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

Medium Term Export Credit Program – Information Technology (IT) Systems, Support and Governance

June 12, 2009
OIG-AR-09-05

Michael W. Tankersley
Inspector General

Export-Import Bank
of the United States

June 12, 2009

To: Fred P. Hochberg
        Chairman

From: Michael W. Tankersley
        Inspector General

Subject: Performance Audit of Medium Term Export Credit Program –
            Information Technology (IT) Systems, Support and Governance

This memorandum transmits Audit Report OIG-AR-09-05, *Medium Term Export Credit Program – Information Technology (IT) Systems, Support and Governance* ("Audit Report"). This audit was initiated by the Office of Inspector General ("OIG") of the Export-Import Bank of the United States ("Bank") at the request of Chairman James L. Lambright to address questions raised regarding the efficiency and effectiveness of information technology ("IT") support for the Bank's medium term export-credit insurance and guarantee programs ("MT program") in view of recent adverse economic results of the MT program and user complaints regarding slow response times.

The audit found that the Bank had not provided adequate IT program support and governance of the MT program. Significant enhancements to the Bank's processes for identifying strategic priorities, setting goals, developing plans to achieve them, supporting business process and system development and allocating IT resources will be required in order to improve functional support for the MT program and create reasonable accountability for realizing management's objectives. Without the recommended changes to the Bank's support and governance for its IT investments there is a significant risk that the Bank will not realize the full potential benefits of those investments for improved MT program performance.

Management's response expresses agreement with the five findings and recommendations made in the Audit Report and describes a number of actions planned or currently in progress to address the findings. However, we believe the actions that management proposes to respond to the recommendations are vague in a number of instances, do not fully address all elements of the recommendation or propose continuation of existing practices that were found to be in need of improvement. This caused us to question whether management's proposed actions will adequately address three of the findings and to conclude that management's proposed actions will be unlikely to adequately address another of the findings. We agree that actions taken by management will satisfy two elements of one of the recommendations, but the third element was not addressed in management's response.

We engaged Protiviti, an independent risk consulting firm, to perform the audit under a contract managed by this office. Protiviti affirmed that the audit was performed in accordance with United States generally accepted government auditing standards.

We appreciate the cooperation and courtesies provided to Protiviti and this office during the audit.

cc: Senior Vice President, Export Finance
        Senior Vice President, Credit and Risk Management
        Chief Information Officer

Export-Import Bank of the United States

Performance Audit Report –
IT Systems, Support and Governance

Medium Term Export Credit Program Audit
June 2009

Executive Summary

The Export-Import Bank of the United States ("Ex-Im Bank" or the "Bank") is the official export-credit agency of the United States. Ex-Im Bank supports the financing of U.S. goods and services in international markets, allowing U.S. companies of all sizes to create and maintain jobs in the United States. Ex-Im Bank assumes the credit and country risks that the private sector is unable or unwilling to accept. Ex-Im Bank also helps U.S. exporters remain competitive by countering the export financing provided by foreign governments on behalf of foreign companies. At the same time, the Bank must safeguard taxpayer resources. To execute this mission, Ex-Im Bank offers short term ("ST"), medium term ("MT") and long term ("LT") export credit financing products.

The MT program has significantly underperformed the ST and LT programs in recent years, accounting for a disproportionate share of Ex-Im Bank's credit losses. In terms of origination volume (authorizations), the MT program is much smaller than the ST and LT programs – representing $806 million in 2007, or 6.4% of the Bank's total authorizations of $12.6 billion. Conversely, in terms of claims volume (net claims as a percentage of disbursements), the MT program has experienced double digit losses dating back to FY 2001 compared to a less than 1% loss rate for the Bank's other programs during this same timeframe. As management has worked since 2005 to reduce the number of defaulted transactions and incidents of fraud against the Bank, transaction requirements and processing times increased, which has been reported to have decreased the appeal and utility of the MT program for many exporters and borrowers.

This audit was initiated by the Ex-Im Bank Office of Inspector General ("OIG") at the request of Chairman James L. Lambright to address the efficiency and effectiveness of information technology ("IT") support for the Bank's MT program in view of the challenges experienced by that program.

The principal objectives of this performance audit were to:

> Assess the adequacy of IT systems and support to provide timely, accurate and useful information with primary focus on the Bank's Ex-Im Online system ("EOL") and other related systems used throughout the MT program transaction lifecycle, and

> Review the state of IT governance as it relates to Ex-Im Bank's processes for creating, modifying and executing plans for the development and improvement of IT system support for the MT program.

The audit concludes that the MT program's IT support, including level of IT investment, has not benefited from effective governance processes. Significant enhancements to the Bank's processes for identifying strategic priorities, setting goals, developing plans to achieve them, supporting business process and system development and allocating IT resources will be required in order to improve functional support for the MT program and create reasonable accountability for realizing management's objectives.

Among the actions recommended in this report to improve the Bank's IT systems, support and governance are:

- Support the MT program with an IT Strategic Plan that focuses on MT program strategic objectives identified in a strategic business plan that management has undertaken to develop;

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- Designate a senior manager with responsibility and accountability for the management of the MT program and its IT support and the facilitation of effective communication and joint development efforts with the Bank's Information Management Technology division ("IMT");
- Establish a more formalized approach for prioritizing and performing system enhancements;
- Develop more fully-functional support systems and data infrastructure, including the design and implementation of embedded system controls; and
- Make improvements to the systems development lifecycle (requirements, testing and training).

Additionally, we identified a number of conditions affecting the efficiency and effectiveness of the MT program during the course of the audit where the scope of the performance audit limited available evidence to support additional audit findings and recommendations in accordance with generally accepted government auditing standards. Appendix B of this report addresses those conditions by providing to management supplemental observations, findings and related suggestions.

Ex-Im Bank has in recent years made substantial investments in its IT infrastructure and Information Management Technology division ("IMT") to support the daily operation of the Bank's export credit programs including the MT program. For FY 2007, the Bank's IMT group spent approximately $14.8 million, or 21 percent of the Bank's total administrative expenses of $69.2 million. Of this amount, approximately $5.2 million was spent to support daily operations of Ex-Im Bank export credit programs, including the MT program, and $1.1 million was spent on new system development initiatives. For FY 2008, the Bank's IMT group was allocated $16.4 million, representing 21 percent of the Bank's total administrative budget of $78.0 million. Of this amount, $3.7 million was budgeted to support daily operations of Ex-Im Bank export credit programs, including the MT program, and $3.9 million was budgeted for new system development initiatives.

We also undertook, at the same time as the audit described in this report, a performance audit of the Bank's credit and fraud risk management processes as well as overall export credit program design as it relates directly to the MT programs with the objectives of (i) evaluating the effectiveness of processes in place to manage credit risk and losses and to identify and respond to fraud risk and (ii) reviewing the design and operating effectiveness of the MT program transaction process with primary focus on business process effectiveness, identification of control deficiencies, and a secondary emphasis on process efficiency. The results of this audit are presented in a separate report entitled *Medium Term Export Credit Program – Credit and Fraud Risk Management and Business Process Improvement* (OIG-AR-09-04, March 30, 2009) (the "MT Program Audit") and are referred to where relevant to the findings and recommendations presented in this report.

Management's Response: Management's response expresses agreement with the five findings and recommendations made in this report, commits to take described actions to address each of them and identifies actions currently in progress to address two of the findings. The full text of management's response to this report appears as Appendix C.

Auditor Comment: The actions that management proposes to respond to our findings and recommendations are in a number of instances vague or propose continuation of existing practices that were found to be in need of improvement. We question whether management's proposed actions will adequately address three of the findings and conclude that management's proposed actions will be unlikely to adequately address another of the findings. Actions taken by management will satisfy two elements of one of our recommendations, but the third element was not addressed in management's response. Where management describes processes currently in place to address two

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of the findings, it should be noted that evidence of specific actions taken subsequent to the completion of our fieldwork in July 2008 was not evaluated for purposes of the conclusions expressed in this report. If the recommended changes to the Bank's support and governance for its IT investments are not effectively implemented on a reasonably prompt basis, there is a significant risk that the Bank will not realize the full potential benefits of those investments for improved MT program performance.

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Background and Objectives

Background   The Export-Import Bank of the United States ("Ex-Im Bank" or the "Bank") is the official export credit agency ("ECA") of the United States. Ex-Im Bank supports the financing of U.S. goods and services in international markets, turning export opportunities into actual sales that help U.S. companies of all sizes to create and maintain jobs in the United States. Ex-Im Bank assumes the credit and country risks that the private sector is unable or unwilling to accept. Ex-Im Bank also helps U.S. exporters remain competitive by countering the export financing provided by foreign governments on behalf of foreign companies. At the same time, the Bank must safeguard taxpayer resources by determining that there is a reasonable likelihood of repayment with respect to each of its transactions.

Ex-Im Bank offers short term ("ST"), medium term ("MT") and long term ("LT") export credit financing products. The core MT products offered by Ex-Im Bank are as follows (see also Table 1 below):

MT Loan Guarantees: Ex-Im Bank loan guarantees cover the repayment risks on the foreign buyer's debt obligations incurred to purchase U.S. exports. Ex-Im Bank guarantees to a lender that, in the event of a payment default by the borrower, the Bank will pay to the lender the outstanding principal and interest on the loan. Ex-Im Bank's comprehensive guarantee covers 100 percent of the commercial and political risks for up to 85 percent of the U.S. contract value of the export transaction. Guarantees extended under the MT program typically have repayment terms of one to seven years and range in amount from $100K or less to $10 million.

MT Export Credit Insurance: The Export Credit Insurance Program helps U.S. exporters develop and expand their overseas sales by protecting them against loss should a foreign buyer or other foreign debtor default for political or commercial reasons. Similar to the loan guarantee product, Ex-Im Bank covers 100 percent of the commercial and political risks for up to 85 percent of the U.S. contract value of the export transaction. Credits insured under the MT program typically have repayment terms of one to seven years ranging from $100K or less to $10 million.

Direct Loans: The direct loan program is a foreign buyer credit program in which Ex-Im Bank makes a loan to a foreign buyer to purchase U.S. exports. Ex-Im Bank's loan disbursements go directly to the U.S. exporter as the export products are shipped to the foreign buyer. Ex-Im Bank has made very few direct loans in the MT program.

The MT program book of business has significantly underperformed the ST and LT programs in recent years. In terms of origination volume (authorizations), the MT program is much smaller than the ST and LT programs – representing $806 million in 2007, or 6.4% of the Bank's total authorizations of $12.6 billion. Conversely, in terms of claims volume (net claims as a percentage of disbursements), the MT program has experienced double digit losses dating back to FY 2001 compared to a less than 1% loss rate for the Bank's other programs during this same timeframe. As management has worked since 2005 to reduce the number of defaulted transactions and incidents of fraud against the Bank, transaction requirements and processing times increased, which has been reported to have decreased the

Background and Objectives

appeal and utility of the MT program for many exporters and borrowers.

Indictments and plea agreements in several high-profile fraud cases emanating from the MT program have been announced in the past 12 months.[1] Notably, of the $965 million of MT transactions authorized in 2004 that were funded, approximately $101 million of the $256 million in claims paid by the Bank were associated with the publicly disclosed fraud schemes. Claims rates and reported instances of fraud for subsequent years have declined from this high level, but have remained above historic norms. Additional data regarding the economic performance of the MT program is presented in the MT Program Audit.[2]

Table 1: Authorizations by Fiscal Year (in millions)

Authorizations	FY 2005	FY 2006	FY 2007
Long Term			
Loans	$0.0	$ 56.5	$ 0.0
Guarantees	$8,076.1	6,603.5	7,234.0
Subtotal, Long Term	*$8,076.1*	*$6,660.0*	*$7,234.0*
Medium Term			
Guarantees	$399.4	$ 387.6	$504.2
Insurance	$451.0	641.4	301.8
Subtotal, Medium Term	*$850.4*	*$1,029.0*	*$806.0*
Short Term			
Working Capital	$1,096.3	$1,173.8	$1,255.3
Insurance	$3,913.4	3,287.7	3,274.1
Subtotal, Short Term	*$5,009.7*	*$4,461.5*	*$4,529.4*
Total Authorizations	**$13,936.2**	**$12,150.5**	**$12,569.4**

Source: Ex-Im Bank 2007 Annual Report

Objectives   The specific objectives of this audit were to:

- Assess the adequacy of IT systems and support to provide timely, accurate and useful information with primary focus on EOL and other related systems used throughout the MT program transaction lifecycle; and

- Review the state of IT governance as it relates to Ex-Im Bank's processes for creating, modifying and executing plans for the development and improvement of IT system support for the MT program.

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[1] Philippines: http://washingtondc.fbi.gov/dojpressrel/pressrel07/wfo101107.htm
San Antonio (Mexico): http://www.usdoj.gov/usao/txw/press_releases/2008/Parker_ind1.pdf
[2] *Medium Term Export Credit Program – Credit and Fraud Risk Management and Business Process Improvement* (OIG-AR-09-04, March 30, 2009) (the "MT Program Audit").

Scope and Methodology

The scope of the audit focused on IT systems and related processes supporting Ex-Im Bank's MT credit program. Fieldwork was conducted on-site at Ex-Im Bank's headquarters in Washington, DC in June and July 2008.

Interviews were held with key personnel in order to understand and evaluate significant processes, controls and risks prevalent in the MT program, including process efficiencies, e.g. transaction cycle times. Specifically, we met extensively with representatives from the following divisions of the Bank: Credit Applications and Processing, Trade Finance & Insurance ("TFI"), Credit and Risk Management, Domestic Business Development, Finance/CFO, Asset Management ("AMD"), Resource Management and Information Management Technology ("IMT").

The technology review focused on the key systems and IT processes supporting the MT program. The primary system reviewed was the EOL system hosted on Ex-Im Bank's on-site servers. A high level review was also performed on other relevant systems supporting the MT program, particularly those that interfaced with EOL. These systems included:

- The Loan and Guarantee Accounting System ("LG/A");
- The Claims and Recovered Debt Servicing System ("CARDS");
- The Insurance Information System ("IIS"); and
- The Asset Management System ("AMS") [does not interface with EOL].

We also compared Ex-Im Bank's current business and IT operations in support of the MT program against leading industry practices, inclusive of the private sector. In doing so, our primary focus was on other transaction-based guarantors such as the Small Business Administration.

In addition to comparisons to the private sector, we reviewed the MT program against government policies and guidance such as the Office of Management and Budget ("OMB") Circular No. A-130 – *Management of Federal Information Resources* ("OMB Circular A-130"). OMB Circular A-130 establishes policy for the management of information systems, the capital planning process and enterprise architecture design.

The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient and 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 the audit objectives for the MT program.

Findings and Recommendations

IT Systems, Support and Governance

Finding 1

[Management, Oversight and Accountability of IT Support for the MT Program
Needs Strengthening](#)

As noted in Finding 7 in the MT Audit Report, a documented strategy for the MT
program is not currently in place. The last strategic plan for Ex-Im Bank was
completed more than five years ago and covers the period of 2002 to 2006.
Shortly after the creation of the 2002-2006 Strategic Plan, Ex-Im Bank
underwent a major reorganization which resulted in the establishment of the
Export Finance Group and the Credit and Risk Management Group. The
strategic plan was never updated after the reorganization, nor was a new plan
issued after 2006. Moreover, strategic plans were never developed for each of
the major program offerings (i.e., Short Term, Medium Term, Long Term).

Ex-Im Bank management stated that an IT strategy document for the MT
program is not in place largely because a strategic plan is not in place for the
MT program (or any other of the Bank's export-credit programs) or for Ex-Im
Bank overall.

OMB Circular A-129, Appendix A section I.4.b.(7), states that management
must "prepare, as part of the agency CFO Financial Management 5-Year Plan,
a Credit Management and Debt Collection Plan for effectively managing credit
extension, account servicing, portfolio management and delinquent debt
collection." OMB Circular No. A-130 – *Management of Federal Information
Resources*, Transmittal Memorandum No. 4 section 7.i., states that "the agency
strategic plan will shape the redesign of work processes and guide the
development and maintenance of an Enterprise Architecture and a capital
planning and investment control process. This management approach promotes
the appropriate application of Federal information resources."

Without a solid strategic business plan in place, it has been and continues to be
challenging for Ex-Im Bank management to develop meaningful strategies and
a collective vision for the MT program that effectively balances the Bank's
competing objectives of supporting U.S. exporters while safeguarding taxpayer
dollars. The absence of a strategic business plan also impairs the ability of IMT
to understand the business objectives of the MT program and to prioritize their
work to support the MT program.

During the design and build out of its information systems, including the Ex-Im
Online ("EOL") system that provides primary support for the MT program
application and credit underwriting processes, Ex-Im Bank did not implement
essential management and oversight controls to effectively support the MT
program. Senior management involvement with the design, development and
implementation of EOL was particularly critical since EOL was initially designed
to support the Short Term ("ST") program and later expanded to include the MT
program. However, management was not sufficiently involved to ensure EOL
enhancements would provide timely and useful information to expedite
processing of MT program transactions and address credit and fraud risks.

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Furthermore, failure to provide appropriate management and oversight has resulted in an excessive amount of change requests ("CR") and unclear expectations from EOL system users, decreasing the level of assurance that IT expenditures are efficient and effective.

OMB Circular No. A-130 – *Management of Federal Information Resources* directs agencies to establish information system management oversight mechanisms that (a) ensure that each information system meets agency mission requirements; (b) provide for periodic review of information systems to determine (i) how mission requirements might have changed, (ii) whether the information system continues to fulfill ongoing and anticipated mission requirements and (iii) what level of maintenance is needed to ensure the information system meets mission requirements cost effectively; and (c) ensure that the official who administers a program supported by an information system is responsible and accountable for the management of that information system throughout its life cycle.

Ex-Im Bank designated the heads of Export Finance and Credit and Risk Management as the executive sponsors of EOL. However, based on documentation provided during the MT program audit, evidence such as formal meeting minutes was not available to indicate the frequency of or attendance at the executive sponsor meetings.

When EOL went into production, Ex-Im Bank formed a formal User Group and directed them to report to the executive sponsors. However, this User Group did not meet routinely on a consistent basis. The User Group initially met bi-weekly to review and submit CRs, alert officials of identified defects and provide guidance on which items should be addressed in the next release of EOL. In recent months during our review, User Group meetings were held very infrequently and on an ad-hoc basis, usually just before work on the next release was about to begin. Based on the most recent schedule, releases occur every 3 to 4 months.

While IMT implemented an effective process for capturing and tracking CRs and defects, the process for determining which CRs and defects are selected for inclusion in a release was not clear. Although there is negotiation among the User Group members, the ST program representatives have been more vocal and, as a result, have managed to get significantly more of their requirements included within many of the EOL releases.

As of the end of May 2008, the number of open defects for the MT program was slightly higher than the number of CRs: 52 vs. 50. These numbers do not include the 15 CRs/defects that were implemented as part of Release 18 at the end of June 2008. Since the third quarter of 2006, the number of new MT program CRs and defects has gone up and down from quarter to quarter rather than being on the decline. Having this many open CRs and defects more than two years after the system went live raises questions about the process for managing CRs/defects. Also, some high priority CRs and defects have not been addressed since they were submitted in 2006. Requestors sometimes

Findings and Recommendations

rate their requests higher than they should for fear they would otherwise be given a lower priority. The users have noted that, at times, the CIO has made the final decision on the specific CRs and defects to be included in a given release and no member of the User Group is empowered to arbitrate conflicts among the different business areas.

In addition to the high number of open CRs/defects and pending releases, inadequate MT management and oversight of EOL contributed to a misalignment of expectations. An Ex-Im Bank internal audit report prepared in July 2007 noted that there was a misalignment between the expectations of the business users regarding the functionality of EOL and the overall IT resources allocated to addressing these expectations. This misalignment of expectations is also partially due to less than optimal communications between the business users and IT representatives.

One of the leading causes of poor performance in complex IT development projects is a lack of focused attention on pre-commencement planning and interim milestone evaluations by the senior managers who authorize the significant commitment of enterprise resources to these projects. Our interviews and evaluation of the records provided to us indicate that the ongoing development of the EOL system and pending projects to enhance other systems that support the MT program would benefit from increased and consistent attention from senior management.

Recommendation 1A

IMT should develop an IT Strategic Plan that is aligned with the MT program business plan and covers the same time period. This plan is not intended to be the large-scale system plan required by OMB, but rather a planning document that would be useful in guiding new and ongoing IT initiatives to enhance their usefulness to the Bank.   This plan should be developed jointly by IMT and MT program management. Key components of the plan would be the identification of major initiatives IMT will undertake to support the business strategies of the MT program, their priorities and the level of investment and the IT resources that would be allocated to each initiative. While the scope of our review was limited to the MT program, we would recommend that the IT Strategic Plan address the needs of each of the major Ex-Im Bank programs/businesses, to the extent that their long term goals and strategies are known. In the absence of a formal strategic plan for the MT program, or, for that matter, the other Ex-Im Bank programs, IMT should still develop an interim plan, as outlined above, based on discussions with MT program management. The plan should then be presented to executive management for approval.

Management Response

Management stated that it agreed with the finding and recommendation while noting some specific points of disagreement with elements of the finding. For instance, management disagreed that the number and pattern of CR's outstanding indicated a problem with the EOL system. Management also stated that sufficient time will be required to create the IT Strategic Plan in order to

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allow for strong participation from the newly appointed Ex-Im Bank Chairman and President. The response notes that current IT investment projects were documented in fully developed OMB Exhibit 300's. Management undertakes to develop a Bank-wide IT Strategic Plan that aligns and integrates each program's IT requirements with Bank-wide goals and priorities, including those of the MT program. Management also commented that it does not believe that an overarching, detailed plan for the MT program can be established on a stand-alone basis independent of the Bank's overall goals and objectives.

Responsible Parties: SVP, Export Finance
Chief Information Officer (CIO)

Resolution Date: December 31, 2009

Auditor Comment

When accomplished, the above actions *may* satisfy this recommendation. However, management's proposed resolution date of December 31, 2009 is too prolonged and not commensurate with the level of effort required to implement the recommendation. Delay in preparing an IT Strategic Plan, even if limited to an interim plan reflecting management's current understanding of the goals and objectives of the MT program and subject to further development and revision, will inhibit the ability of management and the Bank's staff to effectively manage the MT and other export credit programs for a substantial period of time. Management should more expeditiously develop and implement procedures to meet the intent of the recommendation. We note that the OMB Form 300's (presenting a financial justification for IT expenditures) and other actions described in management's response did not create the sort of detailed planning documentation for IT investment to support the Bank's programs that would ordinarily be required to provide reasonable assurance that the program's requirements and management's objectives for an IT investment will be realized.

The Senior Vice Presidents for Export Finance and Credit and Risk Management should:

Recommendation 1B

- Designate a senior manager with responsibility and accountability for the management of the IT systems support for the MT program throughout its life cycle. When identifying this senior manager, the Senior Vice Presidents for Export Finance and Credit and Risk Management may consider obtaining input from key Ex-Im Bank offices involved in the MT program, such as Trade Finance & Insurance and Asset Management to ensure their process requirements are identified and effectively integrated.
- Direct the designated senior manager to take a leadership role in the ongoing development of detailed business requirements in response to strategic objectives identified for IT support of the MT program and requests for enhancements from system users and in the communication of those business requirements to IMT.

Findings and Recommendations

- Direct the designated senior manager to obtain a plan of action and milestone schedule from IMT that addresses all outstanding CRs/defects, which should include all system capabilities required to meet management's objectives for the MT program, and to take prompt action to ensure IMT has timely and appropriately prioritized and developed a well documented plan to address each CR/defect.

Management Response

Management stated that it agreed with the finding and recommendation, noting that the designated senior manager with responsibility for the management of IT system support for the MT program is the Vice President, Trade Finance and Insurance (VP-TFI), who is responsible for the development of detailed business requirements in response to strategic objectives identified for IT support of the MT program and requests for automated enhancement.

Responsible Parties: SVP, Export Finance
SVP, Credit and Risk Management

Resolution Date: Completed (elements 1 & 2); not addressed (element 3)

Auditor Comment

The actions described in management's response satisfy the first two elements of this recommendation. Management does not address the third element of the recommendation – management did not commit the VP-TFI to obtain a plan of action and milestone schedule from IMT that addresses all outstanding CRs/defects and which includes all system capabilities required to meet management's current objectives for the MT program.

Finding 2

IT Systems that Support the MT Program Need Improvement

The systems that support the MT program lack integration, functionality and embedded controls that are consistent with an effective transaction origination system. Appendix A provides detailed information on the development of EOL and a description of the other Bank systems used to support the MT program.

Although we noted that Ex-Im Bank was working towards enhancing its IT support of the MT program, management had not documented a plan that addressed in detail the added functionality and enhancements to EOL and other Bank systems that would be required to provide adequate and timely transaction processing and customer service as well as more effective management of credit and fraud risk. As noted in the MT Program Audit report, delays in processing MT transactions have been a source of frequent negative comment from transaction participants.

OMB Circular No. A-130 – *Management of Federal Information Resources* directs agencies to establish information systems and related policies that (a) ensure that major information systems deliver intended benefits to the agency

and its customers and meet user requirements; (b) evaluate systems to ensure positive return on investment and decide whether continuation, modification or termination of the systems is necessary to meet agency mission requirements; and (c) develop information systems that facilitate interoperability and scalability of applications across networks and platforms.

Information systems supporting the MT program have historically operated on several stovepipe[3] systems requiring information to be manually or batch transferred across systems and key data to be housed on several different platforms resulting in duplicate and unreliable data. This has led to an erosion of confidence from MT program system users and overall lack of management commitment. Discussion of these areas is provided below.

Multiple Systems – Ex-Im Bank has relied on the following systems, with limited interoperability, to provide varying levels of support to the MT program:

- Ex-Im Online ("EOL")
- The Integrated Information System ("IIS")
- The Loan and Guarantee Accounting System ("LG/A")
- The Claims and Recovered Debt Servicing System ("CARDS")
- Asset Monitoring System ("AMS")

EOL provides basic transaction origination support for the MT program, but minimal credit underwriting and no performance monitoring functionality. The front-end intake processing portion of the system appears to work well in capturing the initial application data, tracking documents and routing the work flow. In this regard, it operates very similarly to major loan systems used in the private sector. However, on the back end, the system provides minimal credit underwriting and monitoring functionality. This is partly due to the history of the development of the system.

For transaction-based lenders and guarantors, an effective loan/transaction origination system should encompass end-to-end transaction processing, servicing and reporting capabilities. While it is not uncommon for origination systems to focus solely on front-end processing, they are designed with the flexibility to interface with robust back-office transaction processing and reporting systems.

Data Reliability – Ex-Im Bank currently has a mix of many different database management systems and other data repositories that are hosted on a variety of technology platforms. Data such as participant or client demographics is often manually keyed into multiple systems as application integration is limited to a few batch file transfers. This has resulted in duplication of data and has compromised data quality and data reliability.

In July 2003, a leading information technology research and advisory firm performed an assessment of Ex-Im Bank's IT architecture and identified a

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[3] A system that does not interoperate with other systems.

Findings and Recommendations

number of key data issues which, based on our review, are still in existence today:

- Access to information is limited, difficult and time-consuming;
- There are instances of data discrepancies;
- Data sources exist on many different platforms;
- Data standards are non-existent;
- There are duplicate participant files with no common identifier;
- Data synchronization (e.g., fee codes, risk ratings) is difficult and time consuming;
- Core information is not available to all applications;
- Assumptions underlying a number of the existing reports are not known;
- No bank-wide data repository exists to consolidate shared, mission-critical data which can be accessed by all applications and which can support decision making in evaluating applications, monitoring of approved transactions and management reporting; and
- Users follow manual processes and "workarounds" to find data that they need (e.g. tracking transaction metrics on spreadsheets).

Management Commitment – The limited support EOL provides to the MT program is also due to senior management, particularly in the Credit Underwriting[4] area, not embracing the system and looking for opportunities to expand the use of technology. Some senior members of the Credit Underwriting group see the system's value as limited to providing digital signatures and tracking files. At the September 2008 EOL sponsor meeting, a major issue was the lack of active participation from Credit Underwriting in addressing outstanding defects and desired enhancements. Overall, managers responsible for the MT program have not been able to articulate a clear vision of how technology could be used to help manage the MT program more effectively, including minimizing credit and fraud losses and accelerating processing time of transactions.

We acknowledge that management began planning to improve the Bank's IT systems as early as 2006 and requested funds for that purpose through OMB that were not appropriated until FY 2008 and 2009. During the audit, IMT was addressing some of the above support functionality and data problems with the ongoing re-hosting of mainframe applications to a server platform and the planned re-engineering of IIS, referred to as "EIIS" (see description in Appendix A) to create a data warehouse that would be accessible by the Bank's disparate IT systems. IMT was also building functionality within the EOL participant files to support the ability to define "parent-child" relationships and thereby enable linking of related participants. In conjunction with these actions, the Credit Applications and Processing ("CAP") group has begun an effort to identify related or duplicate participants in the various participant files, establish naming conventions and cleanse the participant data to improve data consistency. While these efforts are positive, in the absence of detailed written objectives

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[4] The Credit Underwriting department reports to the Senior Vice President, Credit and Risk Management.

and plans for all phases of these initiatives and an overarching strategic plan, the extent to which IT support for the MT program should be expected to improve is unclear and there is an insufficient record of stated cost/benefit objectives to permit milestone and end-of-project assessments of the effectiveness of the work done and funds expended, limiting the accountability of the process.

The Senior Vice Presidents for Export Finance and Credit and Risk Management should work closely with the office of the Chief Information Officer to:

Recommendation 2A

- Define and document the key transactional data fields that must be stored across all Ex-Im Bank programs and the structures and relationships between them. This data model would address the problems related to multiple participant files and other common reference data. The data model would also highlight information needs that are not currently met by existing databases or applications.
- Develop, document and implement a plan to enhance the functional capabilities and interoperability of EOL and the other systems supporting MT program transactions, with a focus on design and implementation of embedded system controls, such as:
  o automation of MT lender rating and credit scoring models;
  o automated system alerts that warn of transaction participants with prior claims history as well as denied, withdrawn or fraudulent transactions across all Ex-Im Bank lending programs; and
  o automated monitoring of all MT program transactions regardless of size.

Management Response

Management stated that it agreed with the finding and recommendation while noting that development of an enterprise-wide data model, repository and related business intelligence, monitoring and risk analysis tools is ongoing. Management also commented that the Bank had originally submitted the request to OMB for related system enhancements in FY2006 and is now being implemented as part of the investment approved in the FY2008 budget.

Responsible Parties: SVP, Export Finance
SVP, Credit and Risk Management

Resolution Date: Ongoing

Auditor Comment

When accomplished, the above actions *may* satisfy this recommendation. However, the documentation prepared to support this process was substantially less complete than would ordinarily be required to provide reasonable

Findings and Recommendations

assurance that the IT investment will meet management's objectives for the MT program and management has not specified a resolution date. While we note that the level of effort and duration associated with the design and implementation of these system enhancements may be considerable, this should not preclude management from defining, managing and tracking towards interim milestones and a project end date. If not already completed, management should expeditiously develop and document an implementation plan to meet the intent of the recommendation.

Recommendation 2B

The Chief Information Officer should develop data repositories, based upon the data model developed pursuant to Recommendation 2A, that consolidate and organize the key transactional data fields. In doing so, all existing duplicate files should be eliminated.

Management Response

Management stated that it agreed with the finding and recommendation while noting that building of the data warehouse is currently in the development phase. Management also commented that the data model for the majority of systems is complete and the business intelligence reporting tools have been customized to provide critical metrics and detailed information for staff.

Responsible Parties: Chief Information Officer (CIO)

Resolution Date: September 30, 2009

Auditor Comment

When accomplished, the above actions *may* satisfy this recommendation. We note that the documentation for this IT investment was substantially less complete than would ordinarily be required to provide reasonable assurance that the IT investment will meet management's objectives for the MT program.

Finding 3

Systems Development Process Needs Improvement

Insufficient use of systems development methodologies for business requirements definition, limited testing and lack of end user training throughout the design and build out of EOL and its supporting systems have contributed to EOL's performance problems, large number of CRs and defects and general end user dissatisfaction. Given that EOL is expected to serve as the primary origination system for MT program transactions for the foreseeable future, it is critical that EOL users have a positive working relationship with the system and the developers, and that the users trust the output.

OMB Circular No. A-130 – *Management of Federal Information Resources* directs agencies to create and maintain an Enterprise Architecture Framework that (a) describes the rules and standards and systems life cycle information to optimize the environment which the agency wishes to create and maintain by managing its IT portfolio; (b) defines principles and goals and sets direction on

Findings and Recommendations

such issues as the promotion of interoperability and end user satisfaction; and (c) provides a strategy that will enable the agency to support its current state and also act as the roadmap for transition to its target environment, inclusive of the agency's systems life cycle methodologies.

Requirements – End users have found the process to convey their requested system enhancements and requirements to be overly complex. In developing the EOL System, IMT adopted an approach called "Use Cases" to define business requirements. However, it proved difficult for many of the users to document their business requirements through Use Cases as they found this method to be too detailed, tedious and "IT oriented." The Use Cases did not help the users understand the nuances of how their requirements would be implemented. The Use Cases appear to have hindered rather than promoted communication between the business users and IMT.

Communication has been further hampered by the somewhat unrealistic expectations of both the MT users and the developers. The MT users have been engaged on a very limited basis in requirements analysis, functional design and testing. The developers, on the other hand, have expected the users to be able to clearly define their requirements in a manner that could easily be translated into code. When requirements were unclear, incomplete or lacking, the developers tended to make assumptions and model the functionality for the MT program after the ST program. At other times, users were told their requirements were too complicated and could not be automated.

Testing – As with requirements definition, the MT users have been significantly less involved than the ST users in testing the EOL system due to limited time and resources. Although IMT tests changes and enhancements to EOL, multiple users have complained that fixes made to correct one problem create problem(s) in other parts of the system. Recognizing the need to do more testing, IMT has established a 4-person Quality Assurance team dedicated to testing EOL. Based on data obtained during the audit, the quality and consistency of user acceptance testing varies depending upon the individual performing the tests.

Training –Minimal training was provided to internal and external users. Both users and IMT have expressed the need for more training because EOL is not intuitive for most users in the processing of MT applications. Parts of the MT application review process are dependent upon other reviews being completed first. However, the system does not enforce the order in which the reviews are done. Consequently, the users need to clearly understand how to use the screens and the order in which to complete them.

The CIO should ensure the following are implemented:

Recommendation

3

- A user friendly process for submitting and accepting new end user business requirements as it relates to requests for system enhancements. This process should also facilitate improved communication between IMT resources and end users to ensure

that business requirements are accurately designed and that justification is provided for denied requests.

- A more robust testing program that a) includes the development of a comprehensive suite of test cases and test scripts that can be automatically rerun multiple times and b) requires formal involvement of MT users in the development of the test cases, the execution of the tests and the sign-off of test results.
- A more formal and comprehensive training program for EOL system users. The training should focus not only on the mechanics of the system but also on the policies and processes that the system is supporting. Details on the training program should be made available on Ex-Im Bank's website.

Management Response

Management stated that it agreed with the finding and recommendation while noting that the Bank's existing system development life cycle (SDLC) methodology and testing program will continue to be utilized. Management also commented that professional training will be incorporated into the IT Strategic Plan and the availability of on-line training will be recommended for future use.

Responsible Parties: Chief Information Officer (CIO)

Resolution Date: Completed

Auditor Comment

The above actions do not satisfy this recommendation. Management proposes to continue to substantially rely on processes that we found to be in need of improvement. Management should expeditiously develop and implement more robust procedures that address Finding 3. While we note that the Bank's SDLC methodology and testing program presented during our fieldwork provide a foundation that can be built upon, we believe there is substantial need and opportunity for further improvement. Because management was vague on the planned actions to improve training, it is unclear whether the referenced actions will more effectively serve Ex-Im Bank staff and customers using the EOL system.

Appendix A

Background on EOL

Work on the EOL system began in 2001. During the development effort, the Bank went though two reorganizations, several changes in its Chairman, Directors, IT management and business sponsors of the project, and a one year project moratorium. All of these factors contributed to significant changes in the original scope of the EOL system in terms of functionality and products supported.

Originally the EOL system was intended to meet the needs of the short term ("ST") insurance business which was then being supported by an AS400 system. After development began, the scope of the EOL system was expanded to include the MT Program. It was thought that this program could leverage the functionality that was being developed for the ST program, particularly the front-end application modules. Including the MT program within the scope of EOL, however, significantly increased the system's complexity as the MT transactions are not as homogenous as ST transactions and the data requirements are substantially greater and more difficult to obtain. Trying to retrofit the MT requirements into the system's design, after development had begun, presented some difficult challenges.

Management has reported that due to budgetary constraints and other considerations, some features of EOL were not completed (e.g., reporting, maintenance of code fields, capturing shipment data) and a number of defects were not corrected before the system went live in January 2007 for the MT Program. Manual workarounds had to be developed, several of which continue to exist. In addition, the system maintains its own participant file which uses different identifiers than are used by the participant files that support the mainframe system and AMS. The existence of multiple participant files and duplicate data (e.g., due to multiple spellings of the same name) within these files makes it difficult to monitor high risk participants and the total level of exposure to these participants that Ex-Im Bank has across all its product offerings.

Description of Other Bank Systems and Relationship to EOL and MT Program

LG/A and CARDS – These systems are legacy mainframe systems that provide basic accounting, general ledger and claims processing support to all of the Bank's programs. The systems have been re-hosted to a server platform maintained at the Bank to enable them to take advantage of more current web-enabled technologies similar to those supporting the EOL System. New functionality will not be provided as part of the re-hosting effort; however, the migration to newer technology will enable interoperability among the systems and the possibility of functionality enhancements in the future. This will allow the mainframe applications to communicate with, work with or use parts of other applications (e.g., the EOL System). Over the long term, this will enable the Bank to consolidate and share mission critical data (e.g., participant data) that is now duplicated across multiple files and to eliminate some of its manual processes and "workarounds."

IIS – This is a SQL Server database developed in the early 1990s that is used for reporting. It aggregates data from different system repositories, mainly the mainframe and EOL databases. Although sometimes referred to as a data warehouse, it does not meet the definitions of a data warehouse. Users have had to resort to manual processes and "workarounds" to find data that should be in the IIS. In general, the reliability and structure of IIS is unpredictable.

Recognizing the shortcomings of IIS, IMT has recently embarked on an initiative to modernize and re-engineer the IIS with a Business Intelligence Reporting System referred to as the Enterprise

Appendix A

Integrated Information System ("EIIS"). This system would be a true data warehouse. IMT was in the process of selecting a contractor to develop and implement EIIS when this audit was in progress.

AMS – This system is a Lotus Notes application developed and used by the Asset Management Division to monitor highly structured corporate deals or any transaction where the Bank has a total exposure to the obligor greater than $20 Million. Overall, this system provides virtually no monitoring support to the Medium Term Programs given its high threshold (i.e., $20 Million of aggregate exposure). Initially we were told that there were no plans to replace this system or to migrate it to new technology. Subsequent to completion of our review, we were given the 2010 budget which includes funding for converting AMS from Lotus Notes to a web-based application using the Oracle database management system (DBMS). Oracle is the DBMS used by EOL and the one to which the mainframe applications have been migrated.

Summary Diagram of Ex-Im Bank Applications Supporting the MT Program
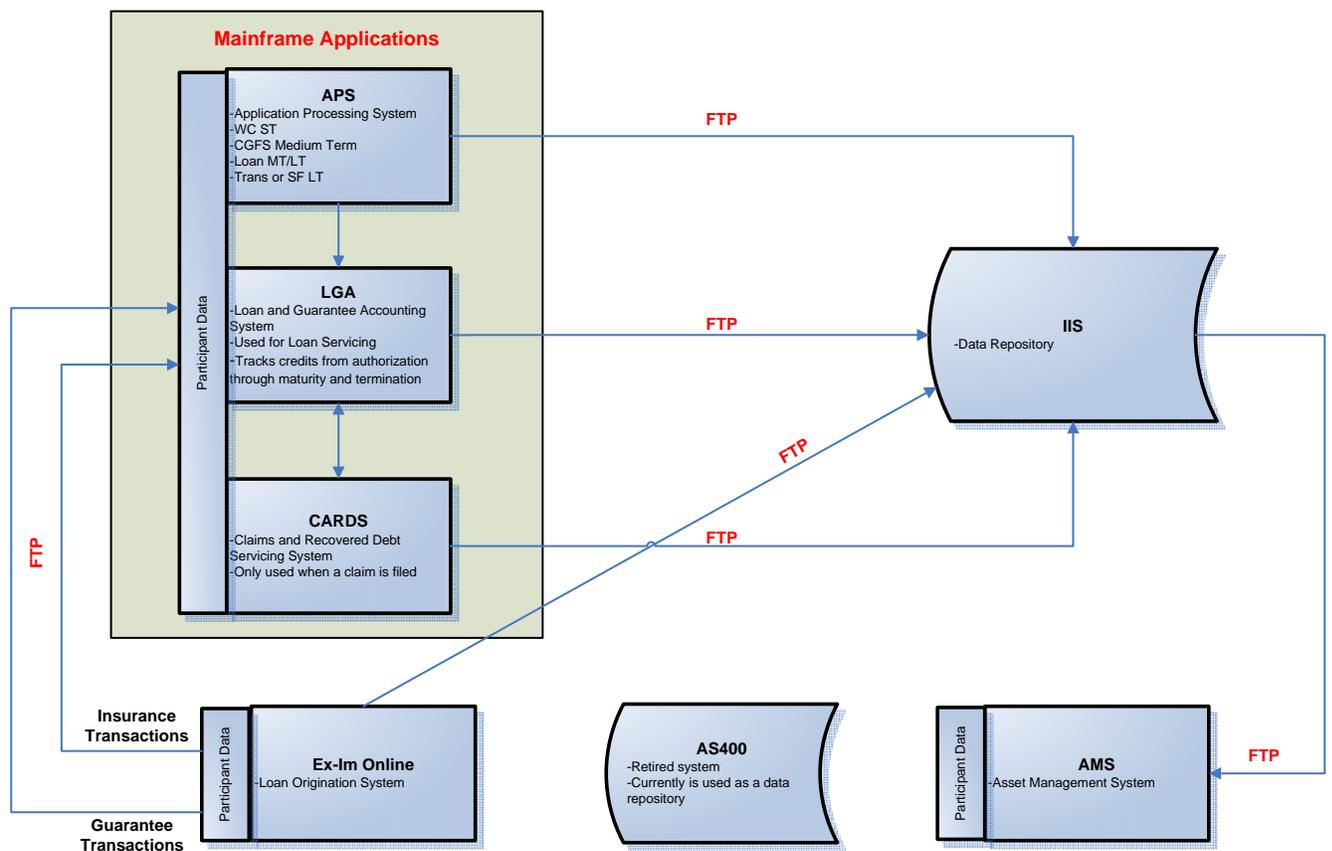
Appendix B

Evaluation Comments and Suggestions to Management

During our fieldwork, we identified a number of conditions and opportunities for improvement that did not rise to the level of formal audit findings and recommendations. We believe management's consideration of these conditions and suggestions for improvement will contribute to strengthened IT support for Ex-Im Bank's export-credit programs, including the MT program.

IT Governance Process
 All organizations can benefit from a well-defined IT governance process. As discussed in OMB Circular A-130, – *Management of Federal Information Resources* and the Control Objectives for Information and related Technology (COBIT®) control framework[5], an effective IT governance process should facilitate communication between IT and the business users by focusing on:

- Strategic IT Alignment – ensures that IT services and investments meet business objectives that are outcomes of strategic planning;
- Value Delivery – IT demonstrates value to the business when it completes projects as specified, on-time and within budget;
- Risk Management – internal controls and policies enable the IT department to assess and control the many risks related to IT projects;
- Resource Management – IT manages its resources to optimize resource value. Staff, customers, vendors, hardware, software and relationships are resources that need to be managed; and
- Performance Measurement – demonstrates how well IT accomplishes its objectives, identifies underperforming areas and allows for continual organizational improvement.

Medium Term Focus
At a minimum, we suggest that the below functional capabilities be developed or enhanced in EOL or EIIS in support of the MT program. Action on each accepted item should be included in a plan of action and milestones for effective management of the activity.

- Analytical modules for Credit Underwriting ("CU") that would automate:
  - Many of the calculations (e.g., exposure fee pricing) that are done manually or offline and subsequently keyed into EOL.
  - MT lender rating and credit scoring models after the pilot phase is completed.

- Enhancement of anti-fraud capabilities by integrating EOL with back office systems, such as AMS, and the collections data and reporting to allow statistical analysis of claims and identification of trend and relationship patterns.

- Enhanced reporting for management decision making and risk monitoring. Much of this reporting would involve relating EOL data with data in other systems, such as LGA, CARDS and APS.
  - Exception reporting, such as transactions where the participants have had previous claims, delinquencies and/or transactions denied or withdrawn.
  - Risk profiles for participants and countries.

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[5] Published in 1996 and periodically updated by the IT Governance Institute® (ITGI™), COBIT® is an increasingly internationally accepted set of guidance materials for IT governance.

- o Monitoring of participant exposure at low threshold levels (e.g., $1 million) across all products, concentration risk, payment history, past lender performance, etc.
- o More detailed activity status reporting (e.g., current transactions being worked on by a given Relationship Manager (RM), CU or Credit Applications and Processing (CAP) analyst, number of days a transaction is in the queue, number of applications CU has completed processing within certain time periods, etc.).

- Alerts:
  - o Currently, the identification of high risk transactions (e.g., ones with an elevated fraud/repayment risk) is dependent upon the RM or CU taking the initiative to obtain participant reports from various sources and manually reviewing the application to determine if it satisfies certain criteria. Going forward, EOL should highlight applications during the intake process that involve high risk participants (e.g., prior transactions withdrawn or declined; poor claims history in the past, etc.) or have high risk characteristics (e.g., used equipment, high risk countries) based on criteria defined by CU. The risk level should be developed using tools, such as the Moody's templates, and be based on the total relationship (currently and historically) the participant has with Ex-Im Bank, not just the products supported by EOL.
  - o Highlight transactions that may be waiting in an individual's queue beyond an acceptable time limit (e.g., 2 days) or that appear at an early stage to be likely to require substantial additional work or time to process.

- Workflow simplification and enhancement:
  - o Providing appropriate checklists to CAP, Trade Finance and Insurance and CU so that they can confirm that all required steps (manual and automated) in their respective areas have been completed in processing an application.
  - o Making the data entry screens more intuitive to both internal and external users, particularly where there are dependencies between different sections of the application intake process. Provide warnings or alerts if required data is missing.
  - o Documenting lender, exporter and broker/agent reporting of "know your transaction" actions focused on fraud avoidance.
  - o Develop system support so that applicants and lenders are able to deliver application data to Ex-Im Bank that is formatted in a way that substantially populates the Bank's required financial spreading and credit reports, minimizing the amount of manual data transfer and analysis time required by Bank staff.

Appendix C

EXPORT-IMPORT BANK
of the UNITED STATES

May 26, 2009

Michael W. Tankersley
Inspector General
Office of Inspector General
Export-Import Bank of the United States

Ref: Medium Term Export Credit Program – Information Technology (IT) Systems, Support and
Governance Draft Audit Report

Dear Mr. Tankersley:

Thank you for the opportunity to respond to the findings and recommendations in the
Performance Audit of the Medium Term Export Credit Program – IT Systems, Support and
Governance Draft Audit Report dated April 8, 2009 and subsequently updated and submitted by your
office on April 22, 2008. This letter provides our observations with respect to the Report. Ex-Im
Bank's responses to the specific Audit findings and recommendations are set forth in attachment A
hereto.

Ex-Im Bank welcomes the recommendations contained in the audit and the support of the
Bank efforts to modernize its automated information systems and your constructive
recommendations emphasizing the continued importance of the business units' participation in the IT
governance at the Bank. The Business Champion of the MT program is the Vice President, Trade
Finance and Insurance (TFI). This individual is the executive responsible for the medium term
program and manages 22 professional staff responsible for processing medium term transactions,
developing new business, and advocating for medium term customers. His role includes the ongoing
development of detailed business requirements in response to strategic and requests for technology
and automated enhancement.

Appendix C

As noted in the response, many of the recommendations, both in terms of processes and information technology had been previously identified and are already underway. The Bank is already developing an enterprise-wide data model, a repository and related business intelligence reporting tools, monitoring and risk analysis tools. The Bank does intend to continue to implement the strategies described in the recommendations contained in the report. These enhancements will directly benefit the MT program.

Ex-Im Bank has in recent years made targeted investments in its information technology. Each of these investments included a fully developed and approved OMB business case (Exhibit 300) covering the full life cycle of the investment. In FY 2007, the IT investment represents 1.6 percent of the total administrative budget. In FY2008, the IT investment represents 5.13 percent of the total administrative budget and included the development of the data warehouse as a resources multiplier for reporting and monitoring applications. In FY2009 and FY2010, enhancements include tools to analyze claims data and establish monitoring alerts.

The Bank looks forward to working with you to evaluate and, as appropriate, automate objective and transparent criteria for classifying transactions according to their risk profile. We are committed to evaluating and implementing the IT recommendations consistent with the broader strategic objectives of the Bank's leadership.

Sincerely,

John McAdams

Senior Vice President, Export Finance

Appendix C

Medium Term Export Credit Program – Information Technology (IT) Systems, Support and Governance Draft Audit Report

Finding 1.   Management Oversight and Accountability of IT Support for the MT Program Needs Strengthening

Recommendation 1A

Management Response 1A - Agree.
The Ex-Im Bank strategic plan and corresponding IT strategic plan will be completed in the first quarter of fiscal year 2010.
(Given the transition of the new administration, the strategic plan shall include strong participation from the new President and new and existing Senior Management staff)

Management agrees with developing a Bank-wide IT strategic plan that aligns and integrates each program's IT requirements with Bank-wide goals and priorities. The purpose of the IT Strategic Plan is to integrate each program's IT requests with the Bank-wide goals and priorities and to comply with legislative and regulatory mandates. An important element of a strategic plan is that it presents an integrated system to support enterprise-wide decisions. Although management agrees in principal that the development of a strategic plan will provide useful long-term guidance in orienting the MT program, we do not believe that such a long-term, overarching, detailed plan can be established as a stand-alone independent of the Bank's overall goals and objectives. In addition, given the size of the Bank's IT budget and staff, it is not an effective use of our limited resources to develop a plan exclusively for MT divorced from Bank-wide business priorities or budget constraints and failing to take into account system-wide technical requirements and architecture.   IT services and systems are integrated to provide the best return on investment mapped to the Bank's priorities.

Notes:
- The budget of the Office of the Chief Information Officer (OCIO) includes standard Information Technology in addition to Records Management (paper and electronics), Dun and Bradstreet's interfaces and subscriptions services for customer's information and credit reports, interfaces to treasury and credit cards payments, centralized telecommunications including international calling cards, etc. It should also be noted that the Ex-Im Bank financial systems provide the core ledger for all authorizations (over $12 billion a year) and not just in support of the administrative budget (below $80 million)
- Ex-1m Bank has in recent years made reasonable investments in its information technology. Each of these investments included a fully developed OMB Exhibit 300 including the full life cycle of that investment. In FY 2007, the IT investment represents 1.6 percent of the total administrative budget. In FY2008, the IT investment represents 5.13 percent of the total administrative budget and included the development of the much needed data warehouse.
- The OCIO has submitted a detailed yearly technology budget as part of the OMB budget submission (2 years in advance of the fiscal year allocation of funds).These documents include FY2006, FY2007, FY2008, FY2009, and FY2010.
- During the design and build of Ex-Im OnLine (EOL) system, the Ex·Im Bank implemented extensive management and oversight controls to effectively support the initiative. Senior Management was highly involved during the design, development and implementation of EOL. For example, a large number of "Sponsor Meetings" were held (i.e. from 01/2005 to 12/2005 (22 meetings) for the design phase; from 01/2006 to 12/2006 (8 meetings) deployment in production of new applications; from 01/2007 to 12/2007 (16 meetings) for the transition phase; and quarterly meeting for the steady phase oversight of EOL.
- Change Request "(CR) and defects has gone up and down from quarter to quarter rather than being on the decline" As users are more proficient with using the system, they request additional

capabilities. The number of CRs is not an indicator of problems with the system. Managing CRs/defects is a function of (a) having a viable solution, (b) priority and (c) the available resources. CRs may remain open for 2+ years (as in our legacy systems) after they were created. Their priority did not make the cut, but were still valid. There are quarterly release schedule. Technology requests are reviewed and prioritized by the EOL User Group (EOUG).

- Ex-Im Bank formed a formal EOUG and directed them to report to the executive sponsors. The business champion of the MT program is the Vice President, Trade Finance and Insurance. The EOUG group has resumed meeting on a regular basis. The EOUG will continue, as it did over the last 16 months, to use a formalized approach for defining the scope of releases.
- "The users have noted that, at times, the Chief Information Officer (CIO) has made the final decision on the specific CRs…". The system that tracks the requestor of CRs and defects shows that not a single CR was decided by the CIO. There is only one single defect that the CFO office plus the CIO office requested implementation in the next release for data integrity and auditing purposes.

Recommendation 1B

Management Response 1B - Agree.

The Business Champion of the MT program is the Vice President, Trade Finance and Insurance (TFI). This individual is the executive responsible for the medium term program and manages 22 professional staff responsible for processing medium term transactions, developing new business, and advocating for medium term customers. The VP, TFI is an effective high-level representative for the interests of the MT program to the EOUG and any other IT governance group. His role includes the ongoing development of detailed business requirements in response to strategic objectives identified for IT support of the MT program and requests for automated enhancement.

Notes:
The EOUG includes members from the CFO office and, as needed, they will request participation from the asset management division.

EOL is based on quarterly release schedules. Technology requests are reviewed and prioritized by the EOUG including the VP, TFI.   The EOL system includes the high priority system capabilities required today to meet management's objectives for the MT program.

The Bank, in a relatively short period of time subsequent to identifying significant risk factors underlying many of the fraudulent and unsound transactions, adapted numerous changes to its approach to assessing and underwriting medium-term transactions. These include the establishment of a monthly due diligence meeting chaired by OGC, and attended by officers at the level of VP or higher, which discusses on-going due diligence matters, plus specific instances of potentially fraudulent activities, and/or participants that have been put on a watch list. As MT pilot processes that provide meaningful information for automated capabilities are identified, the VP, TFI will ensure prompt development and deployment of these capabilities. The plan is defined for the next 12 months. It includes emphasis on the participant functionality and shipment reports. The plan is being reviewed to span 18 months and will include enhancements of several trade finance products to respond to the financial crisis, specifically the tightening of credit and the

Appendix C

lack of liquidity in the export marketplace, and to help U.S. exporters, in particular small-businesses, create and maintain export-related jobs.

Finding 2. IT Systems that Support the MT Program Need Improvement

Recommendation 2A

Management Response 2A - Agree.

The Bank is already developing an enterprise-wide data model, repository and related business intelligence, monitoring and risk analysis tools. The Bank originally submitted the request to OMB in FY2006, and it is now being implemented as part of the investment approved in the FY2008 budget. These projects are sponsored by the Export Finance Group's Operations Division and the CFO's office.

Development of the data warehouse and related business intelligence tool and Moody Risk Analyst capabilities are ongoing. Integration of EOL and AMS will be the result of the business intelligence tool data warehouse.

Notes:
- Automated lender rating and credit scoring models require the completion of pilots underway in TFI and Credit Underwriting. Due to the risk of fraud, the automation of such processes requires height ended analysis of the benefits and potential risks, to include extensive review by the users. Pure automation of underwriting or simplifying the workflow may relax some of the specific due diligence rules required for MT transactions (to identify risk and fraud) and may reduce expert case-by-case analysis by relationship managers or underwriters. The dashboard and data warehouse will be the source of integrated information about transactions and participants to generate alerts.

- The Moody's basic templates do not cover a large number of the emerging markets in which the Bank is active. The expert knowledge of the relationship manager and credit underwriter will be crucial in continuing to collect and share information (using a Moody-like template).

- The data quality of the participant file will continue to affect the additional development and implementation of changes. The existing CR process is used by the business units to define their requirements and select priorities.

- Timely transaction processing and customer service and negative comment from transaction participants is not due to the automated systems like EOL, but to the additional staff due diligence required for these transactions or the submission of incomplete transactions and the need for collecting additional information.

Appendix C

Recommendation 2B

Management Response 2B - Agree.

Management agrees. As indicated in the recommendation "IMT management has stated that most of these recommendations will be addressed by either current or future phases of the EIIS initiative", this recommendation is already in the development phase. An extensive and very successful initiative that will be gradually be deployed by the end of FY 2009. The data model for the majority of the systems is complete and the business intelligence reporting tools has been customized to provide critical metrics and detailed information for the staff.

Finding 3. Systems Development Process Needs Improvement

Recommendation 3

Management Response 3- Agree.

Management agrees. We are going to continue using our rigorous SDLC including JAD, regression testing, and additional training.

- **Requirement-** A rigorous System Development Life Cycle (S DLC) was and will continue to be employed by the OCIO for EOL and other systems. Further, the Bank has implemented strong change management procedures for managing changes to the production EOL system. The change procedures are regularly reviewed and enhanced to provide value to the end users. The design reviews include screen mockups and detailed explanation of how changed or new functions will work. The design reviews are intended to help the stakeholders of the change request clearly understand the proposed design before coding begins and supplements the use cases. Joint Application Development (JAD) and Rapid Application Development (RAD) are used as needed depending on the complexity of the CR. The Bank OCIO staff will continue to internally update the "Use Cases" as they are excellent mechanisms to document systems (especially for auditors). The IT Project Manager for EOL has strong communication and facilitation skills and extensive experience in system development techniques. In addition, the Project Manager relies on Bank staff to assist with successful requirement gathering and JAD and RAD deliverables.
- **Testing-** A robust testing program is in place for the EOL system. OCIO uses a dedicated QA team for creating test cases, conducting tests, including regression tests, recording results, and working with developers to resolve issues. OCIO uses state-of-the-art software for creating and executing test scripts to perform regression testing. Regression tests are reviewed and modified with each release and additional test steps are added to scripts, as appropriate, to test defects and CRs relevant to the release. Commitment from users for user acceptance testing will be vigorously pursued.
- **Training-** The Bank will include professional training as part of the IT strategic plan. In addition, we are also recommending the use of web-type recorded sessions to be made available on exim.gov and on the Intranet.