of system software changes.

InvestOne operates within a mainframe environment which consists of the following system software products:

- z/OS Operating System
- Customer Information Control System (CICS)
- ACF2 Security
- Endeavor Change Control
- Tape Management System (TMS)
- Control M and D (Production and Print scheduling)
- ETF/A (Emergency Change Control)
- iET Enterprise

The FedInvest system can be broken down into its two main components, FedInvest and the FedInvest Maintenance Facility. These components operate within a client-server environment, but have different software architecture products. FedInvest is composed of the following:

- Host Access Transformation Services (HATS)
- DB2
- FedInvest Gateway Servlet
- Hypertext Transfer Protocol (HTTP) Request Handler
- JSP
- JDBC
- XML
- Control M
- ACF2 Security
- MQSeries
- CICS

In addition to the above products, the FedInvest Maintenance Facility has the following system software products:

- BPD Java Framework and Java Architecture
- Simple Mail Transfer Protocol (SMTP)

These mainframe and client-server products are under vendor control for maintenance and support. Upgrades to these products are obtained from the vendors and installed by the Office of

Information Technology (OIT). BPD has maintenance support contracts for InvestOne and for system software running on the BPD mainframe.

For system software changes, BPD uses the iET Enterprise product for change management. All system software changes (i.e., new product installations, maintenance upgrades, etc.) require a change record to be opened in iET Enterprise. A record can be opened by any system programmer in OIT's Enterprise Development Branch (System Programming) or the change control coordinator. The record includes a description of the change, implementation date of the change, a justification, a back-up/back-out plan, and a status for changes that take several weeks/months to implement.

Changes are initially discussed at the Weekly Change Control Meeting held every Tuesday morning at 9:30 am EST. Attendees include representatives from all divisions within OIT as well as all users impacted by the proposed change. Depending on the type of change, notification is sent to the assistant commissioner, division directors, branch managers and/or staff personnel.

Following the meeting, the change control coordinator prepares and distributes the Weekly Change Control Memorandum on Thursday afternoon with information on changes for the upcoming week. This memorandum describes the system changes, effective dates, reasons for changes or problems the changes will resolve. There is also a reference to the iET Enterprise change control number. Each Monday, the Division of Systems and Program Support (DSPS) receives and reviews an iET Enterprise report of all upcoming changes.

Before software changes can be moved to production, they are tested in accordance with the BPD's system software change control procedures. These procedures document the authorization, testing, approval, implementation, and documentation requirements for system software changes. Changes progress through various environments, which differ according to the type of system infrastructure. There are three separate mainframe environments: test, acceptance, and production. Each environment is a logical environment with its own software, datasets, and libraries. Mainframe changes are first tested by a programmer in the test environment. They are then migrated to the acceptance environment where a user tests the change using example transactions and acceptance environment files and libraries. For changes to distributed software (client/server), a testing lab is used to test changes to applications. A second instance of the application is loaded in the production region. Access to this production instance of the application is provided to a limited number of users who perform testing.

Changes are tested through the use of scripts and example transactions/files. Each change is reviewed by the user groups that are affected by the change, and each group provides user concurrence that they accept the change. Following user concurrence, a knowledgeable individual, group, or designee reviews the testing materials and completes a checklist indicating that testing has been fulfilled. The change package is reviewed and coordinated at the weekly change control meeting, and approved by the change control coordinator prior to being moved into the production environment.

Once the Branch Manager approves the change, DSPS sends a Network Services Request to OIT to move the change into the Production environment. Upon notification of an accepted change, OIT creates an update package in Endeavor. Endeavor is a mainframe application through which users approve changes. Endeavor is also used to move changed system software files into the Production environment. Endeavor will not allow changes to be migrated from the Acceptance environment into the Production environment until the changes have been approved. Access to the Endeavor change control software is limited based on job responsibility.

For emergency changes, BPD has established a process that allows system programmers and database administrators to have temporary access to the Production environment through the use of a “fire-call” ID product called ETF/A. The operating system is configured to monitor and log such activity for review and approval by management the following day.

OIT reviews the use of sensitive system utilities included in the protected programs group on a weekly basis and limits access to these programs based on job responsibility.

Tests of Operating Effectiveness and Results of Testing

- Inspected written procedures for system software configuration management and determined that procedures were documented, including procedures to document, test, authorize, and approve changes.
- Inspected the emergency change procedures and determined that procedures for implementing emergency changes were documented, including approval by management on the business day following the emergency change.
- Inspected vendor maintenance support contracts for system software and determined that the contracts existed and were current.
- Inspected a selection of change records in iET Enterprise and determined that iET Enterprise was used throughout the audit period to log, track, and monitor system software changes.
- For a selection of dates, inspected Weekly Change Control Memorandums and determined that weekly change control meetings were held to discuss planned changes with the potential to impact the InvestOne mainframe environment.
- For a selection of system software changes, inspected supporting documentation and determined that the changes were documented in iET Enterprise, tested, authorized, and approved, except as noted below:
 - Evidence of testing of the software change prior to implementation was not provided for 1 out of 11 sampled system software changes.
- Inspected Endeavor access permissions and inquired of BPD management, and determined that access permissions to migrate changes to the production environment were restricted commensurate with job responsibilities.
- For a selection of emergency changes, inspected documented approval and determined that the changes were approved by management.
- Inspected a list of users with access to use ETF/A and inquired of management, and determined that the access list was commensurate with job responsibilities, except as determined below:
 - We identified one user with inappropriate ETF/A access.

Upon notification of the inappropriate access, OIT immediately removed the inappropriate access.

- For a selection of dates, inspected ETF/A activity reports for evidence of review, and determined that ETF/A logs were reviewed.
- For a selection of weeks, inspected evidence of OIT's review of reports for sensitive system utilities in the protected programs group and determined that the reports were reviewed weekly.

No exceptions noted, except as described above.

Control Objective 2 – Vendor Software

Controls provide reasonable assurance that implemented new releases of vendor-supplied applications are authorized, tested, approved, properly implemented, and documented.

Description of Controls

BPD has documented procedures for the testing and authorization of new releases of vendor supplied applications. The change control process is under the control and direction of DSPS.

The InvestOne accounting system is licensed by SunGard Investment Systems, Inc. (SunGard). BPD has a maintenance and support contract for InvestOne with SunGard. The InvestOne accounting system was upgraded in May 2005 to version 04.210.

SunGard periodically provides new releases of InvestOne, including documentation. Each new release requires comprehensive testing. DSPS tests new InvestOne releases developed by SunGard consistent with BPD's System Software Change Control procedures. New InvestOne releases are initially installed in the Test environment where they are subjected to integration testing. After successful completion of testing, the InvestOne new release is migrated by OIT's Enterprise Development Branch to the Acceptance environment, where it is subjected to acceptance testing by users. An InvestOne new release will be installed in the Production environment only after all testing has been successfully completed and management has approved the new release for implementation in the Production environment.

In addition to new releases, SunGard will periodically provide fix tapes for InvestOne. Fix tapes, which address certain InvestOne issues, are narrower in scope than new releases. Based on what changes a particular fix tape includes, BPD management will decide whether or not to implement the fix tape. If BPD management decides to implement the fix tape, the fix tape is migrated through the Test and Acceptance environments. Fix tapes are installed in the Production environment only after successful completion of testing in the Test and Acceptance environments and management approval for migration into the Production environment.

DSPS also tests InvestOne system reports, developed by SunGard Investment Systems, Inc. using the same change control procedures described above.

In addition, BPD uses the Endeavor change management software product to manage the upgrades and enhancements. Access to the Endeavor change control software is limited based on job responsibility. Changes are only migrated into the Production environment once all responsible parties approve the change in Endeavor.

Tests of Operating Effectiveness and Results of Testing

- Inspected procedures for the implementation of new releases of vendor supplied applications, and determined that they were documented.
- Inspected vendor maintenance support contracts for vendor software and determined that the contracts existed and were current.
- Inquired of DSPS personnel and observed the current version of InvestOne in the Production environment, and noted that the current version of InvestOne is 04.210. This version was implemented during May 2005, and as such there were no version upgrades during the

examination period. As such, the operating effectiveness of the vendor software change control process could not be tested.

- Inquired of DSPS personnel, and inspected a list of changes from iET Enterprise, and determined that no fix tapes were implemented during the period. As such, the operating effectiveness of fix tape change control process could not be tested.

No exceptions noted.

Control Objective 3 – Program Change Control

Controls provide reasonable assurance that changes to customized reports are authorized, tested, approved, properly implemented, and documented.

Description of Controls

BPD has custom built additional application components for InvestOne data entry and reporting. Included is the FedInvest application, which functions as a web-based user interface that customer agencies can use for entering transactions into InvestOne. For reporting, BPD has built “In-House” developed programs utilizing RM (desktop) COBOL and mainframe COBOL that generate customized reports to provide information unavailable in the standard InvestOne reporting package.

For RM COBOL, OIT uses Microsoft Visual Source Safe (VSS) to control access to source code for these “In-House” developed programs and to facilitate version control by requiring developers to check source code in and out using VSS. These programs were developed by members of DSPS on their individual PCs located in the Hintgen Building and then migrated to a server in the OIT data center. These programs read the data from the InvestOne accounting system and create reports. Specifically, data is downloaded from InvestOne, using standard InvestOne processes, to a data file on the mainframe then via ftp to the servers where the programs execute. Data is not sent from these programs to the InvestOne accounting system. The reports are used by the trust fund managers, sent to Fund Agencies, or sent to the U.S. Department of the Treasury (Treasury).

For mainframe COBOL OIT uses Endeavor to control access to source code for these “In-House” developed programs and to facilitate version control. These programs were developed by OIT and reside on the mainframe, where these programs execute.

DSPS also provides support for the design and testing of customized reports and any changes to FedInvest. DSPS creates the requirements documentation, which is then provided to OIT for development. DSPS manages the request, testing, and approval process, described below, using the Endeavor software change management product and a Change Control Checklist. Change control procedures for Office of Public Debt Accounting (OPDA) systems are documented and include procedures for using Endeavor, for the mainframe portion of FedInvest. IBM Rational ClearCase is utilized for the change management portion for the FedInvest on-line software.

Changes using Endeavor progress through three separate environments: Test, Acceptance, and Production. Each environment is a logical environment with its own software, datasets, and libraries. A change is first tested by the programmer in the Test environment. It is then migrated to the Acceptance environment where a user tests the change using example transactions and Acceptance environment files and libraries.

Changes are tested through the use of scripts and example transactions/files. Each change is reviewed by the user groups that are affected by the change, and each group provides user concurrence that they accept the change. Following user concurrence, a senior staff member reviews the testing materials and completes a checklist indicating that testing has been fulfilled. The package is provided to the Branch Manager for final review and approval.

For mainframe COBOL, once the Branch Manager approves the change, DSPS sends a Network Services Request to OIT to move the change into the Production environment. Upon notification of an accepted change, OIT creates an update package in Endeavor. Endeavor is a mainframe

application through which users approve changes. Endeavor is also used to move changed program files into the Production environment. Endeavor will not allow changes to be migrated from the Acceptance environment into production until the changes have been approved. Access to the Endeavor change control software is limited based on job responsibility.

For emergency changes to the customized reports developed by OIT or the InvestOne accounting system reports, BPD has established a process that allows system programmers to have temporary access to production through the use of a “fire-call” ID product called ETF/A. The operating system is configured to monitor and log such activity for review and approval by management the following day.

Tests of Operating Effectiveness and Results of Testing

- Inspected the access control lists for VSS and determined that access to the source code for “In-House” developed programs was appropriately restricted.
- Inspected change control procedures for OPDA systems and determined that the procedures for change control and for using Endeavor were documented.
- For a selection of program changes, inspected supporting documentation and determined that changes were authorized, approved, tested, and documented.
- For all emergency changes, inspected documented approval and determined that the changes were approved by management.
- Inspected a list of users with access to use ETF/A and inquired of management, and determined that the access list was commensurate with job responsibilities, except as noted below:
 - We identified one user with inappropriate ETF/A access.

Upon notification of the inappropriate access, OIT immediately removed the inappropriate access.
- For a selection of dates, inspected ETF/A activity reports and evidence of review, and determined that ETF/A logs were reviewed.

No exceptions noted, except as described above.

Control Objective 4 – Physical Access

Controls provide reasonable assurance that physical access to computer equipment and storage media is restricted to properly authorized individuals.

Description of Controls

BPD has documented policies and procedures for controlling physical access to BPD buildings and to the data center. These include:

- Identification of sensitive/critical areas to which access needs to be restricted.
- Physical access controls designed to detect unauthorized access.
- Procedures for log reviews and investigation of violations.

The InvestOne mainframe software and FedInvest servers reside in OIT's data center at the BPD's main building located at 200 Third Street in Parkersburg, West Virginia. Armed security guards man and monitor the north entrance to the building 24 hours a day, 7 days a week. Armed security guards also man and monitor the south entrance when it's open, which is from 5:30 am to 6:00 pm and the H.J. Hintgen Building daily from 5:45 am to 8:00 pm on work-days. In addition, an armed roving patrol security guard makes interior and exterior foot patrols 24 hours a day, 7 days a week. A digital video camera system monitors all entrances, the building perimeter, and certain interior areas, including the data center, and records activity 24 hours a day. Physical access to the OIT Data Center is restricted to authorized employees only.

Employees can only be granted After/Off hours access to the Hintgen Building after a request is made by the Assistant Commissioner from the OPDA to the head of BPD security. Access lists are kept in the BPD Officers Duty Book, copies of which are maintained at each guard post. Employee's requiring After/Off hours access will have their security badge programmed by BPD Security with the appropriate access. To access the building, the employee must notify the Avery Street Guard Post that they are entering, then scan their badge to enter. The access control system automatically bypasses the alarms when the employee scans their badge. Upon entry, the employee then must secure the door behind themselves. When exiting, the employee will ensure the entrance is secured and notify the Avery Street Guard Post that they have exited the building. The Avery Street Guard Post will dispatch a rover guard to check the building entrance to ensure it is secure.

All people entering each building are required to place any materials, packages, bundles, etc. onto an x-ray machine. Entrants are also required to pass through a walkthrough metal detector. An activation of the walkthrough metal detector results in further screening by the security guard, utilizing a handheld metal detector to identify the source of activation. The discovery of any prohibited items during the screening process is addressed by the security guards in accordance with procedures outlined in the BPD Officers Duty Book. In addition, entrants must swipe their badges into an access control system that grants access to authorized personnel. The access control system is connected to the Security Branch located in the Avery Street Building.

The Security Branch issues employee badges, after performing security background checks and fingerprinting. During the initial orientation process, new employees receive security training from security management personnel.

If an employee forgets his/her identification badge, the employees may receive a temporary employee identification badge. The security guard verifies the employee's access rights by

reviewing the security database. After access rights are verified, the security guard provides the employee a temporary badge, the employee signs-in on the Employee Log, and the employee passes through both the x-ray and metal detector devices. Employees must return temporary employee identification badges to the security guard station upon departure on the day of issuance. The security guard completes an inventory of temporary employee identification badges at the beginning and end of each guard shift.

Employees are required to have badges available at all times upon request and must bring their badge to the main entrance if they are escorting a visitor into the building.

Visitors and short-term contractors are required to sign-in on the Visitor Log, pass through both the x-ray and metal detection devices, wear a visitor badge, and must be escorted at all times by an authorized employee. Visitor and short-term contractor access is limited to those areas of the building in which the employee is working. Visitors and short-term contractors are required to exit the Hintgen Building before the guard leaves at 8:00 pm EST or when their escort leaves. The security guard completes an inventory of visitor badges at the beginning and end of each guard shift. Visitors and short-term contractors must return the badge when leaving the building for the day. Long-term contractors who will be working at the site for extended periods are issued a contractor badge with an expiration date after being fingerprinted, having a background investigation completed, and receiving a security clearance. They are then added to the security database for the designated time period, after which access is terminated. Badges must be returned upon termination of the engagement.

Terminated employees are required to surrender identification badges and are removed from the database security system immediately.

An employee needing access to the data center in the main building must have his/her Branch Manager request access. The requests are made through iET Enterprise, a workflow system that is used to approve data center access. Only Branch Managers have access to iET Enterprise. After the Branch Manager completes and submits the iET Enterprise request form, iET Enterprise extracts information from the contact management database and sends the message to the Network Services Branch. The Network Services Branch reviews and approves, rejects, or returns the request. Approved requests are forwarded to Division of Security and Emergency Preparedness (DSEP), where a DSEP administrator adds data center access rights to the employee's badge profile in Momentum, BPD's physical access control system. Access to change physical access profiles in Momentum is limited to physical security staff. Momentum is used to control all badge reader door locks in BPD facilities. Each badge swipe on the card reader provides an audit trail of employees who have accessed the facility, which is reviewed by OIT management for potential access violations.

Access to the main computer areas and all sensitive areas require the use of the badge. Badges must be used for ingress and egress from each sensitive area. Badge access limits employees to only those areas within the data center for which they are authorized. This also provides an audit trail that is reviewed by management for access violations and appropriate follow-up. A monthly violation log review is performed to find any attempts by unauthorized badge holders to enter or exit the data center. Any unauthorized access attempts are followed-up on.

All employees without badge access to the data center, or other visitors, who need access to the data center must sign the computer room visitor register recording the visitor's name, section, date, time-in, time-out, and visitor badge number. This log is maintained at the main entrance to the data center.

No outside materials are delivered to the sites without being inventoried and inspected at the BPD warehousing facility. Authorized BPD employees deliver all materials, mail, and packages.

Beginning in June 2007, OIT performed a semiannual reconciliation of individuals with data center access (as recorded in Momentum) to individuals authorized to have data center access (as recorded in iET Enterprise). If an individual is found to have unauthorized data center access, OIT will, based on the individual's need for access, make a decision whether to request that DSEP remove their data center access in Momentum or whether to provide authorization for their access. Additionally, OIT performs a rolling annual review and recertification of individuals with access to the data center. The review is performed by branch, according to a monthly schedule. During the course of a year, each person who has had authorized data center access for at least one-year, will have their access reviewed and recertified. For any individuals that OIT determines have unnecessary data center access, OIT instructs DSEP to remove their data center access from their ID badge.

Tests of Operating Effectiveness and Results of Testing

- Inspected physical access policies and procedures for the data center and determined that they were documented and that they included the identification of sensitive/critical areas to which access needs to be restricted, physical access controls designed to detect unauthorized access, and procedures for log reviews and investigation of violations.
- Observed physical access controls of BPD buildings and noted that security guards, video cameras, badge readers, and locked doors were placed in operation to restrict access.
- For a selection of dates, inspected the daily guard duty logs and determined that the security guards provided coverage in accordance with BPD requirements.
- Inspected the storage of surveillance camera digital images and determined that the images were maintained for 30 days.
- For a selection of months, inspected the Off-Hour Records of Keys Issued sheet and determined that the logs were utilized to record key requests.
- For a selection of new hires, inspected supporting documentation and determined that access badges were issued after background checks were performed and fingerprinting was completed.
- For a selection of new hires, inspected evidence of attending the initial orientation process, and determined that the new hires received security training.
- For a selection of dates, inspected Temporary Entry Logs and determined that logs were used to record the issuance of temporary badges.
- For a selection of dates, inspected visitor logs and determined that visitor logs were used.
- Inspected the security database and compared it to a list of separated employees and determined that separated employees were removed from the badge reader system.
- For a selection of employees and contractors granted access to the data center, inspected the iET Enterprise record for the access granted and determined that access was approved by a Branch Manager, by the Network Services Branch and by the Security Branch.

- Inspected permissions to access the Momentum badge system and inquired of BPD security management, and determined that access permissions to the physical access systems were commensurate with job responsibilities.
- For a selection of months, inspected evidence of the monthly review of violation logs and inquired of OIT staff tasked with reviewing the logs and determined that a review to identify unauthorized access attempts was performed and violations were followed-up on.
- For a selection of months, inspected computer room visitor registers and determined that the registers were in place.
- For a selection of personnel, inspected documentation of the annual review of physical access privileges to the data center and determined that access privileges were reviewed, except as noted below:
 - The review of BPD data center access privileges was performed using the workflow system that is utilized to approve data center access, and not a list of individuals generated from the physical access control system. OIT represented that a formally-documented reconciliation of the workflow approval system to the physical access control system was not performed prior to the reviews that we selected for testing.

Upon notification of this condition in June 2007, OIT reconciled the access granted (from Momentum) to access authorized (from iET Enterprise).

- Inspected a list of all individuals with data center access (queried from Momentum) and reconciled such list to a list of individuals authorized to have BPD data center access (queried from iET Enterprise) and determined 13 individuals had unauthorized access to the BPD data center. Inquired of BPD management and were informed that for 10 of the 13 individual's access to the data center was appropriate, but not properly documented. We were further informed that the remaining three individuals had no need for or no longer required access to the data center.

Upon notification of the unauthorized access of the 13 personnel, OIT and DSEP removed all inappropriate access and provided documented authorization for remaining users.

- For a selection of personnel with access to the data center, inspected documentation of the recertification of physical access privileges to the data center and determined that access privileges were reviewed.

No exceptions noted, except as described above.

Control Objective 5 – Logical Access

Controls provide reasonable assurance that logical access to system and application software is restricted to properly authorized individuals.

Description of Controls

BPD has guidelines for the preparation of security plans for applications and systems that process Sensitive but Unclassified information. All mission-critical systems and general support systems are subject to an internal risk-based review every three years. This review identifies assets and possible threats to these assets, provides a measure of vulnerability of the system to these threats, and confirms control or protective measures are in place.

The InvestOne accounting system is classified as a mission-critical system.

InvestOne security along with the host mainframe's ACF2 security utility control access to the InvestOne accounting system. InvestOne restricts access to accounts within the system based on user IDs. ACF2 is also used to restrict OIT personnel's access to system software, database files, and program libraries.

FedInvest is a web-based user interface through which users have access to enter transactions into InvestOne and view data. External users are limited to accessing InvestOne data through FedInvest. External users that invest in Government Account Series (GAS) securities are able to connect to FedInvest over the Internet to input transactions into InvestOne as well as to view account statements and transaction information.

Access permissions are assigned to FedInvest and InvestOne users commensurate with their job responsibilities.

OPDA follows BPD system administration security password guidelines/procedures to establish and maintain passwords. These guidelines require passwords to be at least 8 characters in length, changed every 30 days, and unique for each individual. Passwords are not displayed when entered. The ACF2 reserved word feature is enabled to prevent the use of commonly used words in passwords.

Information System Security Representatives (ISSR) manage access to the InvestOne accounting system. Users must complete and submit an Access Request/Revoke Form to DSPS before access is granted. Both Division of Federal Investments management and DSPS must authorize the form. DSPS has documented procedures for granting access in the Production Operating Procedures manual. Modifications to user accounts require use of the same Access Request/Revoke Form.

External users must have their supervisor's approval along with DSPS ISSR approval documented on an Access Request/Revoke form before access is granted to FedInvest. When an external user accesses InvestOne data, they enter a user ID and password into FedInvest. Their user ID is then authenticated by ACF2 and InvestOne. The ACF2 and InvestOne logins are transparent to external users, who only see the FedInvest login screen. However, if one of the required authentications failed (e.g., due to a user ID being suspended), the user would be prevented from accessing InvestOne data through FedInvest.

ISSRs remove FedInvest and InvestOne access from users at the request of their managers. Each access removal request is documented on an Access Request/Revoke Form.

OPDA staff is provided remote support access to the InvestOne accounting system through a virtual private network (VPN) connection. To help ensure that OPDA staff can connect remotely when necessary, dial-in remote access is also available by using a modem and a SecureID token. The Security Branch logs each dial-in attempt. Once a successful VPN or dial-in connection is established, users are authenticated to InvestOne by their designated ACF2 user ID and password.

To log into InvestOne, internal (i.e., BPD) InvestOne users must first login (either locally or remotely) to BPD's Windows network. An ISSR reviews a log of failed Windows domain network logins on a daily basis. Additionally, an ISSR also reviews a weekly Internal Violations Report which includes all failed InvestOne login attempts, and a daily report of all failed FedInvest logins. The ISSR follows-up on violations by questioning the violator.

Additionally, on a weekly basis, an ISSR reviews a report of all system administrator actions taken for appropriateness. The reports are reviewed to detect any inappropriate activity, and follow-up is performed to investigate the activity.

Every month an ISSR reviews a report of all InvestOne user IDs that have not been used to access InvestOne for 45 days or more. The ISSR follows up with any affected users by email or by phone. If a user cannot justify their continued access, or does not respond, the ISSR suspends their access.

Additionally, every year OPDA reviews access privileges for all InvestOne users. DSPS ISSRs remove any user IDs or access privileges identified for deletion by management.

Fund Agency Control Considerations

- Ensure that access to the FedInvest system is restricted to properly authorized individuals.

Tests of Operating Effectiveness and Results of Testing

- Inspected a documented risk assessment and determined that a risk assessment had been performed for InvestOne and FedInvest.
- For a selection of InvestOne users, compared access granted to an organization chart, and noted that access privileges were commensurate with job responsibilities.
- Observed a user log into the InvestOne accounting system and noted that their access was restricted in accordance with the system configuration.
- Inspected a list of users with administrator access privileges to InvestOne and FedInvest, inquired of management and inspected an organization chart, and determined that administrator access was limited commensurate with job responsibilities.
- Inspected security guidelines and procedures for InvestOne and FedInvest and determined that logical access controls procedures were documented.

- Inspected password settings for InvestOne and FedInvest and determined that password length, complexity, and expiration settings were configured in accordance with BPD requirements.
- Observed a user change a password through FedInvest and noted that the FedInvest user interface enforces the same password length and complexity requirements as InvestOne.
- Observed a user log into InvestOne and FedInvest and noted that their password was masked as they entered it.
- For a selection of new InvestOne and FedInvest users, inspected documented user access request forms and determined that access was authorized.
- For a selection of user changes in InvestOne and FedInvest, inspected documented user access request forms and determined that access was authorized.
- Inspected a list of all separated and transferred BPD employees and lists of InvestOne and FedInvest user IDs and determined that access to InvestOne and FedInvest had been revoked for terminated and transferred BPD employees.
- For a selection of dates, inspected network security event logs and determined that they were reviewed.
- For a selection of weeks, inspected InvestOne ACF2 audit log reports and evidence of review, and determined that the reports were reviewed and any exceptions were followed-up.
- For a selection of dates, inspected FedInvest on-line security logs and determined that failed login attempts were logged and reviewed.
- For a selection of weeks, inspected the InvestOne ACF2 audit log reports listing InvestOne security administrator actions entered into the system and determined that the reports were reviewed and any exceptions were followed-up.
- For a selection of months, inspected evidence of review of inactive accounts, and determined that inactive user accounts were reviewed and removed on a monthly basis.
- Inspected documentation of the review and recertification of InvestOne and FedInvest user access and determined that InvestOne and FedInvest user access had been reviewed and recertified.
- For a selection of user account recertification reviews requesting removal of user access privileges, inspected InvestOne and FedInvest user lists, and determined that requested modifications were made.

No exceptions noted.

Control Objective 6 – Computer Operations

Controls provide reasonable assurance that computer processes are scheduled appropriately and deviations are identified and resolved.

Description of Controls

The InvestOne accounting system is an interactive mainframe system with master data files that are updated when entries are posted. End-of-day processes perform maintenance to the data tables and data backups. OIT Production Control Team completes the Production Control Daily Checklist to verify the successful completion of end-of-day processes. Data entry error checking and input screen designs help ensure that the data entered by the users is accurate and complete. The error checks include verification of entered data based on predetermined values and ranges. Errors detected by the system are rejected immediately and must be corrected before the transaction is permitted to update the master data tables.

Daily user operations procedures are posted for the InvestOne accounting system to provide operators with the information necessary to sequentially complete daily processing. Additionally, a monthly calendar is posted that highlights the daily requirements. The InvestOne accounting system configuration requires that daily reporting be performed in sequence before transaction processing can begin. OIT's Production Control Team completes the Production Control Monthly Checklist to verify the successful completion of end-of-month processes.

The mainframe operating production software, called Control M, controls the scheduling of batch jobs for the InvestOne accounting system. Control M allows all programs for batch processing, printing and data backup to be scheduled and performed automatically. Access to Control M job schedules is limited to OIT's Mainframe Automation Branch, and privileges are commensurate with job responsibilities. Control M sends messages confirming successful completion of each day's scheduled jobs to OIT and DSPS. Any abends are also communicated to the appropriate OIT and OPDA personnel as they happen through automated messages.

Tests of Operating Effectiveness and Results of Testing

- For a selection of dates, inspected Production Daily Checklists and determined that the checklists had been used during processing.
- Observed the entry of transactions into InvestOne and noted that error checking edits prevented users from entering values of the wrong data type or values not on lookup lists.
- Inquired of FIB management and inspected posted daily user operations procedures for Invest One and FedInvest, the Daily Procedures, and the monthly requirements calendar and determined that these schedules and procedures were available to FIB personnel.
- For a selection of months, inspected Production Monthly Checklists and determined that the checklists had been used during month-end processing.
- Inspected the InvestOne/FedInvest Control M Job Schedule and determined that a job production schedule for InvestOne and FedInvest had been documented.
- Inspected privileges of individuals granted access to make modifications to schedules and job control language (JCL) for production jobs in Control M and inquired of management

regarding job responsibilities, and determined that access privileges were limited commensurate with job responsibilities, except as noted below:

- We noted that three groups of OPDA users had inappropriate privileges to modify Control M batch job schedules. This privilege allowed members to prevent or alter when batch jobs would run for InvestOne.

Upon notification of the inappropriate privileges, OIT and OPDA immediately removed all inappropriate privileges.

No exceptions noted, except as described above.

Control Objective 7 – Network Performance Monitoring

Controls provide reasonable assurance that network performance monitoring techniques are implemented appropriately.

Description of Controls

Users must be connected to the BPD Intranet to access the InvestOne accounting system. Additionally they must run IBM terminal emulation software to connect to the mainframe CICS environments. Network performance and availability is monitored by OIT using the following utilities:

- HP OpenView is used to monitor networking equipment such as switches and firewalls. HP OpenView automatically reports any network equipment outages.
- Mercury Sitescope is used to monitor the availability of servers, including FedInvest application web servers.

The OIT Command Center is staffed 24 hours a day.

Tests of Operating Effectiveness and Results of Testing

- Observed and inquired of OIT Command Center staff and noted that HP OpenView was used to monitor the availability of BPD networking equipment, such as switches and firewalls.
- Observed and inquired of OIT Command Center staff and noted that Mercury Sitescope was used to monitor the performance of the FedInvest website.
- Inquired of management and were informed that the OIT Command Center was staffed 24 hours a day.

No exceptions noted.

INVESTMENT/REDEMPTION PROCESSING CONTROLS

Control Objective 8 – Item Processing Security

Controls provide reasonable assurance that an authorized investment authority is established prior to processing investment requests.

Description of Controls

The Operating Circular communicates the policies and procedures of the Treasury regarding the government accounts on the books of the Treasury that the Secretary of the Treasury has been authorized or directed by law to invest. The Operating Circular describes the government investment account responsibilities that the Treasury has, and the responsibilities that the Federal agencies that have programmatic responsibilities for the use of the moneys in these government investment accounts have.

FIB creates new investment accounts in the InvestOne accounting system after receiving approval from the Treasury. FIB learns about the establishment of an agency fund from the agency itself or from a legislative review done by BPD's Chief Counsel. FIB refers any proposed investment funds to the BPD's and Treasury's Chief Counsel's office for legal review. Upon completing the legal review, the proposed investment account is sent through the Office of Fiscal Assistant Secretary (OFAS) for final approval. Once OFAS approves the investment account, FIB contacts the responsible Fund Agency to coordinate account setup and assist with accessing FedInvest.

BPD Chief Counsel's office maintains the legal matter management system (Team Connect Enterprise) to track legal matters of investment funds. This system has become the Treasury standard for initiating, maintaining and commenting on all legal matters with regards to new and existing investment funds.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Provide applicable legislation to FIB, and any subsequent legislation revision, that authorizes the Fund Agency to invest.
- Verify the authority to invest prior to submitting the Investment/Redemption Request forms.
- Ensure that only authorized personnel sign requests or submit transactions in FedInvest.

Tests of Operating Effectiveness and Results of Testing

- Inspected written procedures for establishing investment authority and observed FIB process investment requests. Determined that FIB authorized investment authority in accordance with procedures.
- For all investment accounts created during the review period, inspected documentation of approval from Treasury for their creation and determined that approval from Treasury was received prior to the creation of investment accounts.

- For all investment accounts created during the review period, inspected documentation of the completion of legal reviews and determined that the required legal reviews were completed prior to the creation of investment accounts.

No exceptions noted.

Control Objective 9 – Item Capture

Controls provide reasonable assurance that investment and redemption requests are processed and recorded accurately and prepared in a timely manner.

Description of Controls

Fund Agencies log on to the FedInvest system to enter their Investment and Redemption requests prior to the 3:00 pm EST deadline (11:00 am EST for Zero Coupon Bonds). Investment options include: (1) Market-based bills, notes, bonds, Treasury Inflation Protected Securities (TIPS); (2) One-day certificates; (3) Par-value securities for agencies with proper legislative authority; and (4) Zero Coupon Bonds for agencies with a Memorandum of Understanding (MOU) to purchase. Procedures for processing requests for investment and redemption requests are documented for each type of investment, including examples of requests, for use by FIB personnel. For new market-based securities auctioned by the Treasury, FIB accountants manually set up the new securities with a Committee on Uniform Securities Identification Procedures (CUSIP) number assigned by the Treasury into the InvestOne accounting system. Zero Coupon Bond securities are manually set up by FIB accountants with a CUSIP number assigned by the Treasury into InvestOne only when an investment request is received by the agency. One-day and par-value securities are also manually set-up by a FIB accountant; however, the FIB accountant assigns a security number based on the security name and date of issue instead of a CUSIP number.

Processing for Agencies without FedInvest access

If a Fund Agency does not have access to FedInvest, they send the Investment/Redemption Requests by fax or email to FIB. To ensure that the Agency's Investment/Redemption Requests are suitable and have been entered correctly into the system, three FIB accountants review and sign each request. The FIB accountants inspect the requests to ensure that they include: name of fund, account symbol, date of request, amount available or needed, type of security to invest/redeem, and authorized signature of the Fund Agency manager or authorized agent. If the requests do not contain the required information, the FIB accountants contact the Fund Agency to obtain the required information. Investment/Redemption requests are processed as of the date on the requests.

Office of Debt Management (ODM) provides FIB the daily security price files for market-based transactions. The market-based prices are compared daily by FIB to other pricing sources such as Bloomberg and Federal Reserve Bank (FRB) of New York. The FRB of New York provides FIB the daily rate for one-day certificates. These prices/rates form the basis for that day's investment pricing. FIB loads the price file into the InvestOne accounting system and enters the one-day certificate rate in the InvestOne accounting system when this information becomes available. The prices are also loaded into FedInvest.

ODM also provides the Zero Coupon Bond pricing on an as needed basis. FIB receives the instruction from the Fund Agency for the purchase/redemption of Zero Coupon Bonds through a FedInvest email notification process. FIB forwards the request to ODM for pricing. These instructions are binding, unless the MOU states otherwise. Once FIB receives the pricing from ODM, FIB processes the transaction and the confirmation becomes available in FedInvest. Only two Fund Agencies are currently investing in zero coupon bonds.

Fund Agencies can purchase new one-day securities via the FedInvest system. If an Agency does not have FedInvest access, one-day investments require authorization via the

Investment/Redemption Form prior to reinvestment. FIB accountants process these overnight transactions as required.

Investment Request Processing

To establish access to FedInvest, the Fund Agency completes a FedInvest Logon-ID Request form and a BPD Logon Request Form and provides these forms to a supervisor for approval. The supervisor reviews and approves the Forms and submits the forms to FIB. FIB verifies that the information is complete and then forwards the forms to DSPS. Using the approved forms, DSPS establishes a user account and communicates user ID and temporary password to the Fund Agency. FIB then coordinates FedInvest system training with the new user. When a FedInvest user is terminated, the Fund Agency uses the above stated forms to revoke access and submits the approved forms to FIB. FIB submits the forms to DSPS, who removes access for the requested user.

Fund Agency users access the FedInvest system using their User ID and password. The Fund Agency user selects the Account Fund Symbol (AFS), date, security type, and investment amount in the FedInvest system.

Before Prices Loaded – The FedInvest user may enter investment requests before prices are loaded in the systems for up to 10 business days in the future except for Zero Coupon Bonds. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number and generates an on-line confirmation on the FedInvest website (available to FedInvest users). When prices are loaded by the FIB accountant into the InvestOne and FedInvest systems, the price/rate is applied to the investment transaction and an on-line confirmation of results after pricing is available on the FedInvest website to FedInvest users.

After Prices Loaded – The FedInvest user may enter investment requests after prices are loaded in the InvestOne and FedInvest system except for Zero Coupon Bonds. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number, applies the price/rate, and generates and posts an on-line confirmation on the FedInvest website (available to FedInvest users).

Zero Coupon Bonds – The FedInvest user authorized to purchase Zero Coupon Bonds pursuant to an MOU, may enter investment requests by 11:00 am EST. The request is then sent by email from the FedInvest system to the FIB accountants who forward the request to ODM for pricing. ODM prices the purchase of the Zero Coupon Bond at approximately 12:00 pm EST and forwards the results to FIB via email. The FIB accountant enters the price into InvestOne, posts the transaction, forwards the memo number to the FedInvest User, and then an on-line confirmation of results is available on the FedInvest website.

Processing for Agencies without FedInvest access

FIB may receive investment requests via fax or email from Fund Agencies without FedInvest access. A FIB accountant enters the request into the InvestOne accounting system. Then two FIB accountants review and initial each investment request. The InvestOne accounting system automatically applies the price/rate and posts confirmations that describe the amount and terms of the investments on the FedInvest website (available to FedInvest users) the same day. For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction

On the following business day, the fourth FIB accountant compares the InvestOne Spectra report (Prior Day Review) to the Investment Request form to ensure the transaction was properly entered into the InvestOne accounting system.

Redemption Request Processing

To establish access to FedInvest, the Fund Agency completes a FedInvest Logon-ID Request form and a BPD Logon Request Form and provides these forms to a supervisor for approval. The supervisor reviews and approves the Forms and submits the forms to FIB. FIB verifies that the information is complete and then forwards the forms to DSPS. Using the approved forms, DSPS establishes a user account and communicates user id and temporary password to the Fund Agency. FIB then coordinates FedInvest system training with the new user. When a FedInvest user is terminated, the Fund Agency uses the above stated forms to revoke access and submits the approved forms to FIB. FIB submits the forms to DSPS, who removes access for the requested user.

Fund Agency users access the FedInvest system using their User ID and password. The Fund Agency user selects the AFS, date, inventory method (First-In First-Out (FIFO), Specific ID, or Par Value), security type, and redemption amount in the FedInvest system.

Before Prices Loaded – The FedInvest user may enter Market-based bill, note, and bond redemption requests using the FIFO inventory method before prices are loaded in the systems for up to 10 business days in the future. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number and generates an on-line confirmation on the FedInvest website (available to FedInvest users). When prices are loaded by the FIB accountant into the InvestOne and FedInvest systems, the price/rate is applied to the investment transaction and an on-line confirmation of results after pricing is available on the FedInvest website to FedInvest users.

After Prices Loaded – The FedInvest user may enter Market-based bill, note, bond and TIPS redemption requests using the FIFO or Specific ID inventory methods after prices are loaded in the InvestOne and FedInvest systems. If Fund Agencies have a tax lot (a group of the same securities purchased on different dates) for market based securities and decide to apply the Specific ID method rather than FIFO to redeem some of the securities from the tax lot, Fund Agency users need to select “Specific ID – Market Based” inventory method to override the InvestOne accounting system default setting-FIFO, and enter the redemption amount into the tax lot. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne accounting system automatically assigns a Memo number, applies the price/rate, and generates and posts an on-line confirmation on the FedInvest website (available to FedInvest users).

Par Values - Special par-value securities have unique redemption rules that require the InvestOne accounting system to redeem them based on the order of earliest maturity date, lowest prevailing interest rate, and FIFO. The FedInvest user may enter Par Value redemption requests for up to 10 business days in the future. The FedInvest user receives an on-line confirmation on the FedInvest website with a message that the Redemption rules will be applied in accordance with Treasury Fiscal Policy, the Transaction will be posted and Memo number assigned at close of business on the effective date. At close of business (after 3:00 pm EST) on the effective date of the redemption, the FIB accountant will run a Utility that will process, post, and assign memo numbers to the redemption requests in InvestOne using the unique redemption rules and post on-line confirmations on the FedInvest website (available to FedInvest users).

Zero Coupon Bonds – The FedInvest user authorized to purchase Zero Coupon Bonds pursuant to an MOU, may enter redemption requests by 11:00 am EST. The request is then sent by email from the FedInvest system to the FIB accountants who forward the request to ODM for pricing. ODM prices the redemption of the Zero Coupon Bond at approximately 12:00 pm EST and forwards the results to FIB via email. The FIB accountant enters the price into InvestOne, posts the transaction, forwards the memo number to the FedInvest User, and then an on-line confirmation of results is available on the FedInvest website.

Processing for Agencies without FedInvest access

FIB may receive redemption requests via fax or email from Fund Agencies without FedInvest access. A FIB accountant enters the request into the InvestOne accounting system. Then two FIB accountants review and initial each redemption request. The InvestOne accounting system automatically applies the price/rate and posts confirmations that describe the amount and terms of the redemption on the FedInvest website (available to FedInvest users) the same day. For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction.

On the following business day, the fourth FIB accountant compares the InvestOne Spectra report (Prior Day Review) to the Redemption Request form to ensure the transaction was properly entered into the InvestOne accounting system.

Investment Maturity Processing

If Fund Agencies do not redeem securities prior to the maturity date, InvestOne automatically matures the securities on the maturity date, generates and posts an on-line confirmation on the FedInvest website (available to FedInvest users). For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Ensure that the submission of Investment/Redemption Requests in the FedInvest system is accurate and completed prior to 3:00 pm EST (11:00 am EST for Zero Coupon Bonds).
- Notify FIB if the Investment/Redemption Request forms have been processed incorrectly so that correcting transactions may be processed.
- Review investment/redemption/maturity/interest confirmations and Monthly Statements of Account to ensure that each Request was processed accurately, timely, and in accordance with their instructions.
- Ensure that access to the FedInvest system is restricted to properly authorized individuals.

Tests of Operating Effectiveness and Results of Testing

- Inspected investment and redemption request procedures and observed FIB process investment and redemption requests and determined that FIB processes investment and redemption requests in accordance with procedures.

- Observed the FIB accountant upload the price file into the InvestOne accounting system and noted that the FIB accountant appropriately followed the established policies and procedures.
- For a selection of Non-FedInvest user investment requests, inspected signed written documentation or emailed authorization and determined that FIB was authorized by the customer to process each investment request prior to entry into InvestOne, that the request was recorded accurately and processed in a timely manner, that the investment request was initialed by the accountant making the entry, reviewed and initialed by two other FIB accountants after entry into InvestOne, and that a comparison of each request form to an InvestOne Spectra report was documented by a fourth accountant. Additionally, it was also determined that documentation was maintained and available.
- For a redemption request entered through FedInvest, inspected the confirmation and determined that the redemption was recorded accurately and processed as requested in a timely manner.
- For an investment request entered through FedInvest, observed that InvestOne automatically assigned a Memo number, applied the price/rate, and generated and posted an on-line confirmation and noted that the request was recorded accurately and processed in a timely manner.
- For a selection of Non-FedInvest user redemption requests, inspected signed written documentation or emailed authorization and determined that FIB was authorized by the customer to process each redemption request prior to entry into InvestOne, that the request was recorded accurately and processed in a timely manner, that the redemption request was initialed by the accountant making the entry, reviewed and initialed by two other FIB accountants after entry into InvestOne, and that a comparison of each request form to an InvestOne Spectra report was documented by a fourth accountant. Additionally, it was also determined that documentation was maintained and available.
- For a selection of maturities, inspected the corresponding confirmation and determined that the InvestOne accounting system automatically matured the security on the maturity date and posted an on-line confirmation on the FedInvest website.

No exceptions noted.

Control Objective 10 – Confirmations

Controls provide reasonable assurance that confirmations are processed in a timely and accurate manner.

Description of Controls

The InvestOne accounting system creates a confirmation for each transaction entered into the InvestOne accounting system. InvestOne assigns an individual number (memo number) that is linked to each transaction. A one for one relationship exists between requests, confirmation, and memo numbers.

The confirmation generation process for FedInvest and non-FedInvest users is summarized as follows:

Fund Agencies access the FedInvest system using their User ID and password. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne generated confirmations are immediately posted on-line through the FedInvest interface.

Processing for Agencies without FedInvest access

For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction. The daily procedures report is used by FIB to ensure that these confirmations are faxed. The Fund Agencies inform the FIB accountants of any identified confirmation errors so FIB accountants can make the necessary adjustments.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Track investment/redemption confirmations to ensure that the Fund Agency user correctly processes all requests.
- Review and reconcile all transaction confirmations to determine that they are accurate and complete, and report discrepancies to FIB so correcting transactions may be processed before 3:00 pm EST.
- Ensure access to the FedInvest system is restricted to properly authorized individuals.
- Review investment/redemption/maturity/interest confirmations and Monthly Statements of Account to ensure that each request was processed accurately, timely and in accordance with their instructions.

Tests of Operating Effectiveness and Results of Testing

- Observed the processing of transactions in InvestOne and noted that the system automatically assigns a Memo number and generated and posted on-line confirmations for each transaction that accurately reflected the transaction.
- For an investment request entered through FedInvest, observed that InvestOne automatically assigned a Memo number, applied the price/rate, and generated and posted an on-line

confirmation and noted that the request was recorded accurately and processed in a timely manner.

- For a selection of dates, inspected Daily Procedure Reports and determined that outgoing fax confirmations were sent to Fund Agencies and were maintained and available.

No exceptions noted.

Control Objective 11 – Fund Balance Adjustment

Controls provide reasonable assurance that Fund Agency account balance adjustments, due to errors in processing or Fund Agency errors, are processed completely and accurately.

Description of Controls

Fund Agencies should detect errors by reviewing confirmations. Fund Agencies notify FIB of the errors and send adjustment information. FIB accountant obtains FIB manager approval before processing corrections/adjustments that are at the fault of the Fund Agency. FIB maintains a documented procedure detailing the steps that need to be performed when making a correction or adjustment. The Corrections/Adjustments Check List documents the tasks that generally need to be completed when making a correction or adjustment. A FIB accountant inspects the adjustment and enters the adjustment into the InvestOne accounting system. The InvestOne accounting system processes the adjustment and posts a confirmation on the FedInvest website.

Two other FIB accountants review and approve the transaction by comparing the adjustment documentation provided by the Fund Agencies to the adjustment in the InvestOne accounting system.

A report is run from FIB Menu (a COBOL collection of desktop programs) to prepare a Monthly Statement of Account by extracting data out of InvestOne. These statements show the adjustments and other transactions for a particular month and are posted on the FedInvest website for review by the Fund Agencies.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Review investment/redemption/maturity/interest confirmations and Monthly Statements of Account to ensure that each request was processed accurately, timely and in accordance with their instructions.
- Review adjustments and make prompt and appropriate journal entries to the accounting records, to adjust the investment and interest account balances.
- Review Monthly Statements of Account to verify that adjustments were processed completely and accurately.

Tests of Operating Effectiveness and Results of Testing

- Inspected written procedures and observed the processing of error corrections and determined that the corrections were performed in accordance with the established procedures.
- For a selection of account balance adjustments, inspected the Fund Agency's adjustment request and determined that two FIB accountants documented their review of each adjustment request and that the request was processed completely and accurately.

No exceptions noted.

Control Objective 12 – Recordkeeping

Controls provide reasonable assurance that support related to the investment accounts is documented and readily available.

Description of Controls

The confirmations and the Monthly Statement of Account generated by InvestOne are available on the FedInvest website. FIB maintains electronic copies of these files. For Fund Agencies without FedInvest access, FIB files copies of the Investment/Redemption Request forms by Fund Agency in chronological order. FIB maintains the files on-site until they are audited then transports them to archive storage.

On a daily basis, FIB receives market-based price files from ODM, Zero Coupon Bond pricing as needed from ODM, and a daily email for the one-day certificate rate from the FRB of New York. These quotations document the daily prices/rates and are filed for future reference. FIB keeps the files on-site until they are audited then transports them to archive storage.

FIB files and retains Daily Principal Totals Reports on-site until they are audited then transports them to archive storage.

Copies of the Notification of P&I Credit, used to report interest on certain Marketable or Agency Security investments held at FRB of New York are filed for future reference. Each month, FIB develops the SF1132, SF1133-1 and SF1134-1 reports. These reports show each Fund Agency's account balance including securities held in safekeeping at FRB New York. They are sent to the Treasury to be used in decision making and determining financing of securities.

Tests of Operating Effectiveness and Results of Testing

- For a selection of months, inspected Monthly Statements of Account and determined that the reports were documented and maintained
- For a selection of investment/redemption requests, inspected confirmations and determined that confirmations were documented and maintained.
- For a selection of investment requests, inspected supporting Investment Request forms and determined that documentation was maintained and available.
- For a selection of redemption requests, inspected supporting Redemption Request forms and determined that documentation was maintained and available.
- For a selection of Daily Principal Total Reports, inspected Daily Principal Total Reports and determined that documentation was maintained and available.
- For a selection of dates, inspected the Fund Agency Files, Daily Principal Total Reports, Market Price files from ODM, Daily Rate Sheet from FRB, Zero Coupon Bond Pricing from ODM, and Notification of P&I Credit and determined that they were documented and maintained.

- For a selection of months, inspected SF1132, SF1133-1, and SF1134-1 forms and determined that they were documented and readily available.

No exceptions noted.

Control Objective 13 – Segregation of Duties

Controls provide reasonable assurance that the duties of authorizing, processing information, and verifying documents are appropriately segregated.

Description of Controls

FIB has established policies and procedures documenting that the following responsibilities are segregated for Fund Agencies using FedInvest:

- Fund Agencies are responsible for requesting access to FedInvest.
- External FedInvest users must have their supervisor's approval along with OPDA ISSR approval documented on an Access Request/Revoke form before access is granted to FedInvest.
- Access permissions are assigned to FedInvest and InvestOne users commensurate with their job responsibilities.
- Fund Agencies access FedInvest and submit investment purchase and redemption requests.
- FedInvest interfaces with the InvestOne accounting system which processes and posts the investment and redemption requests and generates the confirmations that are available on-line in FedInvest.

FIB has established policies and procedures documenting that the following responsibilities are segregated for Fund Agencies not using FedInvest:

- Fund Agencies prepare and submit Investment/Redemption Requests to FIB via fax or email.
- FIB personnel enter the investment purchase or redemption request into either the InvestOne or FedInvest systems.
- InvestOne processes the investment and redemption requests and generates the confirmations that are available for FedInvest users in the FedInvest System.
- FIB personnel fax the confirmations to Fund Agencies without FedInvest access by 4:00 pm EST on the date of the transaction.
- To verify that transactions have been processed accurately for the Fund Agencies without FedInvest access, two FIB accountants not entering transactions on a given day will review and compare a copy of the Investment/Redemption Request form from the Agency to the data entered into the InvestOne accounting system. Both the data entry personnel and the verifying personnel initial the file copies to document that the procedure has been performed.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Ensure that access to the FedInvest system is restricted to properly authorized individuals.

Tests of Operating Effectiveness and Results of Testing

- Inspected written procedures and observed FIB process transactions and determined that the transactions were processed in accordance with documented procedures.

- For a selection of InvestOne users, compared access granted to an organization chart and noted that access privileges were commensurate with job responsibilities.
- For a selection of investment requests, inspected signed written documentation or emailed authorization and determined that the investment request was initialed by the accountant making the entry, reviewed and initialed by two other FIB accountants after entry into InvestOne, and if a comparison of each request form to an InvestOne Spectra report was documented by a fourth accountant.
- For a selection of redemption requests inspected signed written documentation or emailed authorization and determined that the redemption request was initialed by the accountant making the entry, reviewed and initialed by two other FIB accountants after entry into InvestOne, and if a comparison of each request form to an InvestOne Spectra report was documented by a fourth accountant.

No exceptions noted.

Control Objective 14 – Interest Calculation and Payments

Controls provide reasonable assurance that interest is calculated accurately and interest reinvestments are completed accurately.

Description of Controls

Interest

FIB has documented the methods for calculating interest for GAS securities in written desktop procedures. One-day securities earn interest daily, par value securities pay interest semi-annually on June 30 and December 31, and market-based notes, bonds and TIPS pay interest semi-annually on various dates. The market-based bills and zero coupon bonds do not earn periodic interest and therefore interest income is equal to the discount earned. The InvestOne accounting system calculates the amount of interest to be paid when holdings are redeemed or interest payments are due. The InvestOne accounting system calculates interest based on the investment terms in the system in accordance with the requirements of 31 CFR Chapter II, Part 306, Subpart E with the exception of one-day securities. The InvestOne accounting system calculates interest for one-day securities consistent with the FRB of New York calculated overnight repo rate.

The InvestOne accounting system reports the results of the calculations on confirmations for Fund Agency reconciliation and re-computation. The confirmation generation process is summarized as follows:

Fund Agencies access the FedInvest system using their User ID and password. Since the FedInvest system interfaces with the InvestOne accounting system, the InvestOne generated confirmations are immediately posted on-line through the FedInvest interface.

Processing for Agencies without FedInvest access

For agencies that do not have internet access, the FIB will fax confirmations by 4:00 pm EST on the date of the transaction. The daily procedures report is used by FIB to ensure that these confirmations are faxed. The Fund Agencies inform the FIB accountants of any identified confirmation errors so FIB accountants can make the necessary adjustments.

The InvestOne accounting system also calculates certain accrued interest amounts and Inflation Compensation Earned (ICE) on the TIPS. The InvestOne accounting system calculates ICE in accordance with the requirements of 31 CFR Chapter II, Part 356, Appendix B.

FIB accountants can verify the accuracy of the interest calculations by manually recalculating interest for redemptions, maturities and semi-annual payment dates.

A FIB Menu (collection of COBOL programs) program that extracts data from the InvestOne accounting system to generate Monthly Statements of Account, a cash basis statement that reflects the Agency's investment SF 224 reporting, and shows interest income paid on each security. These statements, in addition to the confirmations, are made available to the Fund Agencies for reconciliation with their accounting records. To create the Monthly Statement of Account, a FIB accountant selects and runs the "account statement" option from FIB menu for both, tax lot and summary levels. This creates two text files for each Fund. The FIB accountant uses "Visual SourceSafe" to post the Monthly Statement of Account on the FedInvest website for easy reference. The Summary level Monthly Statement of Account is sent via email to PD Web

Content Management for review and posting on the FedInvest website. In addition, previous months statements are available for reference purposes. If the Fund Agency identifies any errors, the Fund Agency should inform FIB so the necessary adjustments may be made.

Amortization of Premiums and Discounts

The InvestOne accounting system automatically calculates amortization of discount/premium based on the investment terms in the system. The system calculates amortization for market-based bills (i.e., short-term securities) using the straight-line method and for market-based notes/bonds/TIPS/zero coupon bonds (i.e., long-term securities), using the level yield method, which approximates the interest method. A FIB Menu program is used to create monthly Accrual Confirmation and Activity Reports for each account, which contain the monthly amortization figures and are posted on the FedInvest website for Fund Agency reconciliation and re-computation. To create an Accrual Confirmation Report, a FIB accountant selects and runs the “accrual report” option from the FIB report menu. This generates two text files that include the Accrual Confirmation and Activity Reports for each fund. The FIB accountant uses “Visual SourceSafe” to post the Accrual Confirmation and Activity Reports on the FedInvest website for easy reference. In addition, previous months statements are available for reference purposes. If the Fund Agency identifies any errors, the Fund Agency should inform FIB so the necessary adjustments may be made.

Accrued Interest

The InvestOne accounting system automatically calculates accrued interest based on the investment terms in the system. The FIB Menu accrual report program reports the results of interest accruals in the monthly Accrual Activity Report and posts the report on the FedInvest website for Fund Agency reconciliation and re-computation. To create an Accrual Activity Report, a FIB accountant selects and runs the “accrual report” option from the FIB report menu. The FIB Menu program then generates a text file that includes the Accrual Activity Report for each fund. The FIB accountant uses “Visual SourceSafe” to convert the text files into PDF files and posts the Accrual Activity Report on the FedInvest website for easy reference. In addition, previous months statements are available for reference purposes. If the Fund Agency identifies any errors, the Fund Agency should inform FIB so the necessary adjustments may be made.

Interest Reinvestments

To support the interest reinvestment process for par-value securities on June 30 and December 31 each year, FIB prepares an investment rollover report for the Office of Fiscal Projections that includes principal balances from the InvestOne accounting system and interest accruals that are associated with those balances as of the date of the report. For the December 31 interest payments on par-value securities, the money is reinvested into a certificate of indebtedness maturing the following June 30. For June 30 maturities and interest payments, FIB receives written documentation from each agency that holds par-value securities that states how they want their interest and maturities reinvested. June 30 is the only date in which agencies can invest in longer term par-value securities (par-value bonds). OPDA reviews and approves the investment rollover report for accuracy and sends the report to Treasury headquarters. The Fiscal Assistant Secretary of the Treasury approves and returns the investment rollover report for FIB to process on June 30. The interest-reinvestment process for the non-par-value securities is the same as and subject to the regular investment process discussed in Control Objective 9.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Ensure that the requested investment returns the appropriate amount of interest to meet their investment income goals.
- Reconcile interest payments received as presented in the confirmations and Monthly Statements of Account and recalculate interest for accuracy.
- Approve reinvestments of interest after review for accuracy, completeness, and compliance with instructions.
- Not rely on FIB for advice on appropriateness of investment/ redemption decisions.
- Recalculate interest accrual and amortization of premium and/or discount and compare the results to the BPD provided monthly Accrual Confirmation and Activity Reports.
- Report any interest accrual discrepancies noted on the monthly Accrual Activity Reports to BPD for resolution.
- Report any premium and/or discount discrepancy noted on the monthly Accrual Confirmation Reports to BPD for resolution.

Tests of Operating Effectiveness and Results of Testing

- Inspected interest calculation procedures and determined that interest calculation transactions were processed in accordance with procedures. Additionally, noted that procedures were consistent with the requirements of 31 CFR, Chapter II, Part 306, Subpart E and 31 CFR, Chapter II, Part 356, Appendix B.
- Recalculated a selection of interest transactions for other than one day securities, amortization of premium and discount, and ICE and determined that they were mathematically accurate and properly recorded.
- Recalculated a selection of interest transactions for one-day securities and determined that they were mathematically accurate and complied with the desktop procedures.
- For a selection of months, inspected Monthly Statement of Accounts and determined that they contained the necessary data for Fund Agencies to reconcile and re-compute accruals and amortization and that documentation was maintained and available.
- For a selection of interest reinvestments, inspected supporting instruction and determined that reinvestments were completed in accordance with agency instruction.
- Inspected a selection of investment rollover reports and determined that FIB management documented their review and approval of each report, and that each report was approved by the Assistant Secretary of the Treasury prior to processing.

No exceptions noted.

Control Objective 15 – Statement Rendering

Controls provide reasonable assurance that monthly reports are processed in a timely and accurate manner.

Description of Controls

Monthly Statements of Account

A FIB Menu program extracts data from the InvestOne accounting system to produce the Monthly Statement of Account that details a Fund Agency's beginning balance, investment/redemption activity, unrealized discount, premium/discount recognized, interest earning, and ending balance for the month. These reports are posted on the FedInvest website by the 1st working day after the end of the month to be accessed by Fund Agencies to use for transaction reconciliation, investment monitoring, and investment strategy initiatives. To create the report, the FIB accountant selects and runs the "account statement" option from the FIB reports menu to create text files of the Monthly Statements of Account at both the summary level and tax lot level for each fund. The FIB accountant uses "Visual SourceSafe" to post the Monthly Statements of Account at the tax lot level on the FedInvest website for easy reference. "Visual SourceSafe" protects the posted documents so that they are read-only access and cannot be modified once posted. In addition, previous months statements are available for reference purposes. If the Fund Agency identifies any errors, the Fund Agency should inform FIB so the necessary adjustments may be made. FIB's policy requires that FIB accountants complete and forward Monthly Statements of Account at the summary level to PD Web Content Management for review and posting on the FedInvest Website by the 1st working day after the end of the month

Partial 224 Report

In response to a submitted request for assistance with the preparation of the SF224 report, FIB will report the monthly investment activity to FMS for the requesting Fund Agency. The Fund Agency is responsible for completing the receipts and disbursements information on their respective SF224. Through September 2006, the SF224 report was generated via a mainframe program. A FIB accountant compared the SF224 report to the monthly IPAC total prior to submitting the SF224 report to FMS by the third business day of each month. Beginning in October 2006, FIB converted to FMS's new Governmentwide Accounting and Reporting Modernization Project. The daily IPAC's processed by FIB include the Treasury Account Symbol and Business Event Type Code allowing the activity to be classified in the FMS Governmentwide Account Statement, eliminating the need for the monthly SF224 report. FIB prepares a partial 224 on a monthly basis to report reclassification entries. The partial 224 was a manual process for October and November 2006. The FIB accountant produced various reports to gather the reclassification data needed to manually submit an On-Line Partial 224 to FMS. The file was reviewed by another individual before submission. From December 2006 forward, a partial 224 report and file is created via a mainframe program. The file is then uploaded in a bulk submission to FMS via GWA after being reviewed by another individual. FIB instructs agencies to obtain access to the FMS GWA Account Statement application in order to verify the activity submitted by FIB.

Fund Agency Control Considerations

Fund Agencies should establish controls to:

- Review FIB provided Monthly Statements of Account to ensure that transactions are recorded accurately and timely, and report discrepancies to FIB so correction processes may occur.
- Review investment activity reported by FIB on the SF224 for consistency with receipts and disbursements information prepared by the Fund Agency (August 1, 2006 through October 31, 2006 - Only).
- Review investment activity from FMS application Governmentwide Account Statements to the FIB provided Monthly Statements of Account to verify investment activity reported by FIB on the Fund Agencies behalf.

Tests of Operating Effectiveness and Results of Testing

- For a selection of months, inspected Monthly Statement of Accounts and determined that they contained the necessary data for Fund Agencies to reconcile and re-compute accruals and amortization.
- For a selection of posted Monthly Statement of Accounts, observed the attempt to modify the file and noted that the system prevents modifications.
- For a selection of months, inspected that fund agency Monthly Statement of Accounts were posted on-line and determined that the reports were posted by the 1st working day after the end of the month.
- Inspected a selection of monthly partial 224 submissions and determined that the investment activity was reviewed by an FIB accountant.

No exceptions noted.

**IV. OTHER INFORMATION PROVIDED BY THE
BUREAU OF THE PUBLIC DEBT**

CONTINGENCY PLANNING

System Back Up

The InvestOne accounting system has a contingency plan managed by the Division of System and Program Support (DSPS). There is a formal Division of Federal Investments (DFI) Continuity of Operations Plan (COOP), which is part of a larger COOP Plan for Office of Public Debt Accounting (OPDA) and Bureau of the Public Debt (BPD). The Federal Investments Branch (FIB) performs monthly tests on all daily InvestOne functions at OPDA's contingency site with the support of two FIB employees. The focus of these tests is to provide assurances that connectivity can be made, and these functions will continue with minimum interruption during any emergency that may occur with or without warning.

The first backup is performed before running the nightly batch jobs. The Office of Information Technology (OIT) makes two copies of this backup tape, which are each retained for 15 days. OIT then performs a second backup after completion of the nightly batch jobs. OIT also makes two copies of the second backup tape, which are each retained for 45 days. OIT stores one copy of the first and second backup tape in the production tape library, and the other copies are shipped to CAPS for their respective retention periods. If a backup tape needs to be restored, the request will be made from the DSPS. OIT will then load the backup tape.

Continuity of Operations

A fire alarm and sprinkler system that is managed, maintained, and tested by the facilities management department at BPD protects the Hintgen Building and the main building. Alarms are active 24 hours a day, 7 days a week, and are tied-in to the local fire department over phone lines for spontaneous notification. Sprinkler heads are located in the ceiling of each room of the buildings. This is a wet pipe (always charged with water) system with individual heads that discharge water.

In the event the main building, where the InvestOne accounting system is run, becomes inoperable, mainframe operations would be relocated to the BPD contingency facility in Kansas City, MO in accordance with the OIT data center recovery plan. This facility employs a warm site strategy for recovery of mainframe operations. OIT has contracted with Financial Management Service (FMS) Kansas City to provide mainframe equipment for this site. The DFI Business Continuity Plan calls for resumption of operations and critical applications of essential functions within 12 hours. The InvestOne accounting system has been classified as a critical application.

As part of the DFI COOP Plan, should the Hintgen Building become unavailable, two of FIB's personnel will relocate to the CAPS facility to reestablish their daily operations. BPD will revert to manual procedures until the mainframe and InvestOne accounting system are fully recovered.

**V. INDEPENDENT AUDITORS' REPORT ON
COMPLIANCE WITH LAWS AND REGULATIONS**



KPMG LLP
2001 M Street, NW
Washington, DC 20036

Independent Auditors' Report

Inspector General, U.S. Department of the Treasury
Commissioner, Bureau of the Public Debt
Assistant Commissioner, Office of Public Debt Accounting

We have examined the accompanying description of the general computer and investment/redemption processing controls related to the Federal Investments Branch (FIB) of the Bureau of the Public Debt (BPD) as of July 31, 2007, and have issued our report thereon dated September 10, 2007. Our examination was performed in accordance with standards established by the American Institute of Certified Public Accountants, and applicable *Government Auditing Standards*, issued by the Comptroller General of the United States.

Our examination included procedures to obtain reasonable assurance about whether (1) the accompanying description presents fairly, in all material respects, the aspects of BPD's controls that may be relevant to a Fund Agencies' internal control as it relates to an audit of financial statements; (2) the controls included in the description were suitably designed to achieve the control objectives specified in the description, if those controls were complied with satisfactorily, and Fund Agencies and sub-service organizations applied the controls contemplated in the design of BPD's controls; and (3) such controls had been placed in operation as of July 31, 2007. The control objectives were specified by BPD. Our examination included those procedures we considered necessary in the circumstances to obtain a reasonable basis for rendering our opinion.

Compliance with laws and regulations applicable to FIB of BPD is the responsibility of BPD management. As part of obtaining reasonable assurance about whether control structure policies and procedures tested were operating with sufficient effectiveness to achieve the related control objectives during the period from August 1, 2006 to July 31, 2007, we performed tests of BPD's compliance with certain provisions of applicable laws and regulations directly and materially affecting the general computer and investment/redemption processing controls. We limited our tests of compliance to these provisions and we did not test compliance with all applicable laws and regulations. The objective of our examination was not, however, to provide an opinion on overall compliance with such provisions. Accordingly, we do not express such an opinion.

The results of our tests disclosed no instances of noncompliance that are required to be reported herein under *Government Auditing Standards*.

This report is intended solely for the information and use of the management of BPD, its Fund Agencies, the independent auditors of its Fund Agencies, the U.S. Department of the Treasury Office of Inspector General, the Office of Management and Budget, the Government Accountability Office, and the U.S. Congress, and is not intended to be, and should not be, used by anyone other than these specified parties.

KPMG LLP

September 10, 2007