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June 29, 2017

Ms. Sheryl Morrow
Commissioner
Bureau of the Fiscal Service
Department of the Treasury

Management Report: Areas for Improvement in the Bureau of the Fiscal Service's Information Systems Controls

Dear Ms. Morrow:

In connection with our audit of the consolidated financial statements of the U.S. government,¹ we audited and reported on the Schedules of Federal Debt Managed by the Bureau of the Fiscal Service (Fiscal Service) for the fiscal years ended September 30, 2016, and 2015.² As part of these audits, we performed a review of information systems controls over key Fiscal Service financial systems that are relevant to the Schedule of Federal Debt.

As we reported in connection with our audits of the Schedules of Federal Debt for the fiscal years ended September 30, 2016, and 2015, Fiscal Service maintained, in all material respects, effective internal control over financial reporting relevant to the Schedule of Federal Debt as of September 30, 2016, based on criteria established under 31 U.S.C. § 3512(c), (d), commonly known as the Federal Managers' Financial Integrity Act. Those controls provided reasonable assurance that misstatements material in relation to the Schedule of Federal Debt would be prevented, or detected and corrected, on a timely basis. While we identified control deficiencies relating to information systems controls relevant to the Schedule of Federal Debt, we do not consider them individually or collectively to be material weaknesses or significant deficiencies.³ Nevertheless, these control deficiencies warrant the attention and action of management.

This report presents the deficiencies we identified during our fiscal year 2016 testing of information systems controls over key Fiscal Service financial systems that are relevant to the Schedule of Federal Debt. This report also includes the results of our follow-up on the status of

¹31 U.S.C. § 331(e)(2). Because the Bureau of the Fiscal Service is a bureau within the Department of the Treasury, federal debt and related activity and balances that it manages are also significant to the consolidated financial statements of the Department of the Treasury (see 31 U.S.C. § 3515(b)).

²GAO, *Financial Audit: Bureau of the Fiscal Service's Fiscal Years 2016 and 2015 Schedules of Federal Debt*, GAO-17-104 (Washington, D.C.: Nov. 10, 2016).

³A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness yet important enough to merit attention by those charged with governance. A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis.

Fiscal Service's corrective actions to address information systems control-related deficiencies and associated recommendations contained in our prior years' reports that were open as of September 30, 2015. This is the public version of a Limited Official Use Only report that is being issued concurrently. Information that Fiscal Service deemed sensitive but unclassified has been redacted from this report. In the separately issued Limited Official Use Only report, we communicated to Fiscal Service management detailed information regarding our findings and related recommendations.

We also assessed information systems controls over key financial systems maintained and operated by the Federal Reserve Banks (FRB) on behalf of the Department of the Treasury (Treasury) that are relevant to the Schedule of Federal Debt. We issued a separate report to the Board of Governors of the Federal Reserve System on the results of that assessment.⁴

Results in Brief

During our fiscal year 2016 audit, we identified nine new information systems general control deficiencies related to access controls, configuration management, and segregation of duties. In the Limited Official Use Only report, we made 11 recommendations to address these control deficiencies.

In addition, during our follow-up on the status of Fiscal Service's corrective actions to address information systems control-related deficiencies and associated recommendations contained in our prior years' reports that were open as of September 30, 2015, we determined that corrective actions were complete for 6 of the 10 open recommendations and corrective actions were in progress for the 4 remaining open recommendations related to security management, configuration management, and segregation of duties.

These new and continuing information systems control deficiencies increase the risk of unauthorized access to, modification of, or disclosure of sensitive data and programs and disruption of critical operations. The potential effect of these new and continuing deficiencies on the Schedule of Federal Debt financial reporting for fiscal year 2016 was mitigated primarily by Fiscal Service's compensating management and reconciliation controls designed to detect potential misstatements on the Schedule of Federal Debt.

The Commissioner of the Bureau of the Fiscal Service provided comments on the detailed findings and recommendations in a draft of the separately issued Limited Official Use Only report. In those comments, the Commissioner stated that Fiscal Service has taken, and will continue to take, steps to fully address the 4 prior-year recommendations that remained open as of September 30, 2016, and has actions planned to address the 11 new recommendations made in this year's report.

Background

Treasury is authorized by Congress to borrow money backed by the full faith and credit of the United States to fund federal operations. Treasury is responsible for prescribing the debt instruments and otherwise limiting and restricting the amount and composition of the debt. Treasury is also responsible for issuing and redeeming debt instruments, paying interest to investors, and accounting for the resulting debt. In addition, Treasury maintains an investment

⁴GAO, *Management Report: Areas for Improvement in the Federal Reserve Banks' Information Systems Controls*, [GAO-17-537R](#) (Washington, D.C.: May 18, 2017).

program for federal government accounts, including trust funds that have statutory authority to invest temporary cash reserves not needed for current benefits and expenses.

As of September 30, 2016, and 2015, federal debt managed by Treasury's Fiscal Service totaled \$19,560 billion and \$18,138 billion, respectively, primarily for moneys borrowed to fund the federal government's operations. These balances consisted of approximately (1) \$14,173 billion as of September 30, 2016, and \$13,124 billion as of September 30, 2015, of debt held by the public and (2) \$5,387 billion as of September 30, 2016, and \$5,014 billion as of September 30, 2015, of intragovernmental debt holdings. Total interest expense on federal debt managed by Fiscal Service for fiscal years 2016 and 2015 was about \$430 billion and \$407 billion, respectively.

Treasury relies on a number of interconnected financial systems and electronic data to process and track the money that it borrows, to account for the securities that it issues, and to manage the federal debt. Many FRBs provide fiscal agent services on behalf of Treasury. Such services primarily consist of issuing, servicing, and redeeming Treasury securities held by the public and handling the related transfers of funds. FRBs use a number of key financial systems to process debt-related transactions. Detailed data initially processed at FRBs are summarized and then forwarded electronically to Treasury's data center for matching, verification, and posting to Fiscal Service's general ledger.

Information systems general controls are the structure, policies, and procedures that apply to an entity's overall computer operations. Information systems general controls establish the environment in which the application systems and controls operate. They include five general control areas—security management, access controls, configuration management, segregation of duties, and contingency planning.⁵ An effective information systems general control environment (1) provides a framework and continuing cycle of activity for managing risk, developing security policies, assigning responsibilities, and monitoring the adequacy of the entity's computer-related controls (security management); (2) limits or detects access to computer resources, such as data, programs, equipment, and facilities, thereby protecting them against unauthorized modification, loss, or disclosure (access controls); (3) prevents unauthorized changes to information system resources, such as software programs and hardware configurations, and provides reasonable assurance that systems are configured and operating securely and as intended (configuration management); (4) includes policies, procedures, and an organizational structure to manage who can control key aspects of computer-related operations (segregation of duties); and (5) protects critical and sensitive data, and provides for critical operations to continue without disruption or be promptly resumed when unexpected events occur (contingency planning).

Objectives, Scope, and Methodology

Our objectives were to (1) evaluate information systems controls over key financial systems maintained and operated by Fiscal Service that are relevant to the Schedule of Federal Debt and (2) determine the status of Fiscal Service's corrective actions to address information systems control-related deficiencies and associated recommendations contained in our prior years' reports for which actions were not complete as of September 30, 2015. Our evaluation of information systems controls was conducted using the *Federal Information System Controls*

⁵GAO, *Government Auditing Standards: 2011 Revision*, [GAO-12-331G](#) (Washington, D.C.: December 2011).

Audit Manual.⁶ This work was performed in connection with our audit of the Schedules of Federal Debt for the fiscal years ended September 30, 2016, and 2015, for the purpose of supporting our opinion on Fiscal Service's internal control over financial reporting relevant to the Schedule of Federal Debt.

To evaluate information systems controls, we identified and reviewed Fiscal Service's information systems control policies and procedures; observed controls in operation; conducted tests of controls; and held discussions with officials at Treasury's data center to determine whether controls were adequately designed, implemented, and operating effectively.

The scope of our information systems general controls work for fiscal year 2016 included (1) following up on open recommendations from our prior years' reports and (2) using a risk-based approach to test the five general control areas related to the systems in which the applications operate and other critical control points in the systems or networks that could have an impact on the effectiveness of the information systems controls at Fiscal Service as they relate to financial reporting in the current year relevant to the Schedule of Federal Debt. In addition, we assessed software and network security over key Fiscal Service financial systems that are relevant to the Schedule of Federal Debt.

We determined whether relevant application controls were appropriately designed and implemented, and then performed tests to determine whether the application controls were operating effectively. We reviewed four key Fiscal Service applications relevant to the Schedule of Federal Debt to determine whether the application controls were designed and operating effectively to provide reasonable assurance that

- transactions that occurred were input into the system, accepted for processing, processed once and only once by the system, and properly included in output;
- transactions were properly recorded in the proper period, key data elements input for transactions were accurate, data elements were processed accurately by applications that produced reliable results, and output was accurate;
- recorded transactions actually occurred, were related to the organization, and were properly approved in accordance with management's authorization, and output contained only valid data;
- application data and reports and other output were protected against unauthorized access; and
- application data and reports and other relevant business information were readily available to users when needed.

We used an independent public accounting (IPA) firm, under contract, to assist in information systems testing, including the follow-up on the status of Fiscal Service's corrective actions during fiscal year 2016 to address open recommendations from our prior years' reports. We agreed on the scope of the IPA's work, monitored and reviewed all aspects of its work, and determined that the work was sufficient to satisfy our audit objectives.

During the course of our work, we communicated our findings to Fiscal Service management. We plan to follow up to determine the status of corrective actions taken on recommendations

⁶GAO, *Federal Information System Controls Audit Manual (FISCAM)*, [GAO-09-232G](#) (Washington, D.C.: February 2009).

open as of September 30, 2016, during our audit of the fiscal year 2017 Schedule of Federal Debt.

We performed our audit in accordance with U.S. generally accepted government auditing standards. We believe that our audit provides a reasonable basis for our findings and recommendations in this report.

Assessment of Fiscal Service's Information Systems General Controls

During our fiscal year 2016 audit, we identified nine new information systems general control deficiencies. Three of these deficiencies related to access controls, five related to configuration management, and one related to segregation of duties.

Access controls limit access or detect inappropriate access to computer resources, such as data, programs, equipment, and facilities, thereby protecting them from unauthorized modification, loss, or disclosure. Such controls include logical access controls and physical access controls. The new access control deficiencies we identified during fiscal year 2016 related to logical access controls. Effectively designed and implemented logical access controls require users to authenticate themselves through the use of passwords or other identifiers, and limit the files and other resources that authenticated users can access and the actions that they can execute based on a valid need that is determined by assigned official duties.

Configuration management involves the identification and management of security features for all hardware, software, and firmware components of an information system at a given point and systematically controls changes to that configuration during the system's life cycle. Effectively designed and implemented configuration management controls prevent unauthorized or untested changes to critical information system resources at each system sublevel (i.e., network, operating systems, and infrastructure applications) and provide reasonable assurance that systems are securely configured and operating as intended. In addition, effectively designed and implemented configuration management controls provide reasonable assurance that applications and changes to the applications go through a formal, documented systems development process that identifies all changes to the baseline configuration. To reasonably assure that changes to applications are necessary, work as intended, and do not result in the loss of data or program integrity, such changes should be authorized, documented, tested, and independently reviewed.

Segregation of duties is important because work responsibilities should be segregated so that one individual does not control all critical stages of a process. Effective segregation of duties is achieved by splitting responsibilities between two or more organizational groups. In addition, dividing duties this way diminishes the likelihood that errors and wrongful acts will go undetected because the activities of one group or individual will serve as a check on the activities of the other.

In the separately issued Limited Official Use Only report, we communicated to the Commissioner of the Bureau of the Fiscal Service detailed information regarding the nine new information systems general control deficiencies and made 11 recommendations to address these control deficiencies.

In addition, our fiscal year 2016 follow-up on the status of actions taken by Fiscal Service to address previously identified, but unresolved, information systems general control deficiencies as of September 30, 2015, found that corrective actions were complete for 6 of the 10 open

recommendations and corrective actions were in progress for the remaining 4 open recommendations.

The potential effect of these new and continuing deficiencies on the Schedule of Federal Debt financial reporting for fiscal year 2016 was mitigated primarily by Fiscal Service's compensating management and reconciliation controls designed to detect potential misstatements on the Schedule of Federal Debt. Nevertheless, these control deficiencies increase the risk of unauthorized access to, modification of, or disclosure of sensitive data and programs and disruption of critical operations and therefore warrant the attention and action of management.

Agency Comments

The Commissioner of the Bureau of the Fiscal Service provided comments on the detailed findings and recommendations in a draft of the separately issued Limited Official Use Only report. In those comments, the Commissioner stated that Fiscal Service is committed to having effective internal controls for its information technology systems. The Commissioner further stated that Fiscal Service will continue to look for efficient and effective ways to improve and ensure the consistent application of agency-wide security controls over all systems. Additionally, the Commissioner stated that Fiscal Service has taken, and will continue to take, steps to fully address the 4 prior-year recommendations that remained open as of September 30, 2016, and has actions planned to address the 11 new recommendations made in this year's report. We plan to follow up to determine the status of corrective actions taken on these recommendations during our audit of the fiscal year 2017 Schedule of Federal Debt.

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In the separately issued Limited Official Use Only report, we noted that the head of a federal agency is required by 31 U.S.C. § 720, as recently amended, to submit a written statement on actions taken or planned on our recommendations to the Senate Committee on Homeland Security and Governmental Affairs and to the House Committee on Oversight and Government Reform, the congressional committees with jurisdiction over the programs and activities that are the subject of our recommendations, and GAO not later than 60 days after the date of that report. A written statement must also be sent to the Senate and House Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of that report.

We are sending copies of this report to interested congressional committees, the Secretary of the Treasury, the Inspector General of the Department of the Treasury, and the Director of the Office of Management and Budget. In addition, this report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions regarding this report, please contact me at (202) 512-3406 or simpsondb@gao.gov. Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff members who made major contributions to this report include Nicole M. Burkart, David B. Hayes, and Jeffrey L. Knott (Assistant Directors); Dean Carpenter; Mickie E. Gray; Colleen A. Heywood; Thomas J. Johnson; J. Andrew Long; and Rebecca L. Perkins.

Sincerely yours,

A handwritten signature in black ink that reads "Dawn Simpson". The signature is written in a cursive style with a large initial 'D' and 'S'.

Dawn B. Simpson
Director
Financial Management and Assurance
(101271)