Independent Audit on the Effectiveness of EXIM's Information Security Program and Practices Report for Fiscal Year 2023

OIG-AR-23-06
September 18, 2023

Office of Inspector General
Export-Import Bank of the United States

To: Howard Spira
Senior Vice President and Chief Information Officer

From: Eric Rivera
Assistant Inspector General for Audits

ERIC RIVERA Digitally signed by ERIC RIVERA
Date: 2023.09.18 13:02:28
-04'00'

Subject: Independent Audit on the Effectiveness of EXIM's Information Security Program and Practices – Fiscal Year 2023

Date: September 18, 2023

This memorandum transmits the independent audit on the effectiveness of the Export-Import Bank of the United States' (EXIM) information security program and practices for fiscal year (FY) 2023. Under a contract monitored by this office, we engaged the independent public accounting firm of KPMG LLP (KPMG) to conduct a performance audit. The objective of the audit was to determine whether EXIM developed and implemented an effective information security program and practices, as required by the Federal Information Security Modernization Act of 2014 (FISMA).

KPMG conducted the audit in accordance with generally accepted government auditing standards and is responsible for the findings and conclusions expressed in this report.

EXIM Management concurred with the recommendations in this report. OIG considers management's proposed actions to be responsive. Therefore, the recommendations will be closed upon completion and verification of the implementation of the proposed actions. Also, during the past year, EXIM implemented corrective actions to remediate prior–year deficiencies.

We appreciate the cooperation and courtesies provided to KPMG and this office during the audit. If you have questions, please contact me at (202) 565-3219. Additional information about EXIM OIG and the Inspector General Act of 1978, as amended, is available at www.exim.gov/about/oig.

KPMG LLP
Suite 900
8350 Broad Street
McLean, VA 22102

Eric Rivera
Assistant Inspector General for Audits
Export Import Bank of the United States
811 Vermont Avenue, NW
Washington, DC 20571

Re: Independent Audit on the Effectiveness of EXIM's Information Security Program and Practices Report – Fiscal Year 2023

Dear Mr. Rivera,

We are pleased to submit this report, which presents the results of our independent performance audit of the Export-Import Bank of the United States (EXIM or the Agency) to determine whether their information security program and practices were effective for fiscal year (FY) 2023, as of September 18, 2023, in accordance with the Federal Information Security Modernization Act of 2014 (FISMA). FISMA requires federal agencies, including EXIM, to have an annual independent evaluation performed of their information security programs and practices and to report the results of the evaluation to the Office of Management and Budget (OMB). OMB has delegated its responsibility for the collection of annual FISMA responses to the Department of Homeland Security (DHS). DHS, in conjunction with OMB and the Council of the Inspectors General on Integrity and Efficiency (CIGIE), developed the *FY 2023 - 2024 Inspector General Federal Information Security Modernization Act of 2014 (FISMA) Reporting Metrics* (DHS FY 2023 IG FISMA Reporting Metrics). EXIM OIG contracted with KPMG LLP (KPMG) to conduct this independent performance audit. OIG monitored our work to ensure generally accepted government auditing standards (GAGAS) and contractual requirements[1] were met.

We conducted this performance audit in accordance with GAGAS. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to GAGAS, we conducted this performance audit in accordance with Consulting Services Standards established by the American Institute of Certified Public Accountants (AICPA). This performance audit did not constitute an audit of financial statements, or an attestation level report as defined under GAGAS and the AICPA standards for attestation engagements.

[1] Contract No. 47QRAD19DU208 Order Number 83310123F0013, Item 0001, dated February 22, 2023

The objective for this independent performance audit was to determine whether EXIM developed and implemented an effective information security program and practices, as required by FISMA. KPMG evaluated EXIM's security plans, policies, and procedures in place for effectiveness as required by applicable federal law and regulations, and guidance issued by OMB and the National Institute of Standards and Technology (NIST) Special Publications (SP) and Federal Information Processing Standards (FIPS).

We based our independent performance audit work on a selection of EXIM-wide security controls and a selection of system-specific security controls applicable to one EXIM information system. As part of our audit, we responded to the *DHS FY 2023 IG FISMA Reporting Metrics* and assessed the metric maturity levels on behalf of the EXIM OIG. Additional details regarding the scope of our independent performance audit are included in the Objective, Scope, and Methodology section and Appendix A**,** Scope and Methodology. Appendix C, Status of Prior-Year Recommendations, summarizes EXIM's progress in addressing prior-year recommendations.

Consistent with applicable FISMA requirements, OMB policy and guidance, and NIST standards and guidelines, EXIM established and maintained its information security program and practices for its information systems for the five Cybersecurity Functions[2] and nine FISMA Metric Domains.[3]

Based on the results of our performance audit procedures, all five of EXIM's Cybersecurity Functions were assessed at Level 4: Managed and Measurable. Therefore, the information security program was considered effective according to the instructions detailed within Appendix F, *DHS FY 2023 IG FISMA Reporting Metrics*.

Also, during the past year, EXIM implemented corrective actions to remediate prior-year findings related to Supply Chain Counterfeit Component Training and weaknesses within the Risk Management Plan of Action and Milestone (POA&M) program.

[2] OMB, DHS, and CIGIE developed the *DHS FY 2023 IG FISMA Reporting Metrics* in consultation with the Federal Chief Information Officers Council. In FY 2023, the nine IG FISMA Metric Domains were aligned with the five Cybersecurity Functions of Identify, Protect, Detect, Respond, and Recover as defined in the NIST *Framework for Improving Critical Infrastructure Cybersecurity*.

[3] As described in the *DHS FY 2023 IG FISMA Reporting Metrics*, the nine FISMA Metric Domains are: risk management, supply chain risk management, configuration management, identity, credential, and access management, data protection and privacy, security training, information security continuous monitoring, incident response, and contingency planning.

However, we did identify a finding within the Cybersecurity Identify Function area. Specifically, we noted the following:

Cybersecurity Function: Identify

1. EXIM did not finalize its migration to NIST SP 800-53, Revision (Rev.) 5, *Security and Privacy Controls for Information Systems and Organizations*, to include but not limited to cybersecurity controls such as Personally Identifiable Information (PII) Processing and Transparency-2 and Supply Chain Risk Management-3 across the organization. (FISMA domain: Risk Management)

We considered this finding when we assessed the maturity levels for the *DHS FY 2023 IG FISMA Reporting Metrics*. We provided recommendations related to this one finding that, if effectively addressed by management, should strengthen EXIM's information security program.

We did not render an opinion on EXIM's internal controls over financial reporting or over financial management systems as part of this performance audit. We caution that projecting the results of our performance audit to future periods or other EXIM information systems not included in our selection is subject to the risk that controls may become inadequate because of changes in technology or because compliance with controls may deteriorate. This report is intended solely for the use and reliance of EXIM, EXIM OIG, DHS, and OMB.

Sincerely,

KPMG LLP

September 18, 2023

Office of Inspector General
Export-Import Bank of the United States

OIG-AR-23-06

Why We Did This Audit

The Federal Information Security Modernization Act of 2014 (FISMA or the Act) requires agencies to develop, document, and implement an agency-wide information security program to protect their information and information systems, including those provided or managed by another agency, contractor, or source. The Act provides a framework for establishing and maintaining the effectiveness of management, operational, and technical controls over information technology that support operations and assets. It also provides a mechanism for improved oversight of federal agency information security programs, as it requires agency heads, in coordination with their Chief Information Officers and Senior Agency Information Security Officers, to report the security status of their information systems to the U.S. Department of Homeland Security (DHS) and the Office of Management and Budget (OMB), which is accomplished through DHS' CyberScope tool. In addition, FISMA requires offices of inspectors general to provide an independent assessment of the effectiveness of an agency's information security program.

To fulfill its FISMA responsibilities the Office of Inspector General (OIG) contracted with KPMG LLP (KPMG) for an independent audit of the effectiveness of the Export-Import Bank of the United States' (EXIM or the Agency) information security program. The objective of this performance audit was to determine whether EXIM developed and implemented an effective information security program and practices as required by FISMA. In addition, KPMG followed up on prior-year FISMA findings.

What OIG Recommends

This report includes recommendations to improve the effectiveness of EXIM's information security program.

EXECUTIVE SUMMARY

Independent Audit of EXIM's Information Security Program and Practices Effectiveness – FY 2023
OIG-AR-23-06, September 18, 2023

What OIG Found

EXIM's information security program and practices were effective overall as a result of the testing of the fiscal year (FY) 2023 Inspector General FISMA Reporting Functions, for which all (Identify, Protect, Detect, Respond, and Recover) were assessed at Level 4: Managed and Measurable as described by the DHS criteria. Consistent with applicable FISMA requirements, OMB's policy and guidance, the National Institute of Standards and Technology (NIST) Special Publications (SPs) and Federal Information Processing Standards (FIPS), EXIM's information security program and practices for its systems were established and maintained for the five Cybersecurity Functions and nine FISMA Metric Domains. However, we noted a finding within the Cybersecurity Identify Function area across one FISMA Metric Domain (Risk Management) that needs improvement but was not pervasive to affect the overall effectiveness and assessment of the program. Appendix F contains the Agency's information security program summary results of the DHS FY 2023 IG FISMA Reporting Metrics.

Further, we determined that EXIM had remediated the finding related to penetration testing and is in the process of remediating the other finding reported in the FY 2022 FISMA performance audit report (OIG-AR-23-04, March 2, 2023) related to Risk Management.

Finally, as outlined in Appendix E, we tested 25 NIST SP 800-53, Revision 5, Security and Privacy Controls for Information Systems and Organizations, controls in addition to those identified within the Metrics for one randomly selected system and determined that EXIM effectively designed and implemented these controls.

CONTENTS

LIST OF TABLES

INTRODUCTION

This report presents the results of the independent audit conducted by KPMG LLP (KPMG) of the effectiveness of the information security program and practices of the Export-Import Bank of the United States (EXIM or the Agency) for fiscal year (FY) 2023. The objective was to determine whether EXIM developed and implemented an effective information security program and practices in accordance with the Federal Information Security Modernization Act of 2014 (FISMA).

OBJECTIVE, SCOPE, AND METHDOLOGY

As stated, the objective of the audit was to determine whether EXIM developed and implemented an effective information security program and practices in accordance with FISMA. To address our objective, we evaluated the Agency's security program, plans, policies, and procedures in place for effectiveness as required by applicable federal law and regulations and guidance issued by the OMB and NIST. Using evaluation guidance prescribed by the FY 2023 Inspector General Federal Information Security Modernization Act of 2014 (FISMA) Reporting Metrics (DHS FY 2023 IG FISMA Reporting Metrics), we evaluated Agency and system level security control policies, procedures, and practices associated with the following DHS FY 2023 IG FISMA Reporting Metric Domains:

- Identify – Risk Management and Supply Chain Risk Management;
- Protect – Configuration Management, Identity, Credential, and Access Management, Data Protection and Privacy, and Security Training;
- Detect – Information Security Continuous Monitoring;
- Respond – Incident Response; and
- Recover – Contingency Planning.

We selected one EXIM information system for our performance of system level security control testing procedures: the Financial Management System-Next Generation (FMS-NG).

We also followed up on the status of prior-year FISMA findings. See Appendix A for more details on the scope and methodology of our performance audit.

BACKGROUND

The Export-Import Bank of the United States is an independent agency and a wholly owned U.S. government corporation that was first organized as a District of Columbia banking corporation in 1934. EXIM is the official export credit agency of the United States. EXIM's operations subsequent to September 30, 1991, are subject to the provisions of the Federal Credit Reform Act (FCRA), which became effective October 1, 1991.

The mission of EXIM is to support U.S. exports by providing export financing through its loan, guarantee, and insurance programs in cases where the private sector is unable or unwilling to provide financing, or where such support is necessary to level the competitive playing field for U.S. exporters due to financing provided by foreign governments to their exporters. In pursuit of its mission of supporting U.S. exports, EXIM offers four major financial products: loan guarantees, working capital guarantees, direct loans, and export credit insurance. All EXIM obligations carry the full faith and credit of the U.S. government. The mission-critical systems supporting these programs and the Agency's mission are:

1. Financial Management System – Next Generation (FMS-NG)
2. Infrastructure General Support System (GSS)
3. (b) (7)(E)
4. (b) (7)(E)
5. Application Processing System (APS)
6. Database GSS

EXIM's network infrastructure consists largely of networking devices with various servers running different operating system platforms. Standard desktop personal computers and laptops (b) (7)(E). The networks are protected from external threats by a range of information technology security devices and software, including data loss prevention tools, firewalls, intrusion detection and prevention systems, antivirus, software, and spam-filtering systems.

Federal Laws, Roles, and Responsibilities. On December 17, 2002, the President signed into law the E-Government Act, Pub. L. 107-347, which included the Federal Information Security Management Act of 2002 (FISMA). FISMA, as amended,[1] permanently reauthorized the framework established in the Government Information Security Reform Act of 2000 (GISRA), which expired in November 2002. FISMA continues the annual review and reporting requirements introduced in GISRA. In addition, FISMA includes new provisions aimed at further strengthening the security of the federal government's information and information systems, such as the development of minimum standards for agency systems. NIST has been tasked to work with federal agencies in the development of those standards. NIST issues these standards and guidelines as FIPS and SPs. FIPS provide the minimum information security requirements that are necessary to improve the security of federal information and information systems, and SP 800 and selected 500 series SPs provide computer security guidelines and recommendations. For instance, FIPS Publication 200, *Minimum Security Requirements for Federal Information and Information Systems,* requires agencies to adopt and implement the minimum-security controls documented in NIST SP 800-53, as amended. Federal agencies are required to develop, document, and implement an agency-wide information security program to protect their information and information systems, including those provided or managed by another agency, contractor, or other source. FISMA provides a framework for establishing and

[1] On December 18, 2014, FISMA was amended by the Federal Information Security Modernization Act of 2014. Pub. L. 113-283. The amendment: (1) included the reestablishment of the oversight authority of the Director of OMB with respect to agency information security policies and practices, and (2) set forth the authority for the Secretary of DHS to administer the implementation of such policies and procedures for information systems.

maintaining the effectiveness of management, operational, and technical controls over information technology that support operations and assets. FISMA also provides a mechanism for improved oversight of federal agency information security programs, as it requires agency heads, in coordination with their Chief Information Officers and Senior Agency Information Security Officers, to report the security status of their information systems to DHS and OMB, which is accomplished through DHS' CyberScope tool. CyberScope, operated by DHS on behalf of OMB, replaces the legacy paper-based submission process and automates agency reporting. In addition, OIGs provide an independent assessment of the effectiveness of an agency's information security program. OIGs must also report their results to DHS and OMB annually through CyberScope.

DHS FY 2023 IG FISMA Reporting Metrics. DHS revised the *FY 2022 IG FISMA Reporting Metrics* and published such revisions in the *FY 2023 IG FISMA Reporting Metrics*. DHS created the metrics for IGs to use in conducting their annual independent evaluations to determine the effectiveness of the information security program and practices of their respective agencies. The metrics are organized around the five Cybersecurity Functions[2] outlined in the NIST Cybersecurity Framework[3] and are intended to provide agencies with a common structure for identifying and managing cybersecurity risks across the enterprise, as well as to provide IGs with guidance for assessing the maturity of controls to address those risks. In addition, the Council of the Inspectors General on Integrity and Efficiency (CIGIE) developed and published maturity models for Risk Management, Supply Chain Risk Management, Configuration Management, Identity, Credential, and Access Management, Data Protection and Privacy, Security Training, Information System Continuous Monitoring, Incident Response and Contingency Planning. See Table 1, below, for a description of the NIST Cybersecurity Framework Security Functions and the associated DHS FY 2023 IG FISMA Reporting Metric Domains.

[2] In *Framework for Improving Critical Infrastructure Cybersecurity,* Version 1.0, NIST created Functions to organize basic cybersecurity activities at their highest level. These Functions are Identify, Protect, Detect, Respond, and Recover. They aid an organization in expressing its management of cybersecurity risk by organizing information, enabling risk management decisions, addressing threats, and improving by learning from previous activities.

[3] The President issued Executive Order 13636, "*Improving Critical Infrastructure Cybersecurity,"* on February 12, 2013, which established that "[i]t is the Policy of the United States to enhance the security and resilience of the Nation's critical infrastructure and to maintain a cyber environment that encourages efficiency, innovation, and economic prosperity while promoting safety, security, business confidentiality, privacy, and civil liberties." In enacting this policy, the Executive Order calls for the development of a voluntary risk-based Cybersecurity Framework – a set of industry standards and best practices to help organizations manage cybersecurity risks. The resulting Framework, created through collaboration between government and the private sector, uses a common language to address and manage cybersecurity risk in a cost-effective way based on business needs without placing additional regulatory requirements on businesses.

Table 1: Alignment of the NIST Framework for Improving Critical Infrastructure Cybersecurity Functions to the DHS FY 2023 IG FISMA Metric Domains

Cybersecurity Framework Security Functions	FY 2023 IG FISMA Reporting Metric Domains
Identify	Risk Management Supply Chain Risk Management
Protect	Configuration Management Identity, Credential, and Access Management Data Protection and Privacy Security Training
Detect	Information Security Continuous Monitoring
Respond	Incident Response
Recover	Contingency Planning

The maturity models have five levels: Level 1: Ad-Hoc, Level 2: Defined, Level 3: Consistently Implemented, Level 4: Managed and Measurable, and Level 5: Optimized. Table 2, below, provides the descriptions for each maturity level.

Table 2: Inspector General Assessed Maturity Levels

Maturity level	Maturity Level Description
Level: 1 Ad-hoc	Policies, procedures, and strategy are not formalized; activities are performed in an ad-hoc, reactive manner.
Level: 2 Defined	Policies, procedures, and strategy are formalized and documented but not consistently implemented.
Level 3: Consistently Implemented	Policies, procedures, and strategy are consistently implemented, but quantitative and qualitative effectiveness measures are lacking.
Level 4: Managed and Measurable	Quantitative and qualitative measures on the effectiveness of policies, procedures, and strategy are collected across the organization and used to assess them and make necessary changes.
Level 5: Optimized	Policies, procedures, and strategy are fully institutionalized, repeatable, self-generating, consistently implemented, and regularly updated based on a changing threat and technology landscape and business/mission needs.

The maturity level for a domain is on a calculated average approach, wherein the average of the metrics in a particular domain will be used by IGs to determine the effectiveness of individual function areas (identify, protect, detect, respond, and recover) and the overall program. A security program is considered effective if the majority of the *DHS FY 2023 IG FISMA Reporting Metrics* are assessed at Level 4: Management and Measurable. We used this assessment method in our formation of a conclusion on the effectiveness of EXIM's information security program and practices. For information about our conclusion and the results of our performance audits, see the section immediately below.

AUDIT RESULTS

Consistent with applicable FISMA requirements, OMB's policy and guidance, the NIST SP and FIPS, EXIM's information security program and practices for its systems were established and have been maintained for the five Cybersecurity Functions and nine FISMA Metric Domains. During the past year, EXIM implemented corrective actions to remediate prior-year findings related to Risk Management, however, full implementation remains in process. We calculated the average of the *DHS FY 2023 IG FIMSA Reporting Metrics* for the five Cybersecurity Functions at Level 4: Managed and Measurable and therefore found that EXIM's information security program and practices were effective, as prescribed by the DHS criteria.

However, we identified a finding within the Cybersecurity Identify Function and Risk Management FISMA Metric Domain that, while limited in effect, indicates the need for improvements in EXIM's information security program and practices. We provided a recommendation related to the identified finding that, if effectively addressed by management, should strengthen EXIM's information security program and practices.

A summary of the results for the *DHS FY 2023 IG FISMA Reporting Metrics* assessment is in Appendix F.

As noted above, we evaluated the open prior-year findings from the FY 2022 FISMA performance audit. See Appendix C*,* Status of Prior-Year Findings, for additional details.

In a written response to this report, EXIM Management concurred with our finding and recommendation (see Appendix D, Management Response*)*.

FINDING

Finding 1: Identify Function: EXIM needs to update its Enterprise Risk Management Program to comply with NIST SP 800-53 Rev. 5

During FY 2023, we noted EXIM did not complete actions necessary to meet the requirements of, and be in compliance with, NIST SP 800-53 Rev. 5, *Security and Privacy Controls for Information Systems and Organizations*. Incomplete actions included, but were not limited to, the implementation of the following cybersecurity controls that met the following NIST 800-53 Rev. 5 requirements:

- Personally Identifiable Information (PII) Processing and Transparency-2 and
- Supply Chain Risk Management-3.

The following guidance is relevant to this finding:

Appendix I to OMB Circular No. A-130, *Managing Information as a Strategic Resource*, states:

> For legacy information systems, agencies are expected to meet the requirements of, and be in compliance with, NIST standards and guidelines within one year of their respective publication dates unless otherwise directed by OMB. The one-year compliance date for revisions to NIST publications applies only to new or updated material in the publications. For information systems under development or for legacy systems undergoing significant changes, agencies are expected to meet the requirements of, and be in compliance with, NIST standards and guidelines immediately upon deployment of the systems.

After conducting a business feasibility assessment, EXIM management determined the complete transition to NIST SP 800-53 Rev. 5, while maintaining their enterprise risk management program, would not be feasible without the implementation of a Governance, Risk and Compliance (GRC) tool. As a result of the time needed to evaluate, select, and secure funding for an appropriate tool, EXIM staff reported that they were unable to complete implementation of the requirement in a timely manner.

Enterprise-wide risk management programs provide guidance over controls implemented for the information systems. Outdated programs, policies and procedures can lead to misunderstandings about the EXIM information security program. This, in turn, increases the risk of improper control implementation, thereby exposing EXIM to potential cyber security weaknesses.

Independent Auditors' Recommendations:

We recommend that EXIM management: (1) Update and implement the Enterprise Risk Management program, including applicable policies and procedures, to align with the new requirements outlined in the NIST SP 800-53, Rev. 5, *Security and Privacy Controls for Information Systems and Organizations*, dated September 2020.

CONCLUSION

Based on the results of our performance audit procedures applied, we assessed all five Cybersecurity Functions and nine FISMA Metric Domains at Level 4: Managed and Measurable. Our assessment included consideration of the nature and effect of the above-noted finding. Therefore, we concluded that EXIM's information security program and practices were effective, as prescribed by the DHS criteria.

We determined that EXIM remediated the prior-year findings and related recommendations reported in the FY 2022 FISMA performance audit (see Appendix C for details). EXIM should continue to develop and implement controls and practices that are Level 5: Optimized for the five Cybersecurity Functions and nine FISMA Metric Domains to consistently evaluate and improve the effectiveness of its information security program.

In addition, EXIM should implement corrective actions to complete actions necessary to meet the requirements of, and comply with, NIST SP 800-53 Rev. 5.

APPENDICES

Appendix A: Scope and Methodology

To evaluate the effectiveness of EXIM's information security program and its compliance with FISMA, we conducted a performance audit that was focused on the information security controls, program, and practices at the Agency level (entity level) and for selected information systems.

We conducted the performance audit in accordance with generally accepted government auditing standards and with Consulting Services Standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To assess EXIM's information security controls and practices, we applied procedures to test Agency and system level controls, the latter of which were associated with Financial Management System-Next Generation (FMS-NG), the one information system we selected for our performance audit. Using the evaluation guidance prescribed in the *FY 2023 Inspector General Information Security Modernization Act of 2014 Reporting Metrics* (*DHS FY 2023 IG FISMA Reporting Metrics*) and the methodology steps outlined below for reach of the five Cybersecurity Functions and nine FISMA Metric Domains from the *DHS FY 2023 IG FISMA Reporting Metrics*:

1. We requested that EXIM management communicate its self-assessed maturity levels, where applicable, to help us confirm our understanding of the FISMA-related policies and procedures, guidance, structures, and processes established by the Agency.
2. We performed procedures designed to assess whether Agency and FMS-NG system-level controls were suitably designed and operating effectively to address requirements associated with Level 3: Consistently Implemented maturity models for all nine FISMA Metric Domains. If, based on the results of testing performed, we determined that one or more controls did not meet such requirements, we assessed such controls as Level 1: Ad Hoc or 2: Defined for the associated FISMA Metric Domain questions.
3. For controls that, based on testing performed, met requirements associated with Level 3: Consistently Implemented maturity models, we performed additional procedures designed to assess whether Agency and FMS-NG system-level controls were suitably designed and operating effectively to address requirements associated with Level 4: Managed and Measurable maturity models for applicable FISMA Metric Domain questions.
4. For controls that, based on testing performed, met requirements associated with Level 4: Managed and Measurable maturity models, we performed additional procedures designed to assess whether Agency and FMS-NG system-level control were suitably designed to address requirements associated with Level 5: Optimized maturity models

for applicable FISMA Metric Domain questions. The test procedures associated with this assessment focused specifically on the evaluation of the design of the controls.

As prescribed in the *DHS FY 2023 IG FISMA Reporting Metrics*, a FISMA Metric Domain is considered effective if it is at Level 4: Managed and Measurable or at Level 5: Optimized. See Appendix F, *DHS FY 2023 IG FISMA Metric Results.*

In addition to the procedures above, we selected 25 additional NIST SP 800-53, Rev. 5, security controls that were not referenced in the *DHS FY 2023 IG FISMA Reporting Metrics* and developed and executed test procedures to test such controls for FMS-NG. See Appendix E, Security Controls Selection.

To assess the effectiveness of the information security program and practices of EXIM, we performed various procedures, including:

- Inquiries of information system owners, information system security managers, system administrators, and other relevant individuals to walk through each control process.
- An inspection of the information security practices and policies established by EXIM's Office of Information Management and Technology.
- An inspection of the information security practices, policies, and procedures in use across EXIM.
- An inspection of IT artifacts to determine the implementation and operating effectiveness of security controls.

We relied on computer-generated data as part of performing this audit. We assessed the reliability of the data by (1) observing the generation of the data, (2) inspecting parameters or logic used to generate the data, and (3) interviewing EXIM officials knowledgeable about the data. We determined that the data was sufficiently reliable for testing purposes.

We performed our fieldwork with EXIM management and IT personnel during the period of April 4, 2023, through June 30, 2023. During our audit, we met with EXIM management to provide a status of the engagement and discuss our preliminary conclusions.

See Appendix B for the federal laws, regulations, and guidance used as criteria for the performance audit and Appendix C for a status of prior-year recommendations.

Appendix B: Federal Laws, Regulations, and Guidance

Our performance audit of the effectiveness of EXIM's information security program and practices and external penetration testing was guided by applicable federal laws and regulations related to information security, including but not limited to the following:

- GAO Government Auditing Standards, July 2018 Revision (GAO-18-568G)
- Federal Information Security Modernization Act of 2014 (Pub. L. 113-283, §2(a), 128 Stat. 3073, 3075-3078, Dec. 18, 2014)
- OMB Memorandum 23-03, Fiscal Year 2023 Guidance on Federal Information Security and Privacy Management Requirements
- OMB Circular A-130, Managing Information as a Strategic Resource
- OMB Circular A-123, Management's Responsibility for Enterprise Risk Management and Internal Control
- OMB Memorandum 07-18, Ensuring New Acquisitions Include Common Security Configurations
- OMB Memorandum 07-16, Safeguarding Against and Responding to the Breach of Personally Identifiable Information
- OMB Memorandum 07-11, Implementation of Commonly Accepted Security Configurations for Windows Operating Systems
- OMB Memorandum 06-19, Reporting Incidents Involving Personally Identifiable Information and Incorporating the Cost for Security in Agency Information Technology Investments
- OMB Memorandum 06-16, Protection of Sensitive Agency Information
- OMB Memorandum 05-24, Implementation of Homeland Security Presidential Directive (HSPD) 12 – Policy for a Common Identification Standard for Federal Employees and Contractors
- OMB Memorandum 13-02, Improving Acquisition through Strategic Sourcing
- OMB Memorandum 11-11, Continued Implementation of Homeland Security Presidential Directive 12 – Policy for a Common Identification Standard for Federal Employees and Contractors
- OMB Memorandum 14-03, Enhancing the Security of Federal Information and Information Systems
- OMB Memorandum 15-14, Management and Oversight of Federal Information Technology
- OMB Memorandum 17-12, Preparing for and Responding to a Breach of Personally Identifiable Information
- OMB Memorandum 17-25, Reporting Guidance for Executive Order on Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure
- OMB Memorandum 19-03, Strengthening the Cybersecurity of Federal Agencies by Enhancing the High Value Asset Program
- OMB Memorandum 19-17, Enabling Mission Delivery through Improved Identity, Credential, and Access Management

- OMB Memorandum 19-26, Update to the Trusted Internet Connections (TIC) Initiative
- OMB FedRAMP Policy Memo, Security Authorization of Information Systems in Cloud Computing Environments, Dec. 8, 2011
- FY 2023 - 2024 Inspector General Federal Information Security Modernization Act of 2014 (FISMA) Reporting Metrics
- NIST SP 800-53, Rev. 5, Security and Privacy Controls for Information Systems and Organizations
- NIST SP 800-53A, Rev. 1, Guide for Assessing the Security Controls in Federal Information Systems and Organizations: Building Effective Security Assessment Plans
- NIST SP 800-30, Rev. 1, Guide for Conducting Risk Assessments
- NIST SP 800-34, Rev. 1, Contingency Planning Guide for Federal Information Systems
- NIST SP 800-37, Rev. 1, Guide for Applying the Risk Management Framework to Federal Information Systems: A Security Life Cycle Approach
- NIST SP 800-61, Rev. 2, Computer Security Incident Handling Guide
- NIST SP 800-137, Information Security Continuous Monitoring for Federal Information Systems and Organizations
- FIPS 199: Standards for Security Categorization of Federal Information and Information Systems
- FIPS 200: Minimum Security Requirements for Federal Information and Information Systems

Appendix C: Status of Prior-Year Recommendations

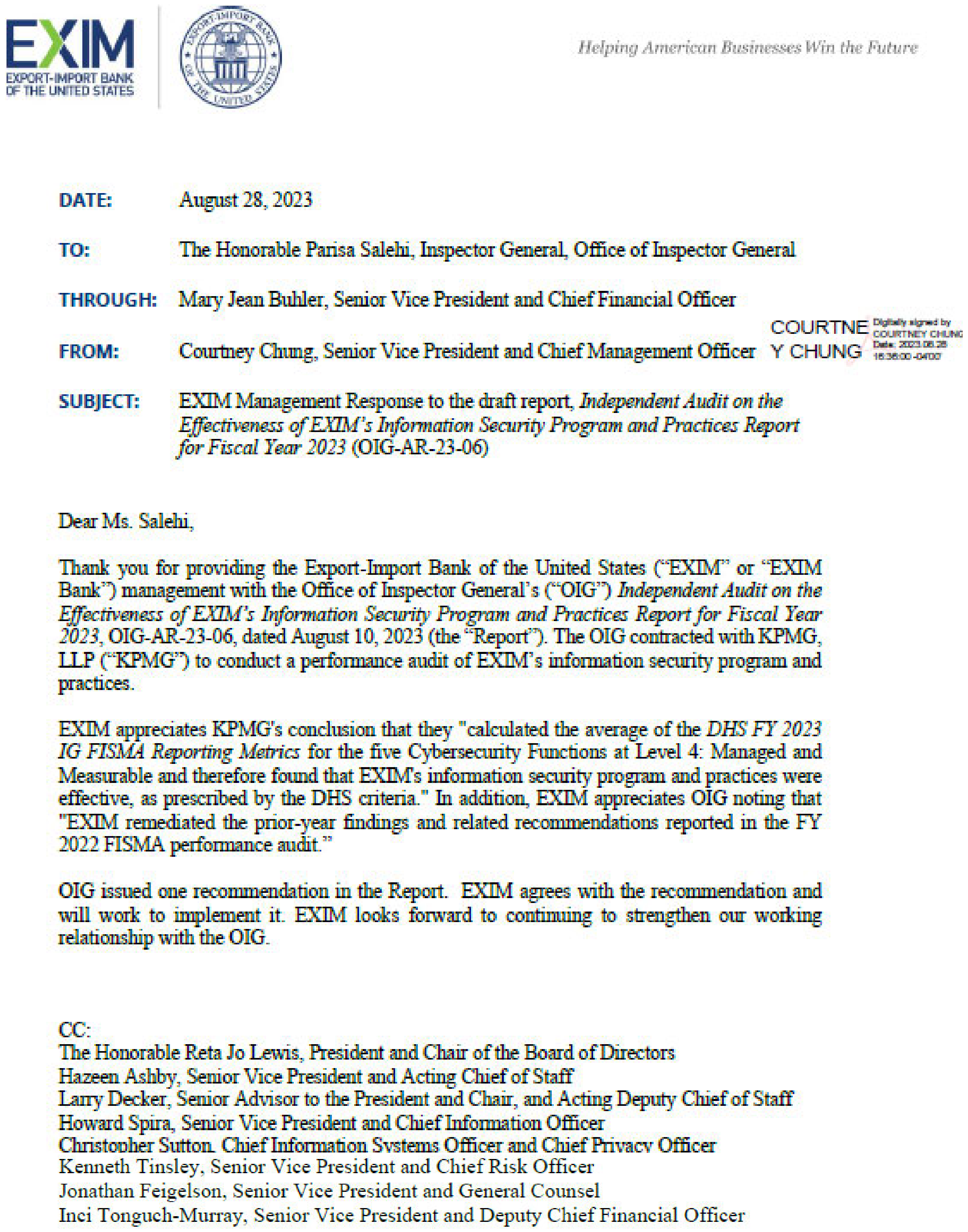
As part of the FY 2023 EXIM FISMA performance audit, we followed up on the status of open prior-year findings. We inquired of EXIM personnel and inspected evidence related to current-year test work to determine the status of the findings. If recommendations were implemented, we closed the findings. If recommendations were partially implemented, not implemented at all, or we identified findings during our testing, we have noted that status within the table below.

Table 3: Status of Prior Audit Recommendations

Finding	Recommendation	FY Identified	Status
Independent Audit of EXIM's Information Security Program and Practices Effectiveness for FY 2022 (OIG-AR-2023-04, March 2, 2023)			
Finding 1 - Identify Function: EXIM needs to update its Enterprise Risk Management Program to comply with NIST SP 800-53 Rev. 5	We recommended that the OCIO: 1) Update and implement the Enterprise Risk Management program, including applicable policies and procedures, to align with the new requirements outlined in the NIST SP 800-53, Rev. 5, Security and Privacy Controls for Information Systems and Organizations, dated September 2020	2022	Open
Finding 1 - Identify Function: EXIM needs to update its Enterprise Risk Management Program to comply with NIST SP 800-53 Rev. 5	We recommended that the OCIO: 2) Implement and test controls within the newly implemented GRC system.	2022	Closed
Finding 2 - External Penetration Testing Results: Cybersecurity weaknesses exist on the EXIM Online and EXIM Loan Management System	We recommended that the OCIO: 1) Update (b) (7)(E) and (b) (7)(E) development processes to ensure application-level security controls are designed and implemented to sufficiently prevent malicious input from users in accordance with NIST SP 800-53, Rev 5.1.	2022	Closed

Finding	Recommendation	FY Identified	Status
	2) Periodically conduct manual and automated web application security test procedures over the non-production (b) (7)(E) and (b) (7)(E) computing environments and remediate high-risk vulnerabilities within 30 days in accordance with EXIM vulnerability management policies, procedures, and NIST SP 800-53, Rev 5.1.		Closed
	3) Enhance the baseline web server configuration and configure the (b) (7)(E), (b) (7)(E) test, and (b) (7)(E) test (b) (7)(E) in accordance with OMB's Memorandum M-15-13 requirements.		Closed
	4) Enhance the EXIM application security testing procedures to include testing of the (b) (7)(E) vulnerability.		Closed
	5) Configure the vulnerability scanner to identify HSTS misconfigurations on the production and non-production (b) (7)(E) (b) (7)(E) and (b) (7)(E) non-production applications.		Closed

Appendix D: Management's Response



EXIM
EXPORT-IMPORT BANK
OF THE UNITED STATES

Helping American Businesses Win the Future

DATE: August 28, 2023

TO: The Honorable Parisa Salehi, Inspector General, Office of Inspector General

THROUGH: Mary Jean Buhler, Senior Vice President and Chief Financial Officer

FROM: Courtney Chung, Senior Vice President and Chief Management Officer COURTNEY CHUNG Digitally signed by COURTNEY CHUNG Date: 2023.08.28 16:36:00 -04'00'

SUBJECT: EXIM Management Response to the draft report, *Independent Audit on the Effectiveness of EXIM's Information Security Program and Practices Report for Fiscal Year 2023* (OIG-AR-23-06)

Dear Ms. Salehi,

Thank you for providing the Export-Import Bank of the United States ("EXIM" or "EXIM Bank") management with the Office of Inspector General's ("OIG") *Independent Audit on the Effectiveness of EXIM's Information Security Program and Practices Report for Fiscal Year 2023*, OIG-AR-23-06, dated August 10, 2023 (the "Report"). The OIG contracted with KPMG, LLP ("KPMG") to conduct a performance audit of EXIM's information security program and practices.

EXIM appreciates KPMG's conclusion that they "calculated the average of the *DHS FY 2023 IG FISMA Reporting Metrics* for the five Cybersecurity Functions at Level 4: Managed and Measurable and therefore found that EXIM's information security program and practices were effective, as prescribed by the DHS criteria." In addition, EXIM appreciates OIG noting that "EXIM remediated the prior-year findings and related recommendations reported in the FY 2022 FISMA performance audit."

OIG issued one recommendation in the Report. EXIM agrees with the recommendation and will work to implement it. EXIM looks forward to continuing to strengthen our working relationship with the OIG.

CC:
The Honorable Reta Jo Lewis, President and Chair of the Board of Directors
Hazeen Ashby, Senior Vice President and Acting Chief of Staff
Larry Decker, Senior Advisor to the President and Chair, and Acting Deputy Chief of Staff
Howard Spira, Senior Vice President and Chief Information Officer
Christopher Sutton, Chief Information Systems Officer and Chief Privacy Officer
Kenneth Tinsley, Senior Vice President and Chief Risk Officer
Jonathan Feigelson, Senior Vice President and General Counsel
Inci Tonguch-Murray, Senior Vice President and Deputy Chief Financial Officer

Appendix E: Security Controls Section

During the planning phase of our performance audit, we identified the NIST SP 800-53, Rev. 5 controls referenced in the *DHS FY 2023 IG FISMA Reporting Metrics*. From the remaining NIST SP 800-53, Rev. 5 controls not referenced in the *DHS FY 2023 IG FISMA Reporting Metrics*, we selected a nonstatistical sample of 25 controls presented in Table 4 below to test for FMS-NG.

Table 4: Additional Security Controls and Testing Results

No.	NIST SP 800-53 Security Control	Control Name	System	Conclusion
1	AC-2	Account Management	FMS-NG	No exceptions noted
2	AC-3	Access Enforcement	FMS-NG	No exceptions noted
3	AC-7	Unsuccessful Logon Attempts	FMS-NG	No exceptions noted
4	AT-4	Training Records	FMS-NG	No exceptions noted
5	AU-1	Policy and Procedures	FMS-NG	No exceptions noted
6	AU-8	Time Stamps	FMS-NG	No exceptions noted
7	AU-11	Audit Record Retention	FMS-NG	No exceptions noted
8	AU-12	Audit Record Generation	FMS-NG	No exceptions noted
9	CM-1	Policy and Procedures	FMS-NG	No exceptions noted
10	CM-9	Configuration Management Plan	FMS-NG	No exceptions noted
11	CP-9	System Backup	FMS-NG	No exceptions noted
12	IR-1	Policy and Procedures	FMS-NG	No exceptions noted
13	IR-2	Incident Response Training	FMS-NG	No exceptions noted
14	IR-8	Incident Response Plan	FMS-NG	No exceptions noted
15	MP-2	Media Access	FMS-NG	No exceptions noted
16	PE-8	Visitor Access Records	FMS-NG	No exceptions noted
17	PM-1	Information Security Program Plan	FMS-NG	No exceptions noted
18	PM-12	Insider Threat Program	FMS-NG	No exceptions noted
19	PS-4	Personnel Termination	FMS-NG	No exceptions noted
20	RA-2	Security Categorization	FMS-NG	No exceptions noted
21	RA-7	Risk Response	FMS-NG	No exceptions noted
22	SC-1	Policy and Procedures	FMS-NG	No exceptions noted
23	SC-2	Separation of System and User Functionality	FMS-NG	No exceptions noted
24	SC-23	Session Authenticity	FMS-NG	No exceptions noted
25	SI-8	Spam Protection	FMS-NG	No exceptions noted

Appendix F: DHS FY 2023 IG FISMA Metric Results

On June 23, 2023, we provided EXIM OIG with the assessed maturity levels for each of the 20 core metrics and 20 non-core metrics outlined in the *DHS FY IG 2023 FISMA Reporting Metrics*. The following tables represent each of the NIST Cybersecurity Framework Functions and FISMA Domains that were assessed to respond to the *DHS FY 2023 IG FISMA Reporting Metrics*. Each of the five Cybersecurity Functions and nine FISMA Domains had specific evaluation questions that were assessed for each metric, which derived a maturity level for each metric, Cybersecurity Function, and FISMA Domain.

Based on the results of our performance audit procedures performed, we assessed all five Cybersecurity Functions and nine FISMA Metric Domains at Level 4: Managed and Measurable. Therefore, we concluded that EXIM's information security program and practices were effective, as prescribed by the DHS criteria.

However, we did identify findings within the Cybersecurity Identify Function area, Risk Management FISMA Domain (See Finding 1 in the Findings section, above).

The tables below present the derived maturity level for the Cybersecurity Functions and FISMA Domains.

Table 5: EXIM's FY 2023 IG FISMA Reporting Metric Results

Core Metric Scoring

Function 1A: Identify - Risk Management

Function	Count
Ad-Hoc	0
Defined	1
Consistently Implemented	0
Managed and Measurable	4
Optimized	0

Function 1B: Identify – Supply Chain Risk Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	1
Optimized	0

Function 2A: Protect - Configuration Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 2B: Protect – Identity, Credential, and Access Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	1
Managed and Measurable	2
Optimized	0

Function 2C: Protect – Data Protection and Privacy

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 2D: Protect – Security Training

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	1
Optimized	0

Function 3: Detect - ISCM

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 4: Respond - Incident Response

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	1
Managed and Measurable	1
Optimized	0

Function 5: Recover - Contingency Planning

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Non-Core Metric Scoring

Function 1A: Identify - Risk Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	5
Optimized	0

Function 1B: Identify – Supply Chain Risk Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 2A: Protect - Configuration Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	3
Optimized	0

Function 2B: Protect – Identity, Credential, and Access Management

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	4
Optimized	0

Function 2C: Protect – Data Protection and Privacy

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	1
Optimized	0

Function 2D: Protect – Security Training

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 3: Detect - ISCM

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	1
Optimized	0

Function 4: Respond - Incident Response

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Function 5: Recover - Contingency Planning

Function	Count
Ad-Hoc	0
Defined	0
Consistently Implemented	0
Managed and Measurable	2
Optimized	0

Calculated Average by Function

Function	Calculated Maturity Level – Core Metrics	Calculated Maturity Level – Non-Core Metrics	FY23 Assessed Value
Identify	3.66	4	Effective
Protect	3.875	4	Effective
Detect	4	4	Effective
Respond	3.5	4	Effective
Recover	4	4	Effective

Appendix G: System Selection Approach

We obtained a schedule of all systems from EXIM's FISMA system inventory and noted that there was a total of 36 systems listed. We sorted the FISMA system inventory to identify systems managed and hosted by EXIM and removed the systems that were selected for testing in the 2018, 2019, 2020, 2021, and 2022 FISMA performance audits. We selected a nonstatistical sample of one system, FMS-NG, since that system was categorized as FIPS 199 Moderate risk and maintains financially relevant data. For FMS-NG, we also tested 25 NIST 800-53 controls in addition to those identified within the Metrics as detailed in Appendix E, Security Controls Selection.

In summary, we selected the following as the representative subset of systems to test for the FY 2023 EXIM FISMA performance audit:

- FMS-NG – was tested for system-level procedures for the *DHS FY 2022 IG FISMA Reporting Metrics* and the 25 additional selected NIST SP 800-53 SP Rev. 5 controls by KPMG.

ABBREVIATIONS

AICPA	American Institute of Certified Public Accountants
APS	Application Processing System
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CIS	Center of Information Security
COVID-19	Coronavirus Disease 2019
DISA	Defense Information System Agency
DHS	Department of Homeland Security
EXIM	Export-Import Bank of the United States
FDOnline	Financial Disclosures Online
FIPS	Federal Information Processing Standards
FISMA	Federal Information Security Modernization Act of 2014
FMS-NG	Financial Management System – Next Generation
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
GISRA	Government Information Security Reform Act of 2000
GSS	General Support System
HSPD	Homeland Security Presidential Directive
IG	Inspector General
NIST	National Institute of Standards and Technology
OCIO	Office of the Chief Information Officer
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PII	Personally Identifiable Information
POA&M	Plans of Action and Milestone
SIEM	Security Incident and Event Management
SP	Special Publication
STIG	Security Technical Implementation Guide
TIC	Trusted Internet Connections

Office of Inspector General
Export-Import Bank of the United States

811 Vermont Avenue, NW
Washington, DC 20571

Telephone 202-565-3908
Facsimile 202-565-3988

HELP FIGHT

FRAUD, WASTE, AND ABUSE

1- 888-OIG-EXIM
(1-888-644-3946)

https://www.exim.gov/about/oig/oig-hotline

IGHotline@exim.gov

If you fear reprisal, contact EXIM OIG's Whistleblower Protection Coordinator at oig.whistleblower@exim.gov

For additional resources and information about whistleblower protections and unlawful retaliation, please visit the whistleblower's resource page at oversight.gov.