

March 2013

EXPORT-IMPORT BANK

Recent Growth Underscores Need for Continued Improvements in Risk Management



Why GAO Did This Study

Ex-Im helps U.S. firms export goods and services by providing a range of financial products. The Export-Import Bank Reauthorization Act of 2012 increased the statutory ceiling on the agency's total exposure to \$140 billion in 2014. The act also requires GAO to evaluate Ex-Im's growth and the effectiveness of its risk management. This report discusses (1) how Ex-Im's business changed in recent years and possible reasons for these changes; (2) how Ex-Im determines credit subsidy costs, loss reserves and allowances, and product fees, and how these processes account for different risks; (3) how Ex-Im's financial portfolio has performed and the budgetary impact of its programs; and (4) the extent to which Ex-Im has a comprehensive risk-management framework. To address these objectives, GAO analyzed Ex-Im's financial data, policies and procedures, and processes for calculating program costs and loss reserves. GAO also interviewed Ex-Im officials and other entities involved in export financing.

What GAO Recommends

Ex-Im should (1) assess whether it is using the best available data for adjusting the loss estimates for longer-term transactions to account for global economic risk, (2) retain point-in-time performance data to compare the performance of newer and older business and to enhance loss modeling, (3) report stress testing scenarios and results to Congress, and (4) develop benchmarks to monitor and manage workload levels. Ex-Im agreed with each of these recommendations.

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What GAO Found

From fiscal year 2008 to fiscal year 2012, the U.S. Export-Import Bank's (Ex-Im) outstanding financial commitments (exposure) grew from about \$59 billion to about \$107 billion, largely in long-term loans and guarantees. Factors associated with this growth include reduced private-sector financing following the financial crisis and Ex-Im's authorization of direct loans—a product not offered by export credit agencies in some other countries—to fill the gap in private-sector lending.

Ex-Im's processes for determining credit subsidy costs, loss reserves and allowances, and fees account for multiple risks. To implement the Federal Credit Reform Act of 1990 and other requirements, Ex-Im calculates subsidy costs and loss reserves and allowances with a loss model that uses historical data and takes credit, political, and other risks into account. Consistent with industry practices, Ex-Im added factors to the model in 2012 to adjust for circumstances that may cause estimated credit losses to differ from historical experience. Opportunities exist to further improve the model. For example, Ex-Im uses a 1-year forecast of certain bond defaults to predict possible changes in loss estimates from changed economic conditions. However, a short-term forecast may not be appropriate for adjusting estimated defaults for longer-term products. Ex-Im's fees are generally risk-based and, for medium- and long-term products (about 85 percent of Ex-Im's exposure), guided by international agreements that set minimum fees that account for credit and political risk.

As of December 2012, Ex-Im reported an overall default rate of less than 1 percent. However, Ex-Im has not maintained data needed to compare the performance of newer books of business with more seasoned books at comparable points in time, a type of analysis recommended by federal banking regulators. Also, without point-in-time data showing when defaults occur, the precision of Ex-Im's loss model may be limited. Ex-Im has been self-sustaining since 2008 and has generated receipts for the government. But, because Ex-Im's portfolio contains a large volume of recent transactions, the long-term impact of this business on default rates and the federal budget is not yet known.

Ex-Im has been developing a more comprehensive risk-management framework but faces operational risks. Ex-Im manages credit and other risks through transaction underwriting, monitoring, and restructuring. Ex-Im also started addressing recommendations by its Inspector General (IG) about portfolio stress testing, thresholds for managing portfolio concentrations, and risk governance. GAO's review of internal control standards and industry practices indicates that the IG's recommendations represent promising techniques that merit continued attention. Ex-Im has not yet made plans to report its stress test scenarios and results to Congress, although doing so would aid congressional oversight and be consistent with internal control standards for effective external communication. Ex-Im faces potential operational risks because the growth in its business volume has strained the capacity of its workforce. Ex-Im has determined that it needs more staff, but it has not formally determined the level of business it can properly manage. GAO internal control standards state that agencies should develop a risk-management approach based on how much risk can be prudently accepted. Without benchmarks to determine when workload levels have created too much risk, Ex-Im's ability to manage its increased business volume may be limited.

Contents

Letter		1
	Background	5
	Ex-Im's Business Grew Substantially in Recent Years Due to Market Conditions and Other Factors	11
	Ex-Im Uses Modeling to Estimate Subsidy Costs and Reserves, and Accounts for Multiple Risks in These Processes and in Setting Fees	20
	Ex-Im Reported a Default Rate under 1 Percent and Generated Receipts, but the Long-Term Budgetary Impact Is Uncertain	30
	Ex-Im Faces Operational Risks from Its Growing Portfolio	38
	Conclusions	50
	Recommendations for Executive Action	51
	Agency Comments and Our Evaluation	51
Appendix I	Objectives, Scope, and Methodology	53
Appendix II	Comments from the U.S. Export-Import Bank	58
Appendix III	GAO Contact and Staff Acknowledgments	61
Figures		
	Figure 1: Ex-Im Total Exposure, Fiscal Years 1990-2012	11
	Figure 2: Ex-Im Annual Authorizations by Product Type, Fiscal Years 2006-2012	12
	Figure 3: Ex-Im Annual Authorizations by Region, Fiscal Years 2006-2012	13
	Figure 4: Ex-Im Annual Authorizations by Sector, Fiscal Years 2006-2012	14
	Figure 5: U.S. and Euro Area Bank Lending Standards, Calendar Years 2006-2012	16
	Figure 6: Corporate Bond Risk Premiums, Calendar Years 2006- 2012	17
	Figure 7: Impaired Assets as a Percentage of Total Exposure, Fiscal Years 2008-2012	34
	Figure 8: Direct Loan and Loan Guarantee Subsidy Reestimates, Fiscal Years 1992-2012	37

Figure 9: Ex-Im Authorization and FTE Levels, Fiscal Years 2006 - 2012

48

Abbreviations

CBO	Congressional Budget Office
CLS	Country Limitation Schedule
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CRO	chief risk officer
ECA	export credit agency
Ex-Im	U.S. Export-Import Bank
FASAB	Federal Accounting Standards Advisory Board
FCRA	Federal Credit Reform Act of 1990
FTE	full-time equivalent
IACPM	International Association of Credit Portfolio Managers
ICRAS	Interagency Country Risk Assessment System
IG	inspector general
IIF	Institute of International Finance
OECD	Organisation for Economic Cooperation and Development
OMB	Office of Management and Budget
OPIC	Overseas Private Investment Corporation

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United States Government Accountability Office
Washington, DC 20548

March 28, 2013

The Honorable Tim Johnson
Chairman
The Honorable Mike Crapo
Ranking Member
Committee on Banking, Housing,
and Urban Affairs
United States Senate

The Honorable Jeb Hensarling
Chairman
The Honorable Maxine Waters
Ranking Member
Committee on Financial Services
House of Representatives

The U.S. Export-Import Bank (Ex-Im) helps U.S. firms export goods and services by providing a range of financial products including direct loans, loan guarantees, and insurance, particularly during times of economic crisis when private financing is not available. In the wake of the 2007-2009 financial crisis, Ex-Im's business volume grew substantially, reaching about \$36 billion in new authorizations in 2012.¹ Additionally, in May 2012, Congress enacted the Export-Import Bank Reauthorization Act of 2012 that increased the agency's exposure limit—that is, the total outstanding value of all direct loans, loan guarantees, and insurance policies that Ex-Im cannot exceed—from \$100 billion in 2011 to \$140

¹All years in this report are federal fiscal years unless otherwise indicated. An authorization is an export financing transaction for which Ex-Im has granted credit approval.

billion in 2014.² As of the end of 2012, Ex-Im's total exposure was about \$107 billion.³

Ex-Im's charter requires the transactions the agency authorizes to have a reasonable assurance of repayment. To comply with this requirement, Ex-Im must manage the wide variety of risks associated with providing export financing. The recent growth in Ex-Im's exposure has heightened interest in ensuring that Ex-Im has proper controls in place to minimize these risks while meeting the needs of U.S. exporters. Furthermore, a report issued in September 2012 by Ex-Im's Inspector General (IG) identified weaknesses in Ex-Im's risk-management policies and procedures and made several recommendations for improvement.⁴ As with any credit institution, Ex-Im expects that some portion of the credit it offers will not be repaid, and it estimates these future losses to establish loss reserves and allowances reported in its financial statements and to comply with federal budgeting requirements in the Federal Credit Reform Act of 1990 (FCRA).⁵ FCRA requires that before entering into direct loans or loan guarantees, Ex-Im must have budget authority for its "credit subsidy costs"—broadly speaking, estimates of net losses on a present value basis, excluding administrative costs. Ex-Im collects fees and, if applicable, interest payments from obligors, which (among other cash flows) are incorporated into estimates of credit subsidy costs.⁶

²Pub. L. No. 112-122, 126 Stat. 350 (2012). The act increases the exposure limit to \$120 billion in 2012, \$130 billion in 2013, and \$140 billion in 2014. The increases in 2013 and 2014 are conditional upon Ex-Im meeting certain reporting and analysis requirements and maintaining a default rate of less than 2 percent. The act also required Ex-Im to submit a business plan to Congress by September 30, 2012, that, among other things (1) estimated the appropriate exposure limits for 2012, 2013, and 2014; (2) justified the estimates; and (3) analyzed the potential for the increased or decreased risk of loss as a result of the estimated exposure limits. The act requires us to review and report on the business plan by June 1, 2013. Pub. L. No. 112-122 §4, 126 Stat. 351, 352 (2012).

³Ex-Im's exposure represents the value of authorized transactions (including unfunded commitments totaling \$36 billion), minus amounts that already have been repaid or cancelled.

⁴Office of the Inspector General, Export-Import Bank of the United States, *Report on Portfolio Risk and Loss Reserve Allocation Policies*, OIG-INS-12-02 (Washington, D.C.: September 2012).

⁵Pub. L. No. 101-508, 104 Stat. 1388 (1990).

⁶We use the term "obligor" to refer to entities that are contractually obligated to make payments to satisfy the terms of an Ex-Im export credit product.

The Export-Import Bank Reauthorization Act of 2012 required GAO to evaluate Ex-Im's growth and the effectiveness of its risk management. This report discusses: (1) how Ex-Im's business changed in recent years and possible reasons for these changes; (2) how Ex-Im determines credit subsidy costs, loss reserves and allowances, and product fees, and how these processes account for different risks; (3) how Ex-Im's financial portfolio has performed and the budgetary impact of its programs; and (4) the extent to which Ex-Im has a comprehensive risk-management framework.

To address these objectives, we reviewed a range of data and documentation and interviewed officials from Ex-Im and other organizations involved in credit financing. More specifically, to examine changes in Ex-Im's business, we analyzed data on Ex-Im's financial exposure from 1990 through 2012 and authorizations from 2006 through 2012. To identify possible reasons for trends in Ex-Im's business activity, we reviewed a variety of Ex-Im documents—including the agency's annual reports, competitiveness reports, and strategic plan—and analyzed data on global credit market conditions. We also interviewed Ex-Im officials, representatives of industry trade associations and research organizations, and officials from the export credit agencies (ECA) of Canada, France, Japan, and the United Kingdom.

To examine how Ex-Im determines subsidy costs, loss reserves and allowances, and product fees, and how these processes account for different risks, we reviewed relevant requirements and guidance, including FCRA, Office of Management and Budget (OMB) Circular No. A-11, and federal financial accounting guidance. We examined information on the tools and processes Ex-Im uses to determine subsidy costs and loss reserves and allowances, including Ex-Im's loss estimation model, and interviewed Ex-Im officials about their implementation. We also reviewed international agreements that govern fees charged by ECAs and reviewed Ex-Im analyses used to support fee adjustments. Further, we interviewed officials from the four foreign ECAs cited previously and officials from other selected U.S. federal credit agencies about their practices for estimating costs, reserving for losses, and setting fees.

To assess how Ex-Im's financial portfolio has performed and the budgetary impact of its programs, we analyzed Ex-Im's default rates by product type and for the portfolio as a whole. We examined end-of-fiscal-year data for 2006 through 2012 and data as of December 31, 2012. We also reviewed federal banking regulator guidance on monitoring default

rates. Additionally, we examined an Ex-Im analysis of the funds it received and sent to the Department of the Treasury (Treasury) from 1990 through 2012. We reviewed supporting information in appropriation acts, the President's budgets, and Ex-Im's financial statements for the same years and determined Ex-Im's analysis was reasonable.

To assess the extent to which Ex-Im has a comprehensive risk-management framework, we reviewed Ex-Im's practices for managing risks at the transaction and portfolio levels. We reviewed a 2012 report by the Ex-Im IG on portfolio risk management and determined what actions Ex-Im had taken in response to the report's recommendations. We also identified relevant criteria in our internal control standards and from practices identified by financial industry groups. In addition, we reviewed information related to potential operational risks stemming from trends in Ex-Im's business volume and workload. We limited our work in this area to Ex-Im's human capital management. We analyzed Ex-Im data on the number of full-time equivalents (FTE) and the number and dollar volume of transactions authorized from 2006 through 2012. Additionally, we interviewed Ex-Im officials, foreign ECA officials, and officials from other federal credit agencies about risk-management practices. To assess the reliability of the data we used, we reviewed information related to data elements and controls, performed electronic testing for obvious errors in accuracy and completeness, compared data to published documents, and interviewed knowledgeable officials about the data. We concluded that the data elements we used were sufficiently reliable for purposes of describing Ex-Im's growth, financial performance, and workload. Appendix I provides more information on our scope and methodology.

We conducted this performance audit from June 2012 to March 2013 in accordance with generally accepted government auditing standards. 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.

Background

Ex-Im's Mission, Financing Products, and Risks

Ex-Im, the official ECA of the United States, is an independent agency operating under the Export-Import Bank Act of 1945, as amended. Its mission is to support the export of U.S. goods and services overseas, thereby supporting U.S. jobs. Official ECAs are organizations that provide export credits with explicit government backing, where either the government or the government-owned ECA assumes all or a portion of the risk. Export credits are financing arrangements designed to mitigate risks to buyers and sellers associated with international transactions. Buyers and sellers in international transactions face unique risks, such as foreign exchange risk, difficulties in settling disputes when damages to shipments occur, or instability in the buyer's country. For these reasons, private lenders may be reluctant to finance a buyer's purchase of foreign goods or finance a seller's operations. Export credit products are meant to facilitate international transactions by mitigating these risks.

An international agreement, the Organisation for Economic Cooperation and Development (OECD) Arrangement on Officially Supported Export Credits (the OECD Arrangement), governs various aspects of U.S. and other member countries' ECAs.⁷ The OECD Arrangement aims to provide a framework for the use of officially supported export credits; promote a level playing field, where competition is based on the price and quality of the exported goods and not the financial terms provided; and provide transparency over programs and transactions. For example, the OECD arrangement sets minimum transaction fees. Participants include Australia, Canada, the European Union, Japan, South Korea, New Zealand, Norway, Switzerland, and the United States. The OECD Arrangement applies to officially supported export credits with repayment terms of 2 years or more.

Congress has placed specific requirements on Ex-Im's operations. For example, Ex-Im's charter states that it should not compete with the private sector. Rather, Ex-Im's role is to assume the credit and country risks that the private sector is unable or unwilling to accept. In addition, Ex-Im must submit annual reports to Congress on its actions to provide

⁷The OECD is an organization of 34 industrialized countries, operating by consensus, that fosters dialogue among members to discuss, develop, and refine economic and social policies and provides an arena for establishing multilateral agreements.

financing on a competitive basis with other ECAs, and to minimize competition in government-supported export financing. Furthermore, Ex-Im must make available at least 20 percent of its authorized aggregate loans, loan guarantees, and insurance (export financing) each fiscal year for the direct benefit of small businesses. Congress also has given Ex-Im instructions on the share of its financing for environmentally beneficial exports, including renewable energy, and to expand the promotion of its financing in sub-Saharan Africa.

Ex-Im offers a number of export financing products, including direct loans, loan guarantees, and export credit insurance. Ex-Im makes fixed-rate loans directly to international buyers of goods and services. These loans can be short-term (up to 1 year), medium-term (more than 1 year up to 7 years), or long-term (more than 7 years). Ex-Im also guarantees loans made by private lenders to international buyers of goods or services, promising to pay the lenders if the buyers default. Like direct loans, loan guarantees may be short-, medium-, or long-term. Additionally, Ex-Im provides export credit insurance products that protect the exporter from the risk of nonpayment by foreign buyers for commercial and political reasons. This allows U.S. exporters the ability to offer foreign purchasers the opportunity to make purchases on credit. Credit insurance policies can cover a single buyer or multiple buyers and can be short- or medium-term. Insurance policies are also available to cover lenders and exporters that finance purchases by foreign buyers. Ex-Im's short-term insurance covers a wide range of goods, raw materials, spare parts, components, and most services on terms up to 180 days.⁸ Medium-term insurance policies protect longer-term financing to international buyers of capital equipment or services, covering one or a series of shipments. Financing under medium-term insurance policies generally can extend up to 5 years.⁹

Some of Ex-Im's short-term products are geared toward U.S. small businesses that have the potential to export but lack sufficient funds to support export efforts and include direct loans and loan guarantees to provide these businesses with working capital. Working capital loans are

⁸According to Ex-Im, in exceptional cases, exports under these policies may be covered on terms up to 360 days.

⁹According to Ex-Im, in exceptional cases, exports under these policies may be covered on terms up to 7 years.

fixed-rate loans that provide exporters with 6- or 12-month revolving lines of credit. Working capital guarantees generally cover 90 percent of the principal and interest on a loan made to an exporter by a private lender. The guarantees are typically 1 year, but can extend up to 3 years and be used on a single transaction or on a revolving basis. Ex-Im delegates the authority for underwriting most of these transactions directly to Ex-Im-approved private-sector lenders.

Ex-Im's long-term products are often used in project finance transactions, what Ex-Im terms "structured finance" transactions, and aircraft transactions.¹⁰ These transactions involve complicated financing arrangements, and Ex-Im has separate divisions to handle them. These transactions also generally involve a direct loan or loan guarantee and their value is usually greater than \$10 million. Project finance is an arrangement in which Ex-Im lends to newly created project companies in foreign countries and looks to the project's future cash flows as the source of repayment instead of relying directly on foreign governments, financial institutions, or established corporations for repayment of the debt. The projects involve a large number of contracts for completion and operation. Project finance transactions have repayment terms up to 14 years (18 years for renewable energy transactions) and typically include the financing of development of a new facility in a foreign country, such as a factory or power plant, or significant facility or production expansions. Most of Ex-Im's project finance transactions have been oil and gas and power sector projects. In structured finance transactions, Ex-Im provides direct loans or loan guarantees to existing companies located overseas based on these companies' balance sheets plus credit enhancements, such as escrow or reserve accounts, subject to Ex-Im's control; special insurance requirements; and letters of credit pledged to Ex-Im through a bank or other third party. Structured finance transactions generally have repayment terms of 10 years (12 years for power transactions). Among others, Ex-Im has completed structured transactions for oil and gas projects and air traffic control, telecommunications, and manufacturing entities. Finally, Ex-Im provides long-term direct loans and loan guarantees that support the purchase of aircraft. Ex-Im uses external advisers to assist in arranging project finance, structured finance, and

¹⁰Although the term "structured finance" sometimes refers to the use of securitization, Ex-Im uses it to describe transactions that are "structured" in the sense that they are based on an existing balance sheet and use risk mitigation tools such as credit enhancements.

aircraft transactions. These advisers can include financial, legal, technical, insurance, market, and environmental consultants.

Ex-Im faces multiple risks when it extends export credit financing. These risks include credit, political, market, concentration, foreign-currency, and operational risks, which are defined as follows:

- *Credit risk.* The risk that an obligor may not have sufficient funds to service its debt or be willing to service its debt even if sufficient funds are available.
- *Political risk.* The risk of nonrepayment resulting from expropriation of the obligor's property, war, or inconvertibility of the obligor's currency into U.S. dollars.
- *Market risk.* The risk of loss from declining prices or volatility of prices in the financial markets. Market risk can arise from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions.
- *Concentration risk.* Risk stemming from the composition of a credit portfolio. Concentration risk comes into being through an uneven distribution of credits within a portfolio. Ex-Im faces three types of concentration risk:
 - *Industry concentration.* The risk that events could negatively affect not only one obligor but also many obligors in the same industry simultaneously.
 - *Geographic concentration.* The risk that events could negatively affect not only one obligor but many obligors simultaneously across a country or region.
 - *Obligor concentration.* The risk that defaults from a small number of obligors will have a major adverse impact on the portfolio because they account for a large share of the portfolio.
- *Foreign-currency risk.* The risk of loss as a result of appreciation or depreciation in the value of a foreign currency in relation to the U.S. dollar in Ex-Im transactions denominated in that foreign currency.
- *Operational risk.* The risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events.

Budgetary Treatment of Federal Credit Programs

In 1990, to more accurately measure the cost of federal credit programs, Congress enacted FCRA, which requires agencies that provide domestic or international credit, including Ex-Im, to estimate and request appropriations for the long-term net losses, or subsidy costs, of their credit activities.¹¹ Credit programs incur subsidy costs when estimated payments by the government (such as loan disbursements or claims paid on defaulted loans) exceed estimated payments to the government (such as principal repayments, fees, interest payments, and recoveries), on a net present value basis over the life of the direct loan or loan guarantee, excluding administrative costs.¹² Credit programs have a positive subsidy when the present value of estimated payments by the government exceeds the present value of estimated payments to the government (collections). When credit programs have a positive subsidy cost, they require appropriations. Conversely, negative subsidy programs are those in which the present value of estimated collections is expected to exceed the present value of estimated payments.

FCRA requires that agencies have budget authority to cover credit subsidy costs before entering into credit transactions. For their annual appropriation requests, agencies estimate credit subsidy costs by cohort.¹³ To estimate their subsidy costs, credit agencies estimate the future performance of direct loans and loan guarantees. Agency management is responsible for accumulating relevant, sufficient, and reliable data on which to base these estimates. To estimate future credit performance, agencies generally have models that include assumptions about defaults, prepayments, recoveries, and the timing of these events and are based on the nature of their credit programs. In addition to assumptions based on agencies' programs, agencies also must incorporate economic assumptions included in the President's budget for credit subsidy calculations. An agency's credit subsidy costs can be expressed as a rate. For example, if an agency commits to guarantee loans totaling \$1 million and has estimated that the present value of cash

¹¹FCRA was enacted as part of the Omnibus Budget Reconciliation Act of 1990 (Pub. L. No. 101-508).

¹²As discussed later in the report, Ex-Im receives annual appropriations for administrative costs but is required to reimburse the appropriated amount to Treasury using the negatives subsidies it generates.

¹³A cohort generally refers to all the credits an agency is committing to providing or guaranteeing in a given fiscal year.

outflows will exceed the present value of cash inflows by \$15,000, the estimated credit subsidy rate is 1.5 percent.

Under FCRA, agencies generally must produce annual updates of their credit subsidy estimates—known as reestimates—of each cohort based on information about the actual performance and estimated changes in future credit performance. This requirement reflects the fact that estimates of credit subsidy costs can change over time. Beyond changes in estimation methodology, each additional year provides more historical data on credit performance that may influence estimates of the amount and timing of future cash flows. Economic assumptions also can change from one year to the next, including assumptions on interest rates. When reestimated credit subsidy costs exceed agencies' original credit subsidy cost estimates, the additional subsidy costs are not covered by new appropriations but rather are funded from permanent, indefinite budget authority.¹⁴

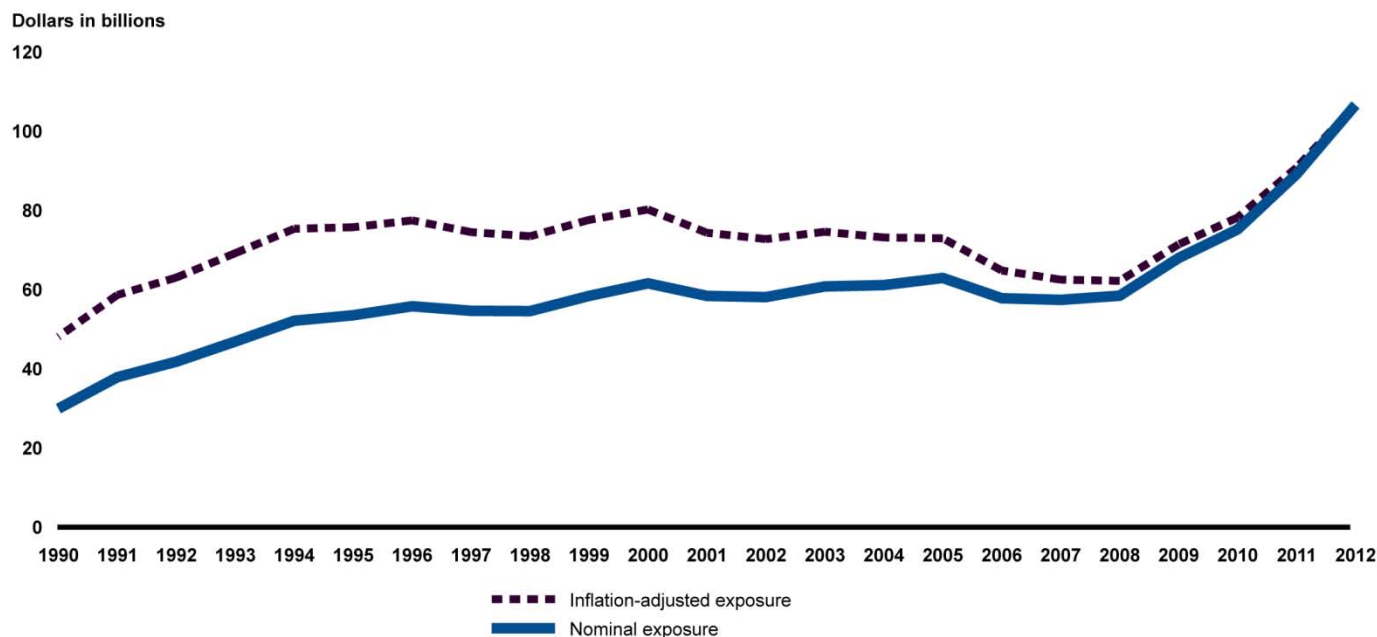
In addition to estimating credit subsidy costs for budgetary purposes, Ex-Im calculates future credit losses for its annual audited financial statements. Ex-Im's financial statements are prepared according to generally accepted accounting principles in the United States applicable to federal agencies. These principles require Ex-Im to follow Federal Accounting Standards Advisory Board (FASAB) guidance when establishing loss allowances for direct loans and loss reserves for loan guarantees or insurance transactions to cover future credit losses.

¹⁴Permanent budget authority is budget authority that is available as the result of previously enacted legislation and is available without further legislative action. Indefinite budget authority is budget authority that, at time of enactment, is for an unspecified amount.

Ex-Im's Business Grew Substantially in Recent Years Due to Market Conditions and Other Factors

Ex-Im business activities grew substantially in recent years. From 1990 through 2012, Ex-Im's financial exposure grew by more than 250 percent (or about 120 percent after adjusting for inflation), with most of the growth occurring after 2008 (see fig. 1).¹⁵ From 1990 through 2007, Ex-Im's exposure grew from about \$30 billion to \$57.5 billion—an average annual increase of just under 4 percent. From 2008 through 2012, Ex-Im's exposure rose from \$58.5 billion to \$106.6 billion—an average annual growth rate of more than 16 percent.

Figure 1: Ex-Im Total Exposure, Fiscal Years 1990-2012



Source: GAO analysis of Ex-Im data.

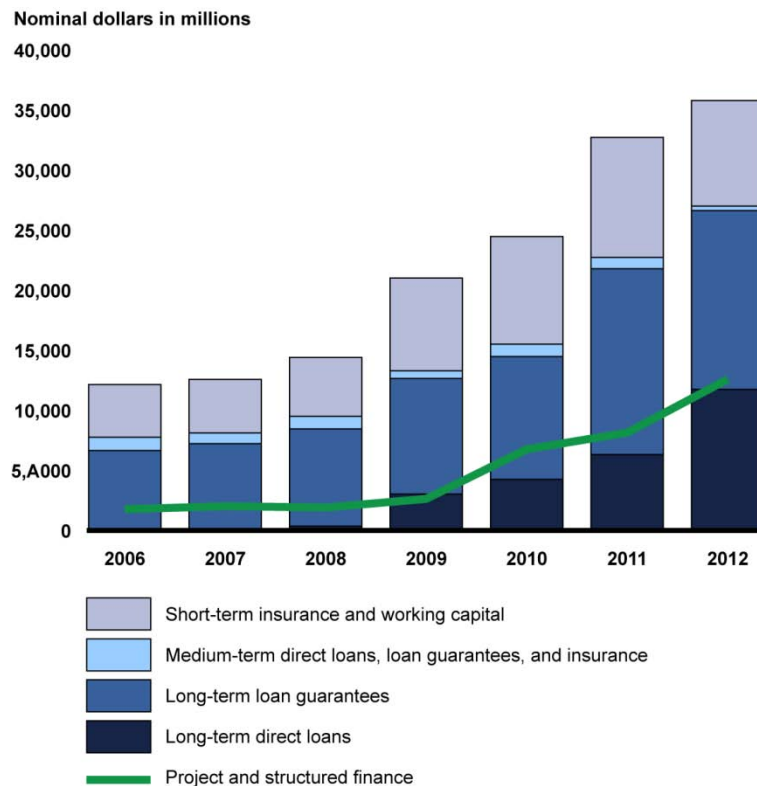
Note: We used the gross domestic product price index to adjust for inflation with fiscal year 2012 as the reference year.

Most of Ex-Im's recent growth occurred through its long-term loan guarantee and direct loan products. Overall, annual Ex-Im authorizations rose from \$14.4 billion in 2008 to \$35.8 billion in 2012 (see fig. 2). Over the same period, annual authorizations for long-term products grew from \$8.5 billion to \$26.6 billion—a more than three-fold increase—and

¹⁵We used the gross domestic product price index to adjust for inflation with fiscal year 2012 as the reference year.

accounted for almost 75 percent of the authorizations Ex-Im made in 2012. In particular, annual authorizations for new project and structured finance transactions, almost all of which used long-term loan guarantees and direct loans, increased from \$1.9 billion in 2008 to \$12.6 billion in 2012, or almost half of the long-term authorizations that Ex-Im made in 2012.

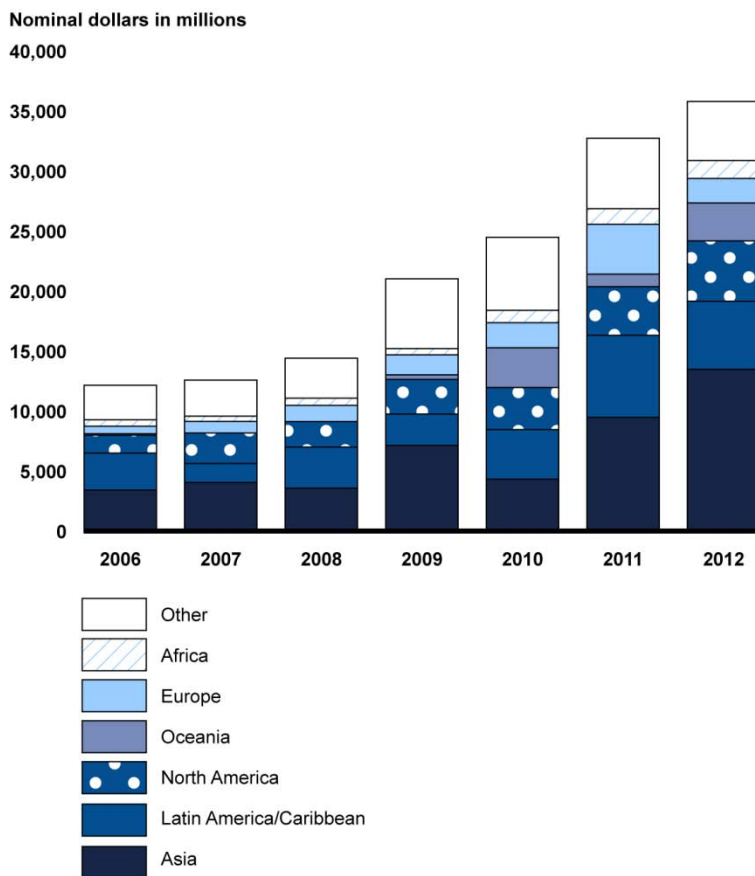
Figure 2: Ex-Im Annual Authorizations by Product Type, Fiscal Years 2006-2012



Source: GAO analysis of Ex-Im data.

By region, annual authorizations grew most rapidly in Asia and Oceania (see fig. 3). For example, Ex-Im authorizations for export financing to Asia grew from \$3.6 billion in 2008 to \$13.5 billion in 2012, an increase of about 275 percent. Overall, Asia accounted for almost 38 percent of Ex-Im's authorizations in 2012. Financing for exports to Oceania, which accounted for a smaller portion (about 9 percent) of Ex-Im's 2012 authorizations, rose even more sharply—from about \$1 million in 2008 to \$3.2 billion in 2012.

Figure 3: Ex-Im Annual Authorizations by Region, Fiscal Years 2006-2012



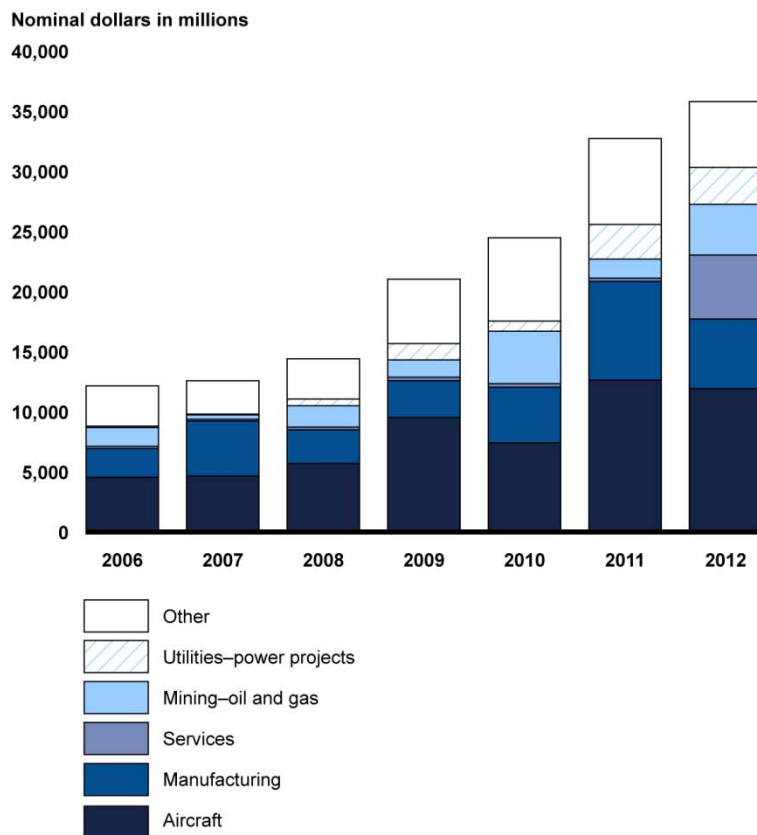
Source: GAO analysis of Ex-Im data.

Note: Ex-Im defines Asia as the region stretching from the Pacific Rim to the Middle East including countries such as the United Arab Emirates, Saudi Arabia, Vietnam, and China. Oceania includes Pacific island nations such as Australia, New Zealand, and Papua New Guinea. "Other" includes transactions that cannot be allocated to a single region—for example, those that involve more than one buyer.

By industry sector, financing for aircraft industry exports was the single largest source of authorizations in recent years, but authorizations in other sectors grew more quickly (see fig. 4). Aircraft-related authorizations grew from \$5.7 billion in 2008 to \$11.9 billion in 2012—an increase of about 110 percent—and accounted for about one-third of Ex-Im's authorizations in 2012. Over the same period, authorizations in the service sector rose more than 20-fold—from \$229 million to \$5.3 billion—and represented 15 percent of Ex-Im's authorizations in 2012. Additionally, authorizations increased by more than 400 percent in the

power utilities sector (from \$0.6 billion to \$3.1 billion) and by more than 130 percent in the oil and gas mining sector (from \$1.8 billion to \$4.2 billion). The power utilities sector and oil and gas mining sector accounted for 9 percent and 12 percent of Ex-Im's 2012 authorizations, respectively.

Figure 4: Ex-Im Annual Authorizations by Sector, Fiscal Years 2006-2012



Source: GAO analysis of Ex-Im data.

Ex-Im's Growth Was Associated with the Reduced Availability of Private-Sector Financing and Its Authorization of Direct Loans

Ex-Im officials and all of the representatives from industry trade associations and research groups we interviewed agreed that reduced availability of private-sector financing after the 2007-2009 financial crisis was the leading factor contributing to increased demand for Ex-Im financing. For example, officials from Ex-Im's Policy and Planning Group and industry representatives told us that the growing reluctance of commercial banks to provide export financing in the wake of the financial crisis was a primary driver of Ex-Im's growth. They explained that the financial crisis diminished the availability of commercial lending and that

Ex-Im provided financing to fill the void. Officials from the foreign ECAs we contacted described similar effects on their business activity. For example, officials from the ECAs in Canada and France explained that as commercial banks withdrew from the trade finance market, their own export credit activities grew as they made efforts to fill the resulting gap.

Officials from Ex-Im, industry trade and research organizations, and other ECAs we interviewed, also said that the ongoing and future implementation of international banking standards further limited private-sector financing, contributing to growth in ECA activities. For example, officials cited the Basel Committee on Banking Supervision “Basel III” standards for banking institutions that include risk-based capital and other requirements. As of December 2012, U.S. regulators were preparing to finalize rules for implementation of these standards.¹⁶ Ex-Im’s 2011 report to Congress on export credit competition notes that the transition to Basel III practices would require most banks to increase prices for export and other types of financing, and consequently, direct loans from ECAs became the preferred mechanism for some long-term trade deals.¹⁷ All five representatives from industry trade associations and research groups with whom we discussed this issue agreed that the ongoing implementation of Basel regulations could further constrain private-sector export financing in the already tightened lending environment following the financial crisis. Similarly, officials from Canada’s ECA noted that their business increased partly in response to banks’ plans for implementing Basel requirements.

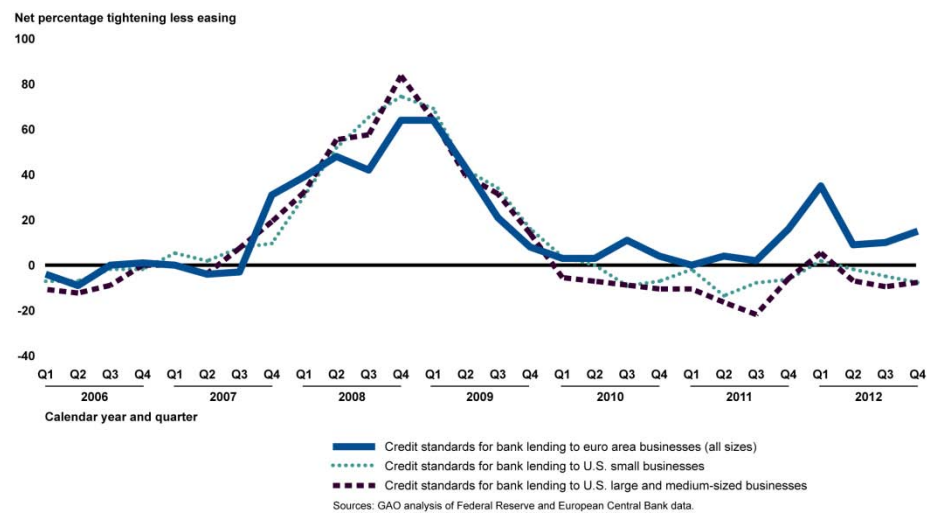
Commercial bank lending trends in the United States and Europe broadly demonstrate the reduced availability of private-sector financing during the 2007-2009 financial crisis, including for U.S. small businesses. As shown in figure 5—which shows the percentage of lenders that tightened or eased credit standards at different points in time—credit standards generally tightened during the financial crisis. Following the crisis, more U.S. banks began to ease rather than tighten credit standards, while more

¹⁶We have previously reported that regulations such as the Basel III requirements could increase the cost and reduce the availability of credit due to the increase in capital requirements. See GAO, *Dodd-Frank Act: Agencies’ Efforts to Analyze and Coordinate Their Rules*, [GAO-13-101](#) (Washington, D.C.: Dec. 18, 2012).

¹⁷Export-Import Bank of the United States, *Report to the U.S. Congress on Export Credit Competition and the Export-Import Bank of the United States for the Period January 1, 2011 through December 31, 2011* (Washington, D.C.: June 2012).

banks in the euro area continued to tighten standards, though not as dramatically as they had during the crisis.¹⁸

Figure 5: U.S. and Euro Area Bank Lending Standards, Calendar Years 2006-2012

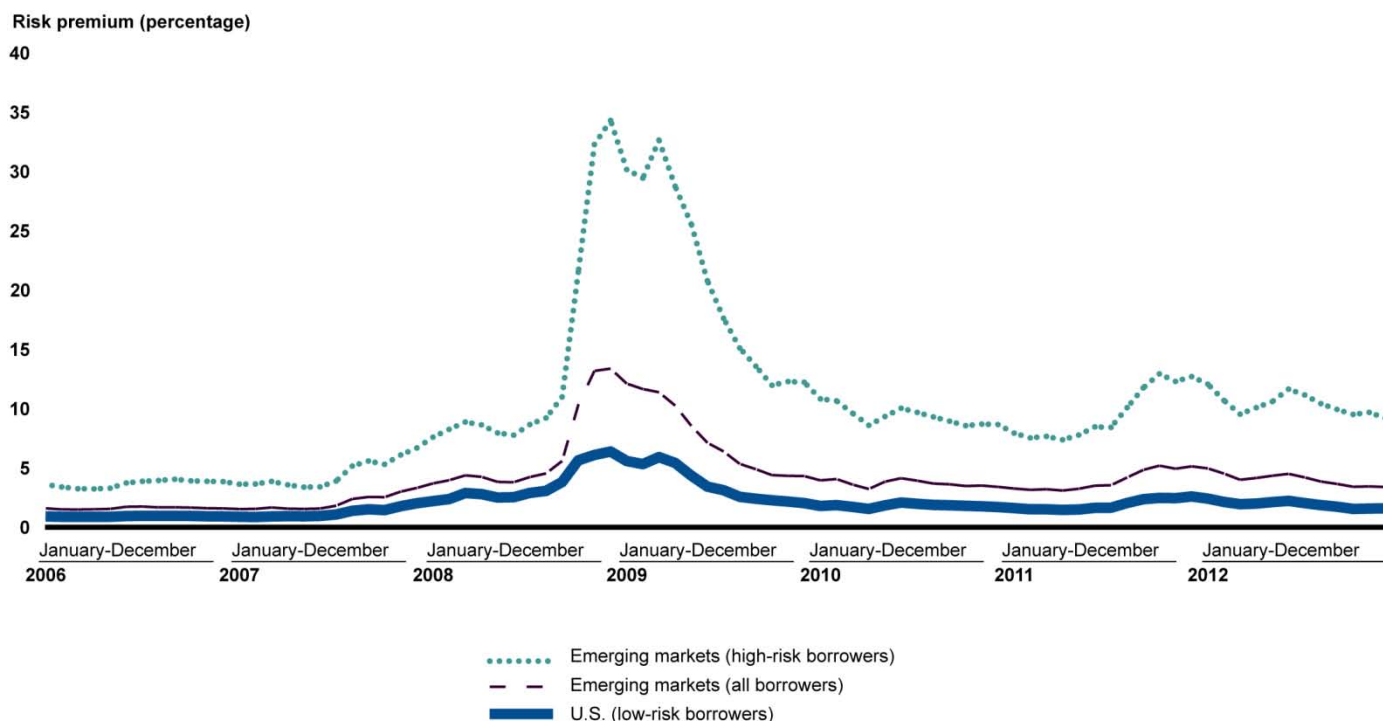


Note: The y-axis in the figure is the percentage of banks in the respective surveys that tightened credit standards minus the percentage of banks that eased credit standards. A positive number indicates more banks tightened standards than eased standards.

In emerging markets, following the onset of the 2007-2009 financial crisis, perceptions of risk and the cost of credit in corporate bond markets also jumped—dramatically for higher-risk borrowers. As shown in figure 6, risk premiums for corporate bonds spiked in late 2008 and early 2009 and remain above precrisis levels.

¹⁸The euro area comprises the 17 European Union countries that have introduced the euro since 1999: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, The Netherlands, Portugal, Slovenia, Slovakia, and Spain.

Figure 6: Corporate Bond Risk Premiums, Calendar Years 2006-2012



Source: GAO analysis of Bank of America-Merrill Lynch data.

Note: The Bank of America-Merrill Lynch bond indices include bonds with a maturity of 1 year or more.

Ex-Im and officials from industry trade associations and foreign ECAs noted the significance of Ex-Im's direct loan product to Ex-Im's recent growth. For example, in its 2011 report to Congress on export credit competition, Ex-Im noted the competitive advantage that direct loans—a product not offered by some other ECAs—gave Ex-Im and other ECAs with similar products. As previously shown in figure 2, long-term direct loan authorizations grew from \$356 million in 2008 to almost \$12 billion in 2012. Representatives from industry trade associations noted that Ex-Im's ability to offer direct loans helped Ex-Im to fill the gap in private-sector lending following the financial crisis and implementation of more stringent banking regulations. Other ECAs also pointed to direct lending as contributing to their ability to fill financing gaps following the recent financial crisis. Of the four foreign ECAs we interviewed, two (Canada and Japan) had existing direct lending capability prior to the 2007-2009 financial crisis. Both agreed that their capability to make direct loans was an important factor in their ability to fill trade financing gaps.

Ex-Im officials and representatives from industry trade associations and research groups identified other possible drivers of Ex-Im's business that may have contributed to the recent growth trend. These include increased demand for U.S. goods and services from emerging markets, increased production by significant Ex-Im customers, Ex-Im's outreach efforts to small businesses and key export markets, and Ex-Im's response to growing competition from foreign ECAs. First, Ex-Im has suggested that demand for U.S. exports, particularly from industrializing emerging markets (such as in Asia), adds to demand for Ex-Im services. For example, as shown previously in figure 3, Ex-Im authorizations in Asia grew more than 275 percent from 2008 through 2012. While Ex-Im activity in some emerging markets did grow in recent years, we did not find evidence of a positive correlation between Ex-Im activity and U.S. exports. For example, Ex-Im's highest growth came in 2009, when total U.S. exports and U.S. exports to emerging markets were falling.

Second, Ex-Im officials also said that increased production by Boeing, Ex-Im's primary aircraft exporter, contributed to authorization growth. Officials emphasized that while Ex-Im's significant activity in the airline sector has contributed to Ex-Im's recent growth, they did not expect growth in the aircraft sector to continue at the same high rate, because the commercial market for aircraft finance is beginning to recover and implementation of a 2011 international agreement among OECD ECAs may result in ECA financing being less competitive than commercial financing.¹⁹ Nonetheless, for 2012, aircraft represented 33 percent of new authorizations—the single largest industry Ex-Im supports.

Third, according to Ex-Im officials, Ex-Im's efforts to offer small business products and increase awareness of available export financing assistance also may have been a factor in its recent growth. Ex-Im recently launched several new small business products and opened four new regional Export Finance Centers throughout the United States to support small business exporters.²⁰ These efforts stem from Ex-Im's mandate to make

¹⁹The 2011 aircraft sector agreement is an annex of the OECD Arrangement on Officially Supported Export Credits. It provides a framework for the predictable, consistent, and transparent use of officially supported export credits for the sale or lease of aircraft and other related goods and services, setting out the most favorable terms and conditions on which officially supported export credits may be provided by participants in the agreement.

²⁰In 2012, Ex-Im opened regional Export Finance Centers in Atlanta, Georgia; Minneapolis, Minnesota; and Seattle, Washington. Ex-Im opened an additional center in Detroit, Michigan, in January 2013.

available at least 20 percent of annual authorizations to small businesses. Ex-Im officials explained that outreach efforts are important because meeting the 20 percent small business requirement has been increasingly difficult as Ex-Im's overall portfolio has grown. In addition to its small business outreach, Ex-Im has been identifying private-sector and public-sector buyers, financial institutions, and key governmental agencies for each of nine foreign "key markets" where it expects U.S. export growth to be strongest in the near future.²¹ In its 2010-2015 strategic plan, Ex-Im cites these country outreach efforts as a way to focus limited Ex-Im resources in areas with high potential for furthering the agency's mission of supporting exports and the jobs they provide. Ex-Im selected the key markets based on a number of factors, including the size of the export market for U.S. companies, projected economic growth, anticipated infrastructure demand, and the need for Ex-Im financing. According to Ex-Im officials, some of these efforts already have produced new transactions in markets such as Brazil.

Lastly, according to Ex-Im and representatives from industry trade associations and research groups, Ex-Im's activity may continue to grow in response to increased competition from other ECAs, particularly those in non-OECD countries, but none of the other ECAs we spoke with suggested that this was a significant factor. Ex-Im's 2012 Annual Report emphasizes the importance of its role in ensuring that U.S. exporters have a fair opportunity to compete with foreign exporters. While the OECD Arrangement governs various aspects of U.S. and other member ECAs' activities, non-OECD ECAs sometimes offer financing terms more favorable than the terms permitted under the OECD Arrangement. Ex-Im can respond to foreign competition in export financing by notifying OECD that it is meeting terms offered by other ECAs in order to preserve U.S. exporters' competitiveness. But, because these ECAs are not beholden to the transparency requirements of the OECD Arrangement, it can be difficult to confirm the terms and conditions of non-OECD ECA export financing transactions. Some representatives from industry trade associations and research groups we interviewed agreed that Ex-Im's response to competition from non-OECD ECAs, particularly China, may have been, and likely would continue to be, a significant factor in increased Ex-Im activity. Others, such as officials from the Berne Union (a

²¹Ex-Im has identified Brazil, Colombia, India, Indonesia, Mexico, Nigeria, South Africa, Turkey, and Vietnam as "key markets."

worldwide association for export credit and investment insurers) noted that while competition based on financing terms might be a significant determinant for a small number of international trade transactions, importers primarily base purchase decisions on the equipment or services that best meet their needs. None of the officials from the four foreign ECAs we interviewed suggested that increased competition was a significant factor in their own or Ex-Im's activity growth.

Ex-Im Uses Modeling to Estimate Subsidy Costs and Reserves, and Accounts for Multiple Risks in These Processes and in Setting Fees

Ex-Im uses a loss estimation model to estimate credit subsidy costs and loss reserves and allowances. This model accounts for various risks and underwent a major update in 2012, but opportunities exist for additional improvements. Ex-Im's product fees account for credit and political risk and are guided by international agreements and internal analyses.

Ex-Im Overhauled its Loss Model in 2012

Ex-Im uses a loss estimation model to build the agency's credit subsidy estimates in the President's budget as well as for calculating loss reserves and allowances reported in Ex-Im's annual financial statements. The model includes quantitative and qualitative factors to account for various risks facing the agency. In 2012, Ex-Im made several adjustments to the model to better account for uncertainty associated with a growing portfolio and changing economic conditions. However, opportunities exist for additional improvements.

Loss Estimation Model

The model considers historical data, as well as qualitative information, to estimate loss rates on Ex-Im's transactions—that is, the percentage loss that Ex-Im can expect for each dollar of export financing. Mathematically, the loss rate is the probability of default times the loss given default.²² Ex-Im's current model uses historical information on loan guarantee and

²²The probability of default is the probability that an obligor will default on its payment obligations as contractually stipulated in a financing document during a specified period. The loss given default is the credit loss incurred if an obligor defaults on its payment obligations. The loss amount is net of recoveries.

insurance transactions authorized from 1994 through 2011.²³ This information includes the default and loss history of those transactions as well as variables that are predictive of defaults and losses, including transaction amount and length, obligor type, product type, and “risk rating”—a numerical risk score that Ex-Im assigns to each transaction. The model calculates a loss rate for each Ex-Im risk rating and product type.

As previously noted, risk ratings are a key variable in the loss model. Ex-Im underwriters assign the ratings, which are based on assessments of credit, political, and market risks.²⁴ Ex-Im’s risk ratings range from 1 (least risky) to 11 (most risky). These risk ratings are determined partly through the Interagency Country Risk Assessment System (ICRAS), a working group that includes Ex-Im and other federal agencies involved in providing international credit.²⁵ According to Ex-Im, for each country, ICRAS ratings are based on entities’ (1) ability to make payments as indicated by relevant economic factors, and (2) willingness to pay as indicated by payment record and political and social factors. There are two types of ICRAS ratings—one for foreign government (sovereign) borrowers and one for private-sector entities in foreign countries. For transactions with foreign governments, Ex-Im officials apply the ICRAS sovereign-risk rating. For transactions with private-sector entities, Ex-Im officials assign risk ratings based on the ICRAS private-sector rating and potentially other information such as obligor financial statements and ratings of the obligors by credit rating agencies.²⁶

²³Because Ex-Im does not have a large history of direct loans, Ex-Im uses the equivalent loan guarantee loss rate for each direct loan it authorizes. According to Ex-Im, this is appropriate because the nature of the direct loan and loan guarantee transactions are the same and they undergo the same underwriting process.

²⁴Ex-Im does not assign risk ratings to short-term insurance in multibuyer transactions or to working capital transactions. All long- and medium-term transactions and short-term insurance in single-buyer transactions are assigned risk ratings.

²⁵ICRAS was established in 1991 to create uniformity in risk assessment among the federal agencies involved in providing international credit. The ICRAS working group is chaired by OMB and includes representatives of the federal credit agencies with international credit programs, as well as the Department of State, the Department of the Treasury, the Federal Deposit Insurance Corporation, and the Board of Governors of the Federal Reserve System.

²⁶Additional information on how Ex-Im develops risk ratings is discussed later in this report.

The loss rates produced by the model are used to estimate future cash flows, which, in turn, are used to determine credit subsidy costs contained in the President's budget and to calculate loss reserves and allowances reported in Ex-Im's annual financial statements. To estimate the subsidy costs of future transactions as part of the annual budget process, Ex-Im uses the loss rates to help determine cash inflows (such as repayments, fees, and recoveries) and outflows (such as claims) for the book of business it expects in the upcoming year. Because the cash inflows and outflows occur in the future, they must be discounted to determine their net present values. To do this, OMB guidance requires Ex-Im to enter cash flows into OMB's credit subsidy calculator, which generates the original credit subsidy cost estimate for that book of business.²⁷ In accordance with FCRA, the discount rates in the OMB credit subsidy calculator are based on interest rates for U.S. Treasury securities.²⁸

Ex-Im also uses the estimated future cash flows to calculate loss reserves or allowances—financial reporting accounts for estimated losses—for each transaction at authorization. The total loss reserves and allowances are reported in Ex-Im's annual financial statements. Each year, Ex-Im adjusts the loss reserve or allowance amount for each transaction using updated estimates of future cash flows, which consider the impact of actual credit performance and estimated changes in future credit performance.

²⁷As required by FCRA, Ex-Im annually reestimates credit subsidy costs for prior books of business using loss rates updated to reflect actual credit performance and estimated changes in future credit performance. The credit subsidy calculator is the discounting tool issued by OMB for agencies to calculate credit subsidy costs.

²⁸OMB, Circular No. A-11, Part 5, *Federal Credit* (2011). The Congressional Budget Office (CBO) has proposed an alternative discounting method for federal credit programs to account for the market risk or uncertainty associated with federal credit transactions. Under the approach proposed by CBO, cash flows would be discounted using market-based discount rates rather than discount rates based on Treasury securities, and would generally result in higher estimated credit subsidy costs for direct loan and loan guarantee programs. However, CBO and OMB have raised issues that would need to be carefully considered as part of any decision to adopt this approach. For example, both OMB and CBO have noted that federal agencies likely would face several administrative challenges in implementing the alternative method, including needing to train staff or hire staff with the right technical skill sets, and improving financial accounting systems and modeling capabilities. OMB also has raised conceptual issues about the suitability of this method for federal credit transactions. See CBO, *Fair-Value Accounting for Federal Credit Programs* (Washington, D.C.: March 2012) and *Fair-Value Estimates of the Cost of Federal Credit Programs in 2013* (Washington, D.C.: June 2012), and OMB, *Analytical Perspectives: Fiscal Year 2013 Budget of the U.S. Government* (Washington, D.C.: 2012), 393-399.

Recent Enhancements to the Model

In addition to the risks discussed previously, the loss model also accounts for the foreign-currency risk Ex-Im faces from its transactions denominated in a foreign currency. In 2012, Ex-Im authorized about \$1.7 billion in guarantees denominated in a foreign currency, or about 5 percent of its total authorizations for that year. According to an Ex-Im official, the loss model uses a methodology that captures the cost of buying a foreign currency at a particular time in the future.²⁹ Therefore, Ex-Im factors this cost into the credit subsidy cost and the related loss reserve or allowance at the time it authorizes a transaction denominated in a foreign currency and updates it during the reestimate process. In addition, an Ex-Im official told us that Ex-Im adjusts its loss reserves monthly to reflect changes in currency exchange rates.

Ex-Im adjusts the loss estimation model annually to enhance the reliability of loss rates used to estimate subsidy costs and calculate loss reserves and allowances. In 2012, Ex-Im made several adjustments to both implement recommendations from external auditors and the Ex-Im IG and to make the model more flexible for the various types of transactions in its portfolio. Among other things, Ex-Im changed how it used its historical dataset and added several qualitative factors.

Due to data limitations, Ex-Im's model does not control for the age of transactions in estimating the probability of default, potentially reducing the precision of the estimates.³⁰ Ex-Im changed how it used the dataset underlying the loss model, which helped to mitigate this limitation. Specifically, to help avoid underestimating the probability of default, Ex-Im removed transactions authorized in 2012 from the dataset because these transactions generally did not have enough time to default. Ex-Im also excluded any long-term transactions that were within 3 years of the obligor's first payment. In addition, Ex-Im removed all transactions that had not been disbursed as of June 30, 2012, because some transactions are never disbursed and therefore never have the opportunity to default. According to Ex-Im, these changes were made so the dataset more accurately reflected the nature of its defaults. An Ex-Im report on the

²⁹Ex-Im officials told us the methodology is a variant of a commonly used option pricing model.

³⁰As discussed later in this report, Ex-Im does not maintain historical, point-in-time data on the performance (e.g., default status) of its transactions. As a result, the model is not able to use historical default data to control for when a transaction might default based on its age.

2012 changes to the loss model stated that these adjustments increased the percentage of defaulted transactions in the dataset—from 14 percent to 19 percent for loan guarantee transactions and from 11 percent to 14 percent for insurance transactions. From a dollar perspective, the adjustments increased the loss rate for transactions in the dataset from 0.9 percent to 1.2 percent for loan guarantees and from 6.2 percent to 6.9 percent for insurance transactions.

Consistent with audit recommendations and industry best practices, Ex-Im also incorporated five qualitative factors into the loss model in 2012 to adjust for circumstances that may cause estimated losses to differ from historical experience. Ex-Im added these factors in recognition of the substantial growth in Ex-Im's portfolio in recent years and of the potential differences between its historical loss experience—on which the quantitative part of the model is based—and future loss experience. According to Ex-Im, the five qualitative factors enhance the reliability of the model by better accounting for uncertainty in loss expectations. Four of the five qualitative factors Ex-Im added to the model in 2012 increased the estimated loss rate, and therefore increased the related loss reserve and allowance amounts for some transactions.

The five qualitative factors are as follows:

- *Minimum loss rate.* Ex-Im established minimum loss rates for products that historically had very low losses and therefore would have very low estimated loss rates based solely on historical data. According to Ex-Im, they added this factor to recognize that although some segments of the data may have low (or zero) historical loss rates Ex-Im should not forecast no losses in the future. The minimum loss rates affected sovereign and other public-sector transactions of long terms with good risk ratings and some short-term insurance transactions with good risk ratings. Ex-Im's 2012 report on the loss model stated that the addition of this qualitative factor increased loss reserves and allowances by 2 percent.
- *Global economic risk.* This factor attempts to account for some market risks associated with changes in international economic and business conditions that may affect Ex-Im's portfolio and make future losses differ from historical losses. First, Ex-Im uses a 1-year forecast from Moody's of default rates on speculative-grade corporate bonds to

predict an Ex-Im default rate.³¹ Ex-Im then compares this rate with Ex-Im's historical default experience. If the estimated default rate is greater than Ex-Im's historical experience, Ex-Im increases its loss estimate in proportion to the difference between the estimated default rate and its historical experience. For 2012, this factor did not result in an adjustment to Ex-Im's loss model.

- *Portfolio concentration risk, including the three factors of region concentration, industry concentration, and obligor concentration in the aircraft portfolio.* Ex-Im added these three qualitative factors to adjust loss rates to account for uncertainties associated with growing concentrations in its portfolio.³² Conceptually, the region and industry concentration factors treat each growing region and industry as if it were an entity that was issuing debt—making the entity more risky and potentially lowering its credit rating. Ex-Im used certain credit rating agency methodologies to develop synthetic ratings for each “entity” and used these ratings to adjust loss rates for transactions in the corresponding regions or industries. Ex-Im's 2012 report on the loss model stated that the addition of the region concentration factor and the industry concentration factor increased loss reserves and allowances by 7 percent and 13 percent, respectively. Ex-Im also developed a concentration factor for obligors in the aircraft sector, which accounted for 46 percent of Ex-Im's exposure at the end of 2012. For example, this factor increases the loss rate for an aircraft transaction if the estimated loss given default (based only on the market value of the aircraft and the transaction amount) is larger than the loss given default predicted by the model (which incorporates other factors). Ex-Im indicated that the addition of the obligor concentration factor increased loss reserves and allowances by 0.8 percent.

³¹Specifically, Ex-Im created a regression model using Moody's Analytics historical default rates on speculative-grade corporate bonds from 1994 through 2011 and Ex-Im's historical claim count rates (a measure of defaults) to determine how Moody's Analytics default rate might translate into an Ex-Im default rate.

³²In cases in which concentration is high but not growing, Ex-Im would not make an adjustment using the region and industry concentration qualitative factors.

Opportunities Exist for Improvements to the Loss Estimation Model

Notwithstanding recent enhancements to the loss estimation model, opportunities exist for additional improvements to the model, as well as Ex-Im's model development and validation processes. Ex-Im's independent financial statement auditor and Ex-Im's IG have made recent recommendations designed to improve Ex-Im's loss modeling process. In conjunction with its audit of Ex-Im's 2012 financial statements, Ex-Im's independent financial statement auditor reviewed the loss model and found it to be reasonable overall. However, the auditor recommended additional improvements to Ex-Im's loss modeling process, including (1) considering enhancements to the adjustment for global economic risk by using economic data or related indicators that would better predict the overall impact to the portfolio; (2) conducting analysis to determine events that trigger defaults; (3) identifying and monitoring industry-specific drivers of risk; and (4) having an independent department or service provider test the accuracy of the model. Ex-Im officials stated they would take these recommendations into consideration as they update the model for the next fiscal year. Additionally, in its September 2012 report, the Ex-Im IG recommended that Ex-Im design and implement a formal governance framework that defines roles and responsibilities for financial models and includes policies and procedures for validating models. Ex-Im agreed with the recommendation and noted that it has begun developing a formal governance framework for financial models. Also, Ex-Im said that it will conduct external validations of future financial models.

As previously discussed, Ex-Im incorporated a qualitative factor into the model to adjust the loss estimates to account for uncertainty related to potential changes in global economic conditions. The factor uses a 1-year forecast of bond defaults to make this adjustment. According to Ex-Im, the bond default rates originally forecasted each year correlated with Ex-Im's observed default rates between 1994 and 2011. In addition, Ex-Im officials said the 1-year forecast was appropriate because Ex-Im will use subsequent 1-year forecasts in annual updates to the loss model. However, a 1-year forecast may not capture the uncertainty associated with Ex-Im's longer-term transactions, and the use of subsequent short-term forecasts does not address this limitation. FASAB guidance for federal credit agencies states that agencies should develop cash flow projections for their transactions based upon the best available data.³³

³³Federal Accounting Standards Advisory Board, *Federal Financial Accounting and Auditing Technical Release 6: Preparing Estimates for Direct Loan and Loan Guarantee Subsidies under the Federal Credit Reform Act* (January 2004).

One-year forecasts may not represent the best available data for transactions that span multiple years. As a result, Ex-Im may not be making the appropriate adjustment to the estimated future losses, which could lead to underestimation of loss rates, credit subsidy cost estimates, and the related loss reserves and allowances for financial reporting purposes.

Ex-Im's Fees Are Guided by International Agreements and Internal Analyses

Ex-Im's fees for medium- and long-term products account for the credit and political risk associated with each transaction and are guided in large part by the OECD Arrangement, which establishes guidelines for determining "minimum premiums"—fees to cover the risk of not being repaid—and minimum interest rates that participant ECAs charge.³⁴ Ex-Im officials told us that the "exposure fee" they charge is generally the minimum premium required by the OECD Arrangement, but that the OECD Arrangement allows them to increase this fee if they deem that the minimum premium does not cover the risk of a transaction. Ex-Im also charges the minimum interest rate required by OECD, but can charge above that rate.

Ex-Im's pricing structure for medium- and long-term products (about 85 percent of Ex-Im's exposure) includes the following:

- *Exposure fees.* These fees cover the credit and political risks associated with a direct loan, loan guarantee, or insurance transaction. Ex-Im generally sets these fees at the level of the OECD minimum premium.
- *Commitment fees.* These fees are a flat percentage per year of the undisbursed portion of a direct loan or loan guarantee that Ex-Im charges to encourage the obligor's use of the credit. These fees are not meant to cover the risk of nonrepayment and are not guided by the OECD Arrangement.

³⁴The first OECD agreement on risk-based premium rates, in 1997, established a set of minimum premium rates to reflect country credit risk. A new agreement, effective as of September 2011, expanded on this earlier agreement by including buyer credit (commercial) risk, as well as country-based risk.

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- *Interest rates on direct loans.*³⁵ The OECD Arrangement specifies a minimum interest charge of 1 percentage point above the U.S. Treasury rate for a security of comparable length.

To determine the OECD minimum premium for a direct loan, loan guarantee, or insurance transaction, Ex-Im must take several aspects of the transaction into account, including the following:

- *Obligor's country.* OECD established a system for classifying the risk associated with transactions in different countries. OECD classifies the countries using a scale from 0 (least risky) to 7 (most risky), and Ex-Im applies the relevant country classification for each transaction.³⁶ These classifications take into account risks associated with a country's financial, economic, and political situation, as well as the historical payment experience of ECAs that are members of OECD and that have provided credit in the country.
- *Obligor's credit risk.* OECD established a framework for classifying obligors based on credit risk and provides guidelines to assist participant ECAs in doing so. Using the guidelines, Ex-Im places each obligor into one of eight classifications, which range from better-than-sovereign credit quality (least risky) to weak credit quality (most risky). Ex-Im uses the obligor's recent financial information and other information, such as the obligor's industry position and ratings by credit rating agencies, to assign a credit risk classification.
- *Other characteristics affecting the risk of nonrepayment.* In determining minimum premiums, Ex-Im also must take into account the type of export financing product, the length of the transaction, and the percentage of the overall credit amount for which Ex-Im is responsible in the event of nonpayment. Additionally, the application of risk-mitigation techniques, such as obligor credit enhancements, reduces the minimum premium.

For specific types of medium- and long-term transactions, different procedures apply. For example, for obligors in high-income OECD countries, high-income euro area countries, or countries with an OECD

³⁵The interest rates for loans for which Ex-Im provides a guarantee are determined by the lender and are not subject to OECD requirements.

³⁶These classifications are separate from the ICRAS ratings discussed previously.

country risk classification of 0, the OECD Arrangement requires ECAs to set fees based on available market information and the characteristics of the underlying transaction.³⁷ This is achieved by using prices of certain comparable private-sector products, or “market benchmarks,” to help set fees. The OECD Arrangement specifies seven products that participant ECAs may use for this purpose, including certain corporate bonds and certain credit default swaps.³⁸ According to OECD, the level of country risk is considered negligible for these countries, and the credit risk associated with transactions in these countries is predominantly related to the credit risk of the obligor. In addition, Ex-Im sets fees for its aircraft transactions according to a separate OECD agreement, updated in 2011, specifically for the aircraft sector.³⁹ This agreement provides guidance on the commitment fees to be charged in aircraft transactions. According to Ex-Im, when the updated agreement is fully implemented in 2013, Ex-Im’s fees for these transactions will rise substantially.

The fee structures for Ex-Im’s short-term products are not covered by the OECD Arrangement or any other international agreements and differ by export financing product, as follows:

- *Working capital.* Ex-Im generally charges a fee of 1.75 percent of the direct loan or loan guarantee amount. Ex-Im does not factor political risk into its fees for this product because the obligors are U.S. exporters. Ex-Im also generally does not differentiate between the credit risk of different obligors.
- *Short-term insurance.* Ex-Im’s fees include a premium that is based on the length of the credit, the type of entity purchasing the export (i.e., a foreign government, financial institution, or nonfinancial institution), and the OECD country risk classification for the country of

³⁷The OECD Arrangement identifies high-income countries as those countries that the World Bank has defined as high-income based on per capita Gross National Income.

³⁸Credit default swaps are bilateral contracts, sold over-the-counter, that transfer credit risks from one party to another. A seller, which is offering credit protection, agrees, in return for a periodic fee, to compensate the buyer if a specified credit event, such as default, occurs.

³⁹Sector agreements have been reached for sectors including nuclear power plants, renewable energies and water projects, and ships. Some of these agreements have different rules for minimum interest and premium rates and maximum repayment terms than those that apply to standard transactions through the OECD Arrangement.

the obligor. Some short-term insurance programs also factor into the premium amount the credit risk of the obligor.

In 2011, Ex-Im conducted internal analyses to help ensure that the fees it charges are sufficient to cover losses. For instance, Ex-Im officials told us that in 2011 they determined that the credit subsidy rate for the working capital program was positive by 9 basis points (0.09 percent), indicating that fee levels for this program were not sufficient to cover losses. As a result, in 2012 Ex-Im raised fees for the working capital program from 1.5 percent to 1.75 percent (or 25 basis points) of the direct loan or loan guarantee amount to avoid the need for an appropriation to cover the credit subsidy costs. Similarly, Ex-Im officials said the 2011 analysis showed that one of Ex-Im's short-term insurance products had a positive subsidy cost. In response, Ex-Im implemented a more risk-based fee structure to increase fees and make the product credit subsidy cost-neutral. Ex-Im officials said that they will conduct similar product analyses on an annual basis. Whether recent fee changes will avoid the need for a future credit subsidy will depend on the extent to which future losses are consistent with Ex-Im's historical experience.

Ex-Im Reported a Default Rate under 1 Percent and Generated Receipts, but the Long-Term Budgetary Impact Is Uncertain

Ex-Im calculates and reports default rates for its portfolio, but it has not maintained data useful for assessing the performance of newer books of business. Ex-Im has been self-sustaining for appropriations purposes since 2008, but its long-term budgetary impacts are uncertain.

Ex-Im Has Not Maintained Data Useful for Assessing the Performance of Recent Business

As of December 31, 2012, Ex-Im reported a default rate for its active portfolio of 0.34 percent. Ex-Im defines the active portfolio as those transactions for which the maturity date has not been reached or that have reached maturity but are still within the time frame during which a claim can be submitted.⁴⁰ Ex-Im calculates the default rate as the sum of net claims paid on loan guarantees and insurance transactions and unpaid past due installments on direct loans divided by disbursements.⁴¹ Ex-Im's default rate declined steadily from about 1.6 percent as of September 30, 2006, to just under 0.3 percent as of September 30, 2012, before edging up slightly by the end of the calendar year. However, this downward trend should be viewed with caution because Ex-Im's portfolio contains a large volume of recent transactions that have not reached their peak default periods. Recent transactions have had limited time to default and may not default until they are more seasoned. For example, according to Ex-Im, the peak default period for long-term loan guarantees—which represent almost 57 percent of Ex-Im's 2012 exposure—is about 3.9 years after authorization. As of the end of 2012, about 53 percent of Ex-Im's active long-term guarantees (in dollar terms) had been authorized within the last 4 years. Therefore, the ultimate impact of Ex-Im's recent business on default rates is not yet known.

As of December 31, 2012, Ex-Im's reported default rate varied by product type, region, and industry. For example, default rates were 0.14 percent for short-term products (working capital loan guarantees and insurance), 7.50 percent for medium-term products (direct loans, loan guarantees, and insurance), and 0.20 percent for long-term products (direct loans and

⁴⁰To determine the transactions in the active portfolio, Ex-Im adds 120 days to the maturity date for working capital loan guarantee and loan transactions, 240 days for short-term insurance transactions, and 150 days for all other types of loan guarantee and insurance transactions to account for the period during which a claim can be submitted for different types of products.

⁴¹Ex-Im developed this calculation of the default rate in response to a provision in the Export-Import Bank Reauthorization Act of 2012, which requires Ex-Im to report default rates to Congress quarterly. (Pub. L. No. 122-122, § 6, 126 Stat. 350, 353 (2012)). For certain short-term products, the total amount disbursed can exceed the recorded authorization amount because the products provide revolving credit. For these products, Ex-Im used the disbursed amount to calculate default rates whether or not disbursements exceeded the authorization amount. According to Ex-Im, limiting the disbursed amount to the authorization amount in the calculation would have increased Ex-Im's overall default rate as of December 31, 2012, by less than one one-hundredth of a percentage point. An Ex-Im official said that the agency's future default rate calculations would use the authorization amount in cases where the disbursed amount was higher.

loan guarantees). Among all products, the default rate ranged from a low of 0.07 percent for working capital loan guarantees to a high of 8.74 percent for medium-term insurance.⁴² Across regions, default rates ranged from 0.002 percent in Oceania to 0.58 percent in Asia. Across Ex-Im's largest industry sectors, default rates ranged from 0 percent in oil and gas to 0.71 percent in manufacturing.⁴³

A technique called vintage analysis is useful for examining the performance of growing portfolios, but Ex-Im has not maintained the data necessary to conduct such analysis. Vintage analysis separates and compares the performance of seasoned cohorts and newer cohorts at comparable points in time (for example, a certain number of years after authorization). This technique can help evaluate the credit quality of recent business by comparing the early performance of these cohorts with the early performance of older cohorts. As such, it can provide early warning of potential performance problems in newer business. Federal banking regulator guidance suggests that banks conduct vintage analysis to help manage growing portfolios. For example, the Federal Deposit Insurance Corporation's Risk Management Manual of Examination Policies states that loan review and monitoring analysis should consider the effects of portfolio growth and seasoning and that vintage analysis can be used to do this. In addition, interagency guidance from federal banking regulators states that reporting from management information systems should include vintage analysis and that such analysis helps management understand historical performance trends and their implications for future default rates.⁴⁴ Although Ex-Im information systems produce quarterly performance snapshots of individual cohorts, the systems overwrite the snapshots with each quarterly update, according to Ex-Im officials. Because Ex-Im has not retained historical cohort-level performance data, it is unable to compare the performance of different cohorts at comparable points in time. Ex-Im officials said that they use

⁴²As of the end of 2012, the dollar amount of medium-term insurance transactions represented less than 1 percent of the dollar amount of Ex-Im's active authorizations.

⁴³Ex-Im's four largest industries represent 89 percent of its active portfolio. They are aircraft, manufacturing, oil and gas, and utilities-power projects.

⁴⁴Office of the Comptroller of the Currency, Federal Deposit Insurance Corporation, Board of Governors of the Federal Reserve System, and Office of Thrift Supervision, *Interagency Guidance on Asset Securitization Activities* (Washington, D.C.: December 1999). While Ex-Im is not bound by this guidance, it faces similar challenges to regulated private financial institutions in managing risks.

several tools to provide early warning of performance problems, including monitoring individual transactions of more than \$1 million, maintaining an Obligors of Concern List, and analyzing monthly and annual trends in claims.⁴⁵ However, by not maintaining the information necessary to conduct vintage analysis, Ex-Im's ability to understand the early performance of recent cohorts and implications of this performance on future default rates may be limited. Additionally, as previously noted, the lack of point-in-time performance data may reduce the precision of Ex-Im's loss estimation model.

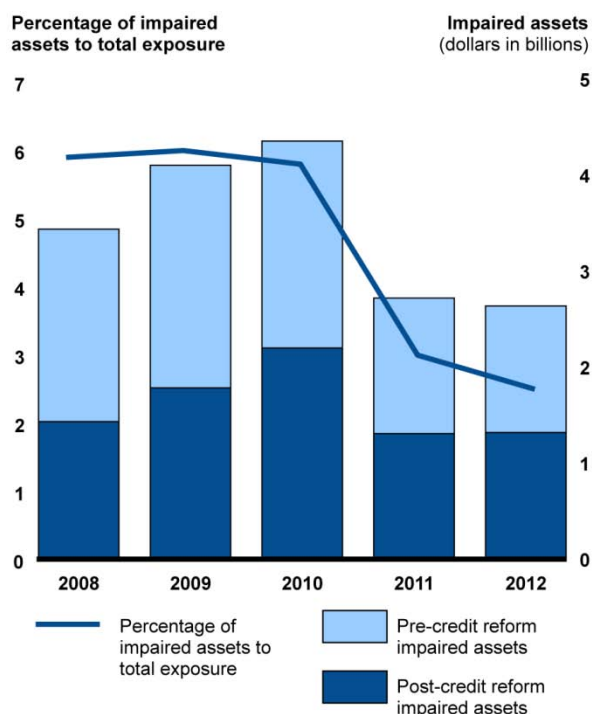
Another measure of portfolio performance is the proportion of credit-impaired (impaired) assets to Ex-Im's total exposure. Ex-Im defines impaired assets as delinquent direct loans, loan guarantees, and claims with an amount of \$50,000 or more past due at least 90 days; rescheduled direct loans, loan guarantees, and claims; or nondelinquent direct loans, loan guarantees, and claims above a certain risk rating.⁴⁶ A substantial portion of Ex-Im's impaired assets are from transactions that preceded the implementation of credit reform in 1992.⁴⁷ For example, from 2008 through 2012, pre-credit reform transactions accounted for about 50 to 60 percent of impaired assets each year. As a percentage of total exposure, Ex-Im's impaired assets generally declined over that period (see fig. 7). In 2008, Ex-Im had about \$3.4 billion in impaired assets, which represented approximately 6 percent of total exposure at that time. In 2010, the corresponding figures were about \$4.4 billion and 5.8 percent. In 2012, impaired assets were approximately \$2.6 billion, or about 2.5 percent of Ex-Im's total exposure for that year. Again, the trend in this performance measure should be interpreted cautiously, because Ex-Im's portfolio was growing during this period, which resulted in more of its portfolio being of recent vintage.

⁴⁵Ex-Im's Obligors of Concern List includes credits rated as impaired due to political, commercial, operational, or technical events or acts of god.

⁴⁶Ex-Im does not pay claims on all impaired assets because some are restructured prior to default. In addition to the examples cited, impaired assets also consist of credits qualifying for debt forgiveness and rescheduling from the Paris Club or under the Heavily Indebted Poor Countries initiative. A rescheduled claim occurs when Ex-Im has paid a claim on a transaction with an underlying sovereign loan guarantee, but a claims receivable exists that has not been written off.

⁴⁷According to Ex-Im officials, pre-credit reform impaired assets include loans to former sovereign entities that Ex-Im does not have the authority to write off.

Figure 7: Impaired Assets as a Percentage of Total Exposure, Fiscal Years 2008-2012



Source: GAO analysis of Ex-Im data.

Ex-Im's Long-term Budgetary Impacts Are Uncertain

Ex-Im has been self-sustaining since 2008. Each year, Ex-Im is appropriated a specified amount of funds for administrative costs and credit subsidy costs.⁴⁸ However, since 2008, appropriation acts have required Ex-Im to repay appropriated funds dollar-for-dollar with offsetting collections so that the result is a net-zero appropriation. Ex-Im's offsetting collections are generated by transactions that are initially estimated to result in negative credit subsidies when fees collected from obligors are estimated to be greater than estimated losses (net of recoveries). For example, for 2012, Ex-Im was appropriated about \$90 million for

⁴⁸Although Ex-Im's overall portfolio historically has had a negative subsidy rate, Ex-Im receives annual appropriations for transactions anticipated to have positive subsidy costs. Ex-Im appropriation acts for 2000 through 2012 require subsidy appropriations to be obligated within 3 years of appropriation and administrative appropriations to be obligated within 1 year of appropriation.

administrative costs and \$58 million for credit subsidy costs and also authorized to retain up to \$50 million in offsetting collections.⁴⁹ That year, Ex-Im generated about \$1 billion in collections. With these funds, Ex-Im reimbursed Treasury for the appropriation of administrative costs. In addition, Ex-Im retained \$108 million—the \$58 million for credit subsidy costs plus the \$50 million in retained offsetting collections—for obligations occurring within the next 3 years. Unlike the administrative costs appropriation, which Ex-Im must repay in the same year as received, Ex-Im has 3 years to repay the credit subsidy appropriation and obligate the \$50 million it retained in offsetting collections. The remaining collections, roughly \$800 million, were sent to Treasury.

According to Ex-Im, since the implementation of FCRA, it has sent about \$5.8 billion more to Treasury than it has received in appropriations.⁵⁰ From 1992 through 2012, Ex-Im was appropriated about \$9.8 billion for credit subsidy costs and administrative costs. Over the same period, Ex-Im sent about \$15.6 billion to Treasury as a result of credit subsidy reestimates (\$12 billion), cancelled authority (\$1.6 billion), returned collections (\$1.3 billion), and rescissions (\$675 million).⁵¹ About \$1.7 billion of the \$5.8 billion net return to Treasury occurred from 2008 through 2012.

Ex-Im annually reestimates credit subsidy costs for its direct loan (medium- and long-term loans) and loan guarantee (medium- and long-term loan guarantees, short- and medium-term insurance, and working capital) programs.⁵² As shown in figure 8, since the implementation of FCRA, the annual subsidy reestimates for the direct loan and loan guarantee programs generally were downward (that is, more favorable than previously estimated). According to Ex-Im officials, the substantial

⁴⁹Pub. L. No. 112-74, 125 Stat. 1190 (2011).

⁵⁰We determined that Ex-Im's figures for appropriations received and amounts sent to Treasury were reasonable based on our analysis of Ex-Im appropriations acts, budget appendixes, and financial statements from 1992 through 2012.

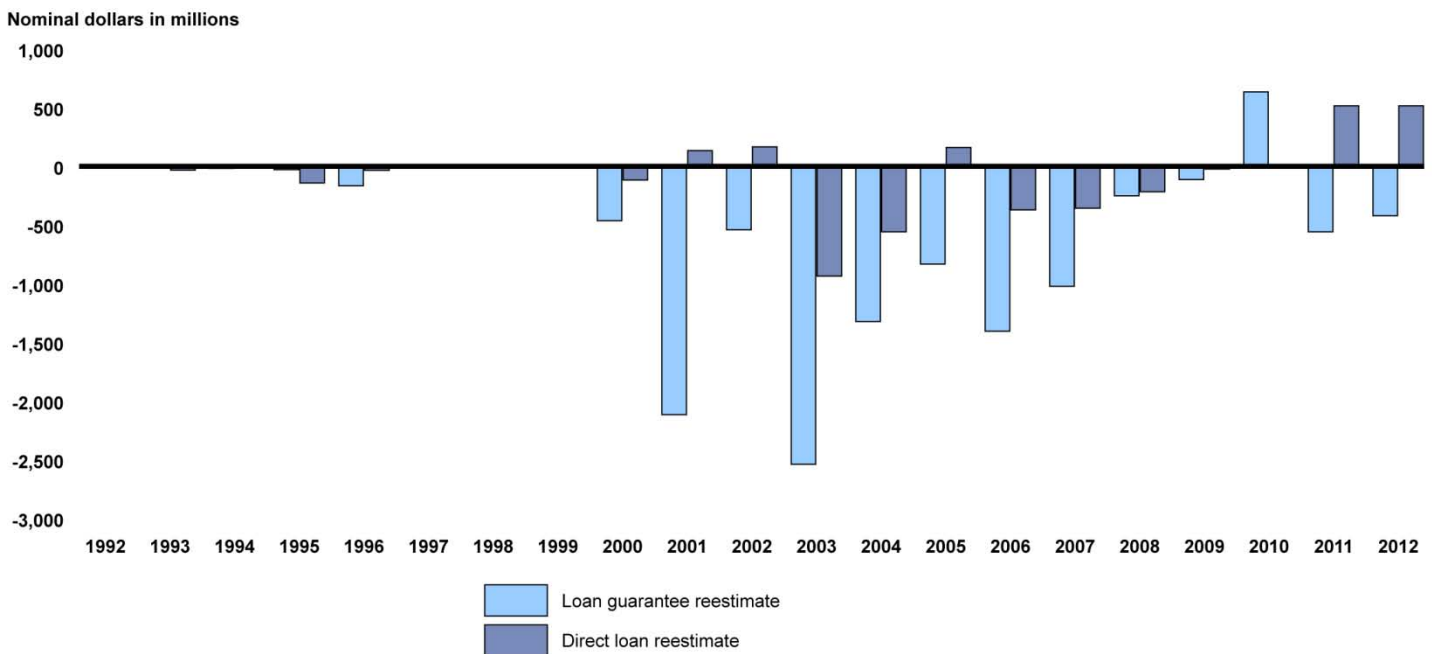
⁵¹The \$12 billion in credit subsidy reestimates is the net of upward and downward reestimates. A rescission is a cancellation of budget authority previously enacted by Congress. Rescissions may be made across all government programs or may be directed towards a single agency or program. The rescission amount listed here represents rescissions directed to Ex-Im.

⁵²Ex-Im includes insurance products in the loan guarantee category for purposes of reporting credit subsidy estimates.

downward reestimates in the early- to mid-2000s were due primarily to a switch from standard loss rates prescribed by OMB to loss rates that reflected Ex-Im's historical experience, which tended to be lower. Ex-Im officials attributed the upward reestimates in 2010 to changes they made that year in their loss estimation model to account for increased loss experience in 2009 and uncertainty stemming from the global financial crisis. Ex-Im officials said that the upward reestimates for 2011 and 2012 for direct loans stemmed from declines in obligor interest rates, which reduce estimated cash flows.⁵³ In addition, Ex-Im officials said they expected further upward reestimates due to modeling changes they made in 2012, including the addition of the qualitative factors discussed previously. These modeling changes will be reflected in the subsidy estimates and reestimates in the 2014 budget.

⁵³More specifically, the upward reestimates result from the particular way in which Ex-Im had defined loan cohorts and how interest rate changes are incorporated into subsidy cost reestimates. Through 2012, Ex-Im defined a loan cohort by the year in which funds for the transactions were appropriated rather than the year in which Ex-Im authorized and obligated funds for the loans. For example, because Ex-Im receives multiyear appropriations, a loan for which Ex-Im authorized and obligated funds in 2011 could be funded with 2008 appropriations. For annual reestimation purposes, the loan would be included in the 2008 cohort and reflect forecasted 2008 discount rates. But, because obligor interest rates were lower in 2011 than they were in 2008, the difference in the interest rates contributes to an upward reestimate. According to OMB guidance, once a cohort is at least 90 percent disbursed, rates prevailing during the disbursement period, instead of forecasted discount rates, are used, which could contribute to a decrease in the subsidy cost estimate. According to Ex-Im, the agency has reconfigured its accounting systems to organize all of its cohorts based on obligation year, beginning with the 2014 budget. As a result, future reestimates should not reflect distortions due to the issue described above.

Figure 8: Direct Loan and Loan Guarantee Subsidy Reestimates, Fiscal Years 1992-2012



Source: GAO analysis of the President's budget for 1994 through 2013.

Note: Amount for 2012 is estimated.

The extent to which Ex-Im will continue to send more funds to Treasury than it receives in appropriations and permanent, indefinite budget authority will depend partly on future credit subsidy reestimates. Credit subsidy estimates are based, in part, on economic assumptions that are uncertain and can change from year to year. In addition, the estimates are developed using Ex-Im's loss estimation model, which is not intended to capture the impact of unexpected economic scenarios that could substantially affect Ex-Im's losses. Therefore, changes in underlying assumptions or adverse economic events could result in upward subsidy reestimates that may require drawing on permanent and indefinite budget authority.

Ex-Im Faces Operational Risks from Its Growing Portfolio

Ex-Im Uses Various Techniques to Manage Transaction Risks

Ex-Im uses a number of risk-management techniques throughout the different stages of a transaction, which include underwriting, monitoring and restructuring, and claims and recovery. In January 2013, Ex-Im completed a comprehensive revision of its policies and procedures manual that covers each stage.

Underwriting

Ex-Im manages risks through the underwriting process in several ways. First, Ex-Im produces a Country Limitation Schedule (CLS) that specifies the types of transactions eligible for financing in each country and the conditions under which they are eligible. For example, in some countries, Ex-Im will not provide financing because the credit and political risks are deemed to be too high or because of legal prohibitions. In countries where Ex-Im does business, Ex-Im may only provide financing for transactions of certain durations or for either public- or private-sector borrowers. Ex-Im has basic eligibility requirements for obligors. For example, an obligor must not have been suspended or debarred from doing business with the U.S. government and may be required to have been in the same line of business for a specified number of years. Requirements for obligors also vary by product type and transaction length.

For transactions that meet CLS and eligibility requirements, Ex-Im assigns a risk rating used to determine whether there is a reasonable assurance of repayment. As previously discussed, the ratings range from 1 (least risky) to 11 (most risky). For transactions conveying the full faith and credit of a foreign government, Ex-Im officials apply the ICRAS sovereign risk rating. ICRAS ratings for sovereign obligors are based on macroeconomic indicators, such as indebtedness levels, balance-of-payments factors, and political and social factors. For most private-sector transactions, Ex-Im officials use the private-sector ICRAS rating as a baseline and adjust that rating depending on their assessment of the obligor's creditworthiness and other factors. ICRAS ratings for private-sector transactions in a country are based on qualitative and quantitative assessments of the depth of private-sector business activity in a country, the strength of private-sector institutions, foreign exchange availability, political stability, and other factors. Ex-Im officials assess obligors'

creditworthiness by reviewing information including financial statements and corporate credit ratings. For more complex transactions, Ex-Im considers additional information to develop the risk rating. For example, for project finance transactions, Ex-Im considers the allocation of risk among project participants, the financial strength of the project, and market pricing of project inputs and outputs.⁵⁴ Ex-Im generally does not authorize transactions with risk ratings over 8.⁵⁵

In addition to the CLS and risk rating, Ex-Im uses other processes, standards, and conditions in underwriting transactions. Examples of these include the following:

- *Due diligence process.* Ex-Im reviews information related to the integrity of the transaction and the character and reputation of the participants. For example, Ex-Im determines whether it has had adverse prior experience with a participant or if the participant presents a risk due to poor references or investigations by local legal or regulatory authorities.
- *Collateral standards.* As applicable, Ex-Im requires assets to secure the transactions and prefers the asset value to exceed the loan value in most transactions. For example, working capital loan guarantees must be secured by raw materials, finished goods, accounts receivable, or other specified assets. Additionally, each Ex-Im aircraft transaction is secured not only by the aircraft being financed under that transaction, but also by any other aircraft Ex-Im is currently financing for the obligor.
- *Risk-sharing conditions.* These conditions require lenders and exporters to share a percentage of the credit risk with Ex-Im. For example, for working capital loan guarantees, Ex-Im guarantees 90 percent of the principal and interest on a loan issued by a private lender. In the event of a claim, Ex-Im reimburses the lender for 90 percent of both the outstanding principal balance of the loan and accrued interest, and the lender is responsible for the remaining 10 percent.

⁵⁴For example, inputs and outputs for a power plant project could be coal and electricity, respectively.

⁵⁵As previously discussed, the risk ratings are used in estimating loss rates, but are not used for determining product fees.

Monitoring and Restructuring

Ex-Im monitors the performance of all medium-term direct loan, loan guarantee, and insurance transactions and long-term direct loan and loan guarantee transactions above \$1 million to help contain risk. Ex-Im conducts ongoing reviews of these transactions to identify and address any deterioration in credit quality before the obligor defaults. This includes assessment of the operating environment and financial condition of the obligor to determine whether or not there have been changes that might increase or decrease credit risk. Ex-Im updates a transaction's risk rating at least annually to reflect any changes in credit risk, which, in turn, affects the estimated credit subsidy cost and loss reserve or allowance associated with the transaction.⁵⁶ Specific monitoring activities include evaluating the capacity of obligors to repay their debts, reviewing the value of pledged collateral, and staying abreast of actions by the obligor to respond to adverse market changes, and on-site visits at crucial project milestones (as applicable). Through the monitoring process, Ex-Im develops a Watch List, which tracks transactions that show signs of impairment, and an Obligors of Concern List, which tracks transactions that are impaired. These transactions are subject to more frequent monitoring than other transactions. In addition, monitoring staff share these lists with the Office of the Chief Financial Officer and other senior management to keep them informed of emerging credit issues.

Ex-Im uses a different monitoring approach for some short-term transactions. For example, for working capital loan guarantees, Ex-Im conducts examinations of lenders that have "delegated authority," meaning that the lenders can underwrite transactions on Ex-Im's behalf. During these examinations, Ex-Im reviews a sample of loans to determine if lenders have been complying with Ex-Im's credit policies, including due diligence steps. According to Ex-Im officials, lenders considered higher-risk (for example, due to their volume of problem loans and claims history) receive a more in-depth review than lower-risk lenders. Lenders that fail these examinations have their delegated authority suspended.⁵⁷ The Ex-Im IG has reported that its investigations have indicated a lack of due diligence efforts by some lenders that offer loans guaranteed by Ex-

⁵⁶Risk ratings for short-term insurance in single-buyer transactions are not updated because the transactions are either repaid or a claim is filed within 1 year. A higher risk rating results in a greater credit subsidy cost and loss reserve or allowance.

⁵⁷According to Ex-Im, no lenders failed the 156 examinations conducted from 2008 through 2012.

Im.⁵⁸ Further, in 2012, Congress directed Ex-Im to improve and clarify its due diligence procedures.⁵⁹ In response, Ex-Im officials said they expected to have the revised procedures completed by the summer of 2013.

Ex-Im restructures transactions with credit weaknesses to help prevent defaults and increase recoveries on transactions that do default. According to Ex-Im, restructuring can involve substantial revision of transaction terms and conditions.⁶⁰ For example, in 2012, Ex-Im restructured a defaulted project finance transaction into a direct loan with the implicit backing of a foreign government. Restructuring can also involve the addition of credit enhancements such as extra collateral or third-party guarantees. According to Ex-Im, the agency restructures as many as eight transactions per year. According to Ex-Im officials, the agency is developing a dedicated restructuring team to help reduce the workload of staff currently responsible for both monitoring and restructuring tasks. In addition, they indicated that restructuring staff inform underwriting staff of trends in credit deteriorations or problems with particular borrowers to help ensure that any lessons learned are applied to future transactions.

Claims and Recovery

Ex-Im pays claims when a loan that it has guaranteed or an insurance policy that it has issued defaults.⁶¹ Ex-Im tries to minimize losses on claims paid by pursuing recoveries. For example, Ex-Im takes steps to collect on the assets of the obligors, which can include the collateral backing a transaction. For all products combined, Ex-Im's recovery rate—the total amount recovered divided by the total amount of claims paid plus recovery expenses—was about 50 percent on average from 1994 through 2012. In addition, when Ex-Im pays a claim for a loan guarantee that is

⁵⁸Office of Inspector General, Export-Import Bank of the United States, *Semiannual Report to Congress – October 1, 2011 to March 31, 2012* (Washington, D.C.: 2012).

⁵⁹Pub. L. No. 112-122 §7, 126 Stat. 350, 354 (2012).

⁶⁰Ex-Im also reviews and, as appropriate, approves routine waiver and amendment requests such as extensions of disbursement and coverage dates. According to Ex-Im, the agency makes decisions on as many as 20 requests per month.

⁶¹Payment of claims for insurance and working capital loan guarantee transactions is conditional upon transaction participants' compliance with Ex-Im requirements such as underwriting policies, deadlines for filing claims, payment of premiums and fees, and submission of proper documentation. Ex-Im's guarantee on medium- and long-term loan guarantees is unconditional, meaning Ex-Im must pay submitted claims.

denominated in a foreign currency, Ex-Im manages its foreign-currency risk by purchasing the foreign currency to pay the claim to the lender and then seeks recovery on the U.S. dollar equivalent, which represents the obligor's debt obligation. This policy effectively shifts the foreign-currency risk from Ex-Im to the obligor after a claim has been paid.

Ex-Im Has Started Developing a More Comprehensive Risk-Management Framework

In September 2012, the Ex-Im IG issued a report on Ex-Im's management of risk at the overall portfolio level.⁶² On the basis of industry best practices, the report made a number of recommendations to improve Ex-Im's portfolio management in areas such as stress testing, portfolio concentrations, and risk governance. Our review of federal internal control standards and industry practices suggests that the IG's recommendations in these areas represent prudent risk-management techniques. Ex-Im has begun to implement some of the IG's recommendations and is in the process of analyzing others to determine their applicability to Ex-Im and the risk-management benefits that could be gained from them.

Stress Testing

The Ex-Im IG recommended that Ex-Im develop a systematic approach to stress testing its portfolio that would be conducted at least annually as part of the process for reestimating credit subsidies. A stress test is a "what-if" scenario that is not a prediction or expected outcome of the economy. Stress testing is one tool to measure the vulnerability of portfolios to unexpected losses—that is, losses associated with extreme yet plausible events. The IG stated that in light of concentrations in Ex-Im's portfolio, stress testing would provide Ex-Im information on how its portfolio would react to shocks in financial markets. Ex-Im agreed to implement this recommendation.

Stress testing is consistent with our internal control standards and industry practices. For example, our internal control standards state that agencies should have adequate mechanisms to identify risks arising from external factors and analyze the possible effects of these risks.⁶³ In addition, in its best practices manual on credit portfolio management, the

⁶²OIG-INS-12-02.

⁶³GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999) and *Internal Control Management and Evaluation Tool*, [GAO-01-1008G](#) (Washington, D.C.: August 2001).

International Association of Credit Portfolio Managers (IACPM) states that institutions should conduct stress testing to inform management about the portfolio's vulnerabilities and to establish the portfolio's sensitivity to risk factors.⁶⁴ Similarly, guidance from regulators of federal financial institutions notes that the recent financial crisis underscored the need for banking organizations to incorporate stress testing into their risk-management practices.⁶⁵ Furthermore, the foreign ECAs and U.S. federal credit agencies with which we spoke conduct stress testing on their portfolios. For example, officials from one ECA told us that they conduct stress tests every 6 months using scenarios related to current world issues to determine the impact those scenarios would have on obligors.

Ex-Im officials stated that they have conducted ad hoc stress tests in the past, but have been developing a systematic approach. This approach will involve assessment of (1) how the entire portfolio or portions of the portfolio would be affected by extreme economic events and (2) the impact that particular adverse scenarios may have on specific obligors. Ex-Im officials told us that they will first stress test the aircraft portfolio, which accounts for about 50 percent of the agency's exposure. According to Ex-Im, the stress test results will be included in a quarterly internal report on the financial status of Ex-Im's portfolio. Ex-Im officials stated that the results of the stress testing will be used to inform the loss modeling process and will be used by senior management in making decisions about the agency's resource allocations and strategic planning efforts. Ex-Im officials also indicated that they intend to share their stress testing and loss modeling methodologies with other federal credit agencies so that others may benefit from Ex-Im's efforts.

Ex-Im has not yet made plans to report its stress scenarios and stress test results to Congress. Such reporting could help Congress oversee Ex-Im's activities by providing additional information on Ex-Im's risk exposure. Through provisions in the Export-Import Bank Reauthorization Act of 2012, Congress has required Ex-Im to provide analysis of the

⁶⁴IACPM, *Sound Practices in Credit Portfolio Management* (New York, N.Y.: 2005).

⁶⁵Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, *Guidance on Stress Testing for Banking Organizations with Total Consolidated Assets of More Than \$10 Billion*, SR 12-7 (Washington, D.C.: May 2012). While Ex-Im is not governed by this guidance, it provides useful criteria for assessing Ex-Im's activities because the agency faces similar challenges to regulated private financial institutions in managing risks.

Portfolio Concentration Management

agency's default rates and risk of loss associated with its increased exposure limits.⁶⁶ Information on Ex-Im's stress testing would complement that analysis by disclosing the magnitude of losses that Ex-Im could face under adverse scenarios. Additionally, reporting such information would be consistent with our internal control standards, which indicate that communications with external parties, including Congress, should provide information that helps them better understand the risks facing the agency.⁶⁷

As previously discussed, Ex-Im's portfolio is concentrated in certain industries, regions, and obligors. These concentrations expose Ex-Im to the risk associated with negative events in those market segments. In light of these concentrations, the Ex-Im IG recommended that Ex-Im implement "soft portfolio concentration sublimits"—that is, informal thresholds for the portion of total exposure within different segments of the portfolio. The IG recommended that Ex-Im set the soft portfolio sublimits by industry, geography, or transaction risk rating and use them as internal guidance to inform future pricing and portfolio risk-management decisions (e.g., ways to diversify the portfolio). According to IG officials, the establishment of soft portfolio sublimits (as opposed to hard limits) would help Ex-Im manage portfolio concentrations without restricting its ability to meet exporters' demand for financing or adversely affecting Ex-Im's competitiveness with other ECAs.

Portfolio sublimits represent one technique for managing a "risk appetite"—that is, the amount of risk an institution is willing to accept. Setting a risk appetite is consistent with our internal control standards, which state that agencies should develop an approach for risk management based on how much risk can be prudently accepted.⁶⁸ Additionally, industry best practices identified by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), the Institute of International Finance (IIF), and IACPM cite the establishment of risk appetite, including through portfolio sublimits, as a sound risk-

⁶⁶Pub. L. No. 112-122, §§ 4, 6, 126. Stat. 350, 351, 353 (2012).

⁶⁷[GAO/AIMD-00-21.3.1](#) and [GAO-01-1008G](#).

⁶⁸[GAO-01-1008G](#).

management practice.⁶⁹ Some organizations with which we spoke, including the Overseas Private Investment Corporation (OPIC) and two foreign ECAs, set a risk appetite by establishing limits on the volume of financing they provide to different industries, countries, or obligors. Setting a risk appetite can help senior management determine the point at which the institution's exposure has reached a level that may require implementation of additional risk controls.

As of December 2012, Ex-Im had not established soft portfolio sublimits. However, Ex-Im officials said that they were evaluating whether this practice was suitable for the agency in light of potential implications for Ex-Im's ability to meet client demands and competitiveness with other ECAs. Given the potential benefits of this risk-management practice, following through on this evaluation will be important for Ex-Im. Furthermore, if it determines that soft portfolio sublimits are appropriate, following industry guidance for setting a risk appetite will also be important. For example, guidance issued by COSO in January 2012 states that in developing a risk appetite an institution should consider its existing risk profile (current level and distribution of risks); risk capacity (the amount of risk that an organization is able to support); risk tolerance (the acceptable level of variation an organization is willing to accept); and stakeholders' attitudes towards growth, risk, and return.⁷⁰

Risk Governance

In its September 2012 report, the Ex-Im IG also stated that Ex-Im's risk governance structure was not commensurate with the size, scope, and strategic ambitions of the institution.⁷¹ Among other things, the IG noted that Ex-Im lacked an official responsible for managing the full spectrum of risks facing the agency and developing risk-management strategies. The IG recommended that Ex-Im create the position of chief risk officer (CRO) to oversee the design and implementation of an enterprisewide risk-management function.

⁶⁹COSO is a joint initiative of five professional associations dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management, internal control, and fraud deterrence. IIF is a global association of financial institutions that supports the financial industry in prudently managing risks.

⁷⁰Larry Rittenberg and Frank Martens, *Enterprise Risk Management: Understanding and Communicating Risk Appetite*, report prepared for COSO (January 2012).

⁷¹Governance refers to the actions and processes by which an institution exercises authority and makes and implements decisions. Risk governance applies the principles of governance to the identification, assessment, management, and communication of risks.

Industry best practices and corporate governance principles of the Basel Committee on Banking Supervision highlight the importance of having focal points for all the activities required to manage enterprisewide risks. For example, best practices published by IIF state that financial firms should assign responsibility for risk management to an officer at a senior level, in most cases a CRO. The Global Association of Risk Professionals has indicated that the typical roles of a CRO include establishing risk-management policies and procedures consistent with entitywide policies, reviewing and approving models used for pricing and risk measurement, measuring risk on a global basis as well as monitoring exposures and changes in risks, and communicating risk-management results to senior management. OPIC and some foreign ECAs with which we spoke have CROs and cited benefits of this function, including risk assessment that is independent from other business functions. For example, OPIC officials said that OPIC's CRO function is carried out by a small unit led by a Director of Risk Management that reports directly to the agency's Chief Financial Officer.

Ex-Im does not have a centralized CRO function and instead distributes responsibilities for risk management to several parts of the organization, including the Office of the Chief Financial Officer, Office of General Counsel, Credit Management Group, and Credit Policy Committee. For example, the Office of the Chief Financial Officer's responsibilities include loss modeling, determining credit subsidy estimates, and portfolio monitoring. The Office of General Counsel's responsibilities include conducting due diligence on transaction participants to manage reputational risk and assisting in documenting transactions. The Credit Management Group takes the lead in reviewing and recommending broad credit policy and underwriting standards. Finally, the Credit Policy Committee is responsible for formulating, coordinating, and making recommendations to Ex-Im's Board of Directors in the areas of country risk, sovereign and private-sector risk, changing or modifying CLS, and addressing other risk issues.

As of February 2013, Ex-Im officials told us that they were analyzing the possibility of establishing a more centralized CRO function. The officials said that in performing this analysis, they were reviewing other organizations that have a CRO, including OPIC, the World Bank, the International Finance Corporation, and the African Development Bank. Careful consideration of the potential benefits of a CRO function and the extent to which the agency's current structure comprehensively addresses enterprisewide risks is critical given Ex-Im's growing financial exposure. Further, taking into account the potential expansion of its risk-

management activities, such as the implementation of soft sublimits and regular stress testing, will be important for Ex-Im's analysis.

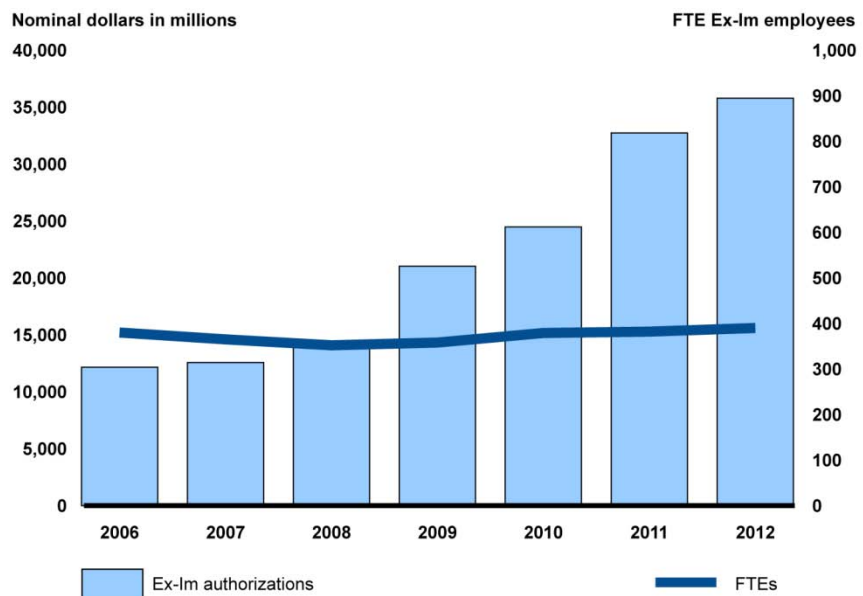
Other Recommendations

In addition to the three recommendations discussed previously, the IG recommended that Ex-Im: (1) develop a systematic approach for modeling portfolio risk, including identifying appropriate qualitative risk factors; (2) with the assistance of external experts, implement a formal framework for the use of financial models, including procedures for model validation; (3) review risk metrics and reporting procedures to enhance transparency and to better inform key stakeholders; and (4) amend its by-laws to provide for oversight of an agencywide risk-management function by Ex-Im's Board of Directors. Ex-Im has taken actions to address the first three of these recommendations. As already noted, Ex-Im incorporated qualitative risk factors into its loss estimation model. In addition, Ex-Im hired a contractor to serve as an external expert in reviewing and analyzing Ex-Im's loss estimation model and plans to conduct external validation of future financial models. Ex-Im also began issuing a quarterly default report and is identifying portfolio management best practices—including risk metrics and reporting procedures—through a review conducted by subject-matter experts. Ex-Im disagreed with the fourth recommendation. Ex-Im stated that the agency's charter does not provide this oversight function to the Board of Directors, but rather provides the President of Ex-Im broad operational authority for the management of Ex-Im, including oversight of all of Ex-Im's risk-management functions.

Ex-Im Has Not Yet Determined the Volume It Can Prudently Manage

Ex-Im's annual authorizations increased from about \$12 billion in 2006 to nearly \$36 billion in 2012, an increase of about 195 percent. Over the same period, Ex-Im's staff level, as measured by full-time equivalents (FTE), increased from 380 to 390 FTEs, about 3 percent (see fig. 9).

Figure 9: Ex-Im Authorization and FTE Levels, Fiscal Years 2006 - 2012



Source: GAO analysis of Ex-Im data.

The rapid increase in business volume, coupled with a modest growth in FTEs, creates potential operational risks for Ex-Im. If demand for Ex-Im's services exceeded its capacity, the agency's ability to properly underwrite and monitor transactions might suffer. Agencywide, the average dollar amount of annual authorizations per FTE rose from \$32 million in 2006 to about \$92 million in 2012, an increase of more than 150 percent. Over the same period, the number of transactions per FTE rose from 7.0 to 9.7, an increase of 38 percent. Ex-Im acknowledged that its current resources would not be sufficient for the high levels of activity it expected to see in the coming years. In addition, Ex-Im division managers with whom we spoke noted the strain of the increased and increasing workloads on employees and said they could use additional staff. Ex-Im officials stated that risks to the agency have been increasing as a result. While the officials told us that the increased business volume primarily had affected the underwriting function, the impact had been mitigated somewhat by the agency's delegation of some underwriting to private lenders for working capital loan guarantees. However, the officials said that Ex-Im's other transaction-related functions, including legal and monitoring activities, were expected to have significantly higher workloads as transactions complete the underwriting phase and move on to other phases.

Ex-Im has taken some steps to manage its increased workload. Ex-Im asked for additional administrative resources in its annual budget requests, in part to hire more staff. For example, in its 2013 budget request, Ex-Im requested a \$7 million increase in administrative resources to support underwriting and small business outreach. While acknowledging the constrained federal budget environment, Ex-Im officials said that future budget requests likely also would request resources for additional staff. In the interim, Ex-Im officials said that when vacancies occurred, they allocated the positions to areas of highest need rather than automatically refilling the vacancies. Ex-Im also hired a consultant to identify best practices for improving operational efficiency of the monitoring function. In addition, Ex-Im officials said they planned to update the agency's 2009-2012 Human Capital Plan following a forthcoming revision to Ex-Im's strategic plan. Ex-Im's workforce planning process involves assessing its current workforce, anticipating future needs, analyzing gaps, and developing strategies to address those gaps.

Although Ex-Im has acknowledged growing risks associated with its increasing workload, it has not formally determined the level of business it can prudently manage—either agencywide or within specific functional areas—with a given level of resources. For example, while Ex-Im has reported the average number and dollar amount of authorizations per FTE, officials stated that they have not determined the level at which operational risks are too high. Additionally, Ex-Im officials within different functional areas were unable to provide formal, documented assessments of resource needs. As previously noted, our internal control standards state that agencies should develop an approach for risk management based on how much risk can be prudently accepted. In addition, these standards indicate that agencies should decide upon specific control activities to manage or mitigate risks entitywide and at each activity level. Ex-Im officials said the dramatic increase in business was not anticipated and that the agency historically did not need to make major workforce adjustments because its business volume was stable. However, without benchmarks to determine when workload levels have created too much risk, Ex-Im's ability to monitor and manage operational risks associated with its already increased business volume may be limited. Monitoring workloads against such benchmarks would help Ex-Im determine when additional steps—such as tightening underwriting standards or increasing requirements for lender participation—may be needed to mitigate Ex-Im's increased risk. Moreover, legislated increases in Ex-Im's exposure limits provide room for additional increases in Ex-Im's business volume, and thus Ex-Im could continue to experience strains on its workforce.

Conclusions

In recent years, Ex-Im has assumed an increased role in supporting the export of U.S. goods and services. In part, this increase resulted from a decline in the availability of private-sector credit that accompanied the 2007-2009 financial crisis. For several years, Ex-Im has been self-sustaining for budgetary purposes, although the long-term cost of Ex-Im's new business is not yet known. In addition, Ex-Im has made recent improvements to its risk management, including enhancements to its loss estimation model and plans for a more systematic approach for stress testing its portfolio. However, the growth in Ex-Im's portfolio and the spectrum of risks Ex-Im faces underscore the need for continued improvements in risk management. Recommendations made by the Ex-Im IG in September 2012 and further supported by our work point to additional steps that Ex-Im could take to strengthen its risk-management framework. These steps include establishing soft portfolio sublimits and assessing the benefits of a more centralized CRO function. Following through on these recommendations will be critical to help manage the risks and challenges associated with the agency's greater financial exposure.

In addition, our work identified other opportunities for Ex-Im to improve how it monitors, manages, and reports on the risks it faces. First, while Ex-Im added qualitative factors to its loss model in 2012, the factor that adjusts loss estimates for potential changes in global economic conditions uses a 1-year forecast for speculative-grade corporate bond defaults for all its transactions, regardless of their length. Because many of Ex-Im's transactions span multiple years, a 1-year default forecast may not represent the best available data for making default adjustments for these transactions. The use of default forecasts or other economic data with a longer time horizon may produce more reliable loss estimates and would be consistent with FASAB guidance on using the best available data for developing cash flow projections. Second, Ex-Im has not maintained the data necessary to conduct vintage analysis, a technique federal banking regulators have cited as useful for monitoring growing portfolios. Once a sufficient amount of data has been retained, such an analysis could help Ex-Im to assess the early performance of new books of business by providing comparisons to seasoned books at a comparable point in time. It could also provide Ex-Im an additional early warning indicator to assist Ex-Im in taking timely actions to mitigate emerging risks. Such data also have the potential to strengthen Ex-Im's future loss modeling efforts by providing additional information about when defaults occur over the life of a transaction. Third, Ex-Im has made progress toward implementing a systematic approach to stress testing its portfolio, but has not yet made plans to report the scenarios and results to Congress. Providing this

information to Congress—potentially as part of Ex-Im’s annual report—would be consistent with federal internal control standards for effective external communication and would aid congressional oversight of the agency. Finally, although Ex-Im has recognized and taken some steps to address workload challenges, it has not developed benchmarks for the level of business it can properly support with a given level of resources. This is contrary to federal internal control standards, which indicate that agencies should develop a risk-management approach based on how much risk can be prudently accepted. Ex-Im’s workload challenges may continue to grow because of increases in Ex-Im’s exposure and exposure limit, coupled with resource constraints in the current budgetary environment. In the absence of workload benchmarks, Ex-Im lacks a sound basis for workforce planning and for determining when additional control activities might be needed to manage operational risks.

Recommendations for Executive Action

We recommend that the Chairman of the Export-Import Bank of the United States take the following four actions:

- To help improve the reliability of its loss estimation model, Ex-Im should assess whether it is using the best available data for adjusting loss estimates for longer-term transactions to account for global economic risk.
- To conduct future analysis comparing the performance of newer and older business and to make future enhancements to its loss estimation model, Ex-Im should retain point-in-time, historical data on credit performance.
- To help Congress better understand the financial risks associated with Ex-Im’s portfolio, Ex-Im should report its stress test scenarios and results to Congress when such information becomes available.
- To help manage operational risks stemming from Ex-Im’s increased business volume, Ex-Im should develop workload benchmarks at the agencywide and functional area levels, monitor workload against these benchmarks, and develop control activities for mitigating risks when workloads approach or exceed these benchmarks.

Agency Comments and Our Evaluation

We provided a draft of this report to Ex-Im for its review and comment. In written comments, which are reproduced in appendix II, Ex-Im agreed with our recommendations. Ex-Im also provided technical comments that we incorporated into the final report, as appropriate.

In its written comments, Ex-Im said it would begin to implement all four of our recommendations in fiscal year 2013. Specifically, Ex-Im said it would implement our recommendation to assess data for adjusting loss estimates for longer-term transactions as part of a spring 2013 reevaluation of its loss estimation model. Concerning our recommendation that Ex-Im retain point-in-time data on credit performance, Ex-Im said it had already begun doing so and would use these data to compare the performance of newer and older books of business and to enhance its loss estimation model. Ex-Im also agreed with our recommendation that it provide stress testing scenarios and results to Congress and said it would include the results of its stress tests in the default reports it submits to Congress. Ex-Im did not indicate whether it would also include its stress test scenarios in the default reports. Because stress testing results are only meaningful in the context of the stress scenarios used, our recommendation emphasizes reporting both types of information to Congress. Finally, concerning our recommendation that Ex-Im set workload benchmarks to help manage operational risk, Ex-Im said it planned to form an Enterprise Risk Committee consisting of senior management from the business, financial, legal, policy, resource, and risk-management areas. Ex-Im stated that operational risk would be one of the first areas the committee examines.

We are sending copies of this report to appropriate congressional committees and the Chairman of the U.S. Export-Import Bank. The report is also available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or sciremj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

A handwritten signature in black ink, appearing to read 'Mathew Scirè', followed by a long horizontal flourish.

Mathew Scirè
Director, Financial Markets and
Community Investment

Appendix I: Objectives, Scope, and Methodology

Our objectives were to examine: (1) how the U.S. Export-Import Bank's (Ex-Im) business changed in recent years and possible reasons for these changes; (2) how Ex-Im determines credit subsidy costs, loss reserves and allowances, and product fees, and how these processes account for different risks; (3) how Ex-Im's financial portfolio has performed and the budgetary impact of its programs; and (4) the extent to which Ex-Im has a comprehensive risk-management framework.

To assess how Ex-Im's business changed in recent years and possible reasons for these changes, we analyzed information on Ex-Im's financial exposure and authorizations, including data from Ex-Im annual reports and data compiled by the agency from its Ex-Im Bank Reporting System. We examined Ex-Im's total exposure levels for each year from 1990 through 2012 to identify growth trends both in nominal and inflation-adjusted terms. We also examined Ex-Im's annual authorizations for each year from 2006 through 2012. We chose that period in order to cover Ex-Im's pre- and post-financial crisis business activity. We analyzed trends in the dollar volume of Ex-Im's total authorizations each year, the volume of total U.S. exports, as well as Ex-Im authorization levels disaggregated by product type, region, and industry sector. To identify possible reasons for trends in Ex-Im's business activity, we reviewed a variety of Ex-Im documents, including annual reports, competitiveness reports, the agency's strategic plan for 2010-2015, and reports issued by Ex-Im's Office of Inspector General (IG). We also reviewed relevant reports by the Basel Committee on Banking Supervision, academics, and foreign export credit agencies (ECA). Because Ex-Im can play a countercyclical role in export finance (i.e., expanding when private sector credit is retrenching), we also analyzed data related to the availability and cost of credit from 2006 through 2012. In particular, we analyzed (1) calendar 2006-2012 survey data from the Board of Governors of the Federal Reserve System and the European Central Bank on the percentage of commercial lenders that were tightening or easing lending standards and (2) calendar 2006-2012 data on corporate bond risk premiums from Bank of America-Merrill Lynch. We also analyzed International Monetary Fund data on the volume of U.S. exports over fiscal years 1990 through 2012 in order to compare changes in export volume with changes in Ex-Im authorizations. Additionally, we interviewed Ex-Im officials and six representatives of industry trade associations and research organizations about reasons for changes in the agency's business volume. We selected the trade association and research organization representatives to interview on the basis of a literature review of relevant published articles, prior GAO work on Ex-Im and international trade issues, and recommendations from knowledgeable federal agency and industry officials about individuals with

expertise on Ex-Im's activities or export financing generally. Our literature review focused on publications that cited Ex-Im, export credit agencies, trade finance, and export finance. Three of the entities we interviewed represented industry trade associations (the Coalition for Employment through Exports, the Berne Union, and the Bankers' Association for Finance and Trade and International Financial Services Association) and three represented research groups (Peterson Institute for International Economics, the Rhodium Group, and the Research Division of the U.S. International Trade Commission). Further, to obtain perspectives on ECA growth generally, we conducted telephone interviews with officials from four foreign ECAs: Export Development Canada (Canada), Compagnie Française d'Assurance pour le Commerce Extérieur (France), UK Export Finance (United Kingdom), and Japanese Bank for International Cooperation (Japan). We selected these ECAs based on their similarity to Ex-Im in terms of: (1) their role in supplementing rather than competing with private markets for export credit support, (2) the types of export credit products they offer, and (3) the presence of a small business directive or mandate.

To examine how Ex-Im determines subsidy costs, loss reserves and allowances, and product fees, and how these processes account for different risks, we reviewed relevant requirements and guidance. This included the Federal Credit Reform Act of 1990; the Office of Management and Budget (OMB) Circular No. A-11 (*Preparation, Submission, and Execution of the Budget*); the Statement of Federal Financial Accounting Standards No. 2 (*Accounting for Direct Loans and Loan Guarantees*); the Federal Accounting Standards Advisory Board's Federal Financial Accounting and Auditing Technical Release 6 (*Preparing Estimates for Direct Loan and Loan Guarantee Subsidies under the Federal Credit Reform Act*); and the Organisation for Economic Cooperation and Development Arrangement on Officially Supported Export Credits (OECD Arrangement). We identified types of risks applicable to Ex-Im by reviewing Ex-Im's documents, including annual reports and policy manuals, as well as prior GAO work on credit programs and risk management. To examine how Ex-Im accounts for these risks, we reviewed information on the tools and processes Ex-Im uses to determine subsidy costs and loss reserves and allowances, including Ex-Im's loss estimation model. We reviewed documentation on the structure of the model, updates made to the model in 2012, and findings and recommendations made by the Ex-Im IG and Ex-Im's independent financial statement auditor about the model. We also reviewed relevant workpapers from the independent auditor's audit of Ex-Im's 2012 financial statements. We also reviewed Congressional Budget Office and OMB

reports on discounting methodologies for federal credit programs. To obtain additional information about Ex-Im's subsidy cost and loss reserve and allowance calculations, we interviewed Ex-Im and Ex-Im IG officials, representatives from Ex-Im's independent financial statement auditor, and OMB officials responsible for approving Ex-Im's subsidy cost estimation methodology. In addition, we spoke with other federal agencies that provide international credit—including the Small Business Administration, the Department of Agriculture's Foreign Agricultural Service and Farm Service Agency, and the Overseas Private Investment Cooperation (OPIC)—and the four foreign ECAs cited previously about their processes for estimating program costs and reserving for future losses. To obtain information about how Ex-Im sets product fees and what risks they account for, we reviewed fee-setting requirements contained in the OECD Arrangement and Ex-Im analyses used as a basis to adjust fees for different products. An assessment of the appropriateness of the fee levels resulting from the OECD Arrangement was outside the scope of our review. We interviewed Ex-Im officials and officials from the U.S. Department of the Treasury responsible for negotiating for the United States at OECD, including negotiations on minimum premiums. We also discussed with the four foreign ECAs how they set product fees.

To assess how Ex-Im's financial portfolio has performed and the budgetary impact of its programs, we reviewed agency data and documentation—including Ex-Im performance data, annual reports, financial statements, and quarterly default reports—and information contained in the President's budgets and Federal Credit Supplements. Specifically, to determine how Ex-Im's portfolio has performed, we analyzed data Ex-Im compiled from the Ex-Im Bank Reporting System on active transactions—including authorized and disbursed amounts, amounts in arrears, claims paid, and recoveries—to calculate overall default rates and default rates by product type. We examined end-of-fiscal-year data for 2006 through 2012 and data as of December 31, 2012. We reviewed federal banking regulator guidance on default monitoring, including vintage analysis, and determined whether Ex-Im conducted or maintained data to perform such an analysis. In addition, we reviewed data on the ratio of Ex-Im's impaired assets to total exposure from 2008 through 2012. To determine the budgetary impact of Ex-Im's programs, we reviewed Ex-Im's analysis of the funds it has been appropriated and the funds it has sent to the U.S. Treasury (the net of upward and downward credit subsidy reestimates, cancelled authority, returned collections, and rescissions) from 1992 through 2012. To do this, we compared Ex-Im's analysis to data contained in appropriation acts, the President's budgets, and Ex-Im's financial statements for the same years.

Based on this comparison, we determined that Ex-Im's analysis was reasonable. Additionally, we analyzed Ex-Im's annual credit subsidy reestimates for 1992 through 2012 using information in the President's budgets. We discussed the performance and budget data with knowledgeable Ex-Im officials to ensure that we interpreted the data correctly.

To assess the extent to which Ex-Im has a comprehensive risk-management framework, we reviewed the practices Ex-Im uses to manage risks at the transaction, portfolio, and agency level. At the transaction level, we reviewed Ex-Im's policies and procedures related to the underwriting, monitoring and restructuring, and claims and recovery functions. We also interviewed Ex-Im senior management and division managers responsible for various products about these procedures. To assess how Ex-Im manages risks at the portfolio level, we reviewed a September 2012 report by the Ex-Im IG on Ex-Im's portfolio risk management and followed up with Ex-Im officials to determine the actions they had taken in response to the report's recommendations.¹ We also identified relevant criteria in GAO's *Standards for Internal Control in the Federal Government* and *Internal Control Management and Evaluation Tool* and documents from financial industry groups describing sound practices for managing financial portfolios.² Additionally, we discussed portfolio and general risk-management practices with officials from the federal credit agencies and foreign ECAs cited previously, a representative from the International Association of Credit Portfolio Management, and Ex-Im officials. Finally, we reviewed information related to potential operational risks stemming from Ex-Im's increasing business volume and workload and identified relevant criteria from our internal control standards. We limited our work in this area to Ex-Im's human capital management. Specifically, we analyzed Ex-Im data on the number of full-time equivalents and the number and dollar volume of transactions authorized from 2006 through 2012. We also reviewed Ex-Im's Human Capital Plan for 2009-2012, Reauthorization Act of 2012 Business Plan, and congressional budget justifications from 2008 through 2013, and internal Ex-Im analyses of agency workloads. Additionally, we interviewed Ex-Im officials responsible for resource management.

¹OIG-INS-12-02.

²[GAO/AIMD-00-21.3.1](#) and [GAO-01-1008G](#).

To assess the reliability of the data provided by Ex-Im, including exposure and authorization amounts and performance statistics, we (1) reviewed information related to data elements, system operations, and controls; (2) performed electronic testing for obvious errors in accuracy and completeness; (3) compared data to published documents; and (4) interviewed Ex-Im officials knowledgeable about the data. To assess the reliability of data we used to describe capital market conditions and U.S. exports, we (1) reviewed related documentation, (2) interviewed knowledgeable officials about the data, and (3) performed electronic testing and inspected the data for missing observations and outliers. We concluded that the data elements we used were sufficiently reliable for purposes of describing Ex-Im's growth and financial performance.

We conducted this performance audit from June 2012 to March 2013 in accordance with generally accepted government auditing standards. 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.

Appendix II: Comments from the U.S. Export-Import Bank



EXPORT-IMPORT BANK
OF THE UNITED STATES

March 15th, 2013

Mathew J. Scirè
Director, Financial Markets and Community Investments
U.S. Government Accountability Office
Washington, D.C. 20584

Dear Mr. Scirè:

Thank you for providing the Export-Import Bank of the United States (Ex-Im Bank) with the opportunity to comment on GAO's March 2013 draft final report.

We are pleased that GAO recognizes that Ex-Im Bank has been developing a comprehensive risk management framework, while remaining competitive vis-à-vis other Export Credit Agencies. Ex-Im Bank has a culture of pro-actively managing risk and is committed to continuous improvement in this regard. Recently, the Bank has implemented important improvements including the streamlining of credit monitoring functions, along with the creation of a Special Assets unit to address emerging credit issues during the credit exposure periods. Furthermore, we have plans to implement additional risk management improvements identified in fiscal years 2012 and 2013 from internal analysis of best practices, outside expert advice, and audit recommendations from Bank initiated audits and from our own Inspector General.

Ex-Im Bank has a robust system of financial oversight. In fiscal years 2012 and 2013 alone, the Bank's transactions and/or portfolio have been reviewed by its Inspector General, the Bank's financial auditors Deloitte Touche, and the Bank's internal Audit Committee, which consists of three members of the Bank's board of Directors. In addition, the Bank's management is in the process of reviewing the Export-Import Bank Strategic Plan: 2010 – 2015, to specifically add a new goal related to risk management and analysis.

Ex-Im Bank believes that a comprehensive risk management framework, with strong emphasis on continuous improvement, minimizes claims. The Bank is very proud of the risk management improvements made during the past fiscal years, improvements that protect the U.S. taxpayer. In fiscal year 2012, the Bank paid \$37 million in gross claims on a portfolio of \$106 billion. In fiscal year 2012, the Bank collected \$1 billion in fee income and sent more than \$800 million (the excess over Bank expenses and loan loss reserves) to the U.S. Treasury. Ex-Im Bank reported to Congress a default rate of just 0.34% for fiscal year 2012, which is exceptionally low compared to industry peers.

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Ex-Im Bank very much appreciates GAO's cooperative approach to the risk management audit. This has been a positive experience for Ex-Im Bank in reviewing our current risk management approach and in identifying areas in which the Bank can further enhance our risk management practices.

The following are Ex-Im Bank's responses to GAO's recommendations:

- 1. To help improve the reliability of its loss model, Ex-Im should assess whether it is using the best available data for adjusting loss estimates for longer-term transactions to account for global economic risk.**

Ex-Im Bank continuously evaluates and improves upon its loss model. The Bank will next re-evaluate its model in the spring of 2013. The Bank agrees with the GAO recommendation to assess and review the data used for adjusting loss estimates for longer-term transactions to account for global economic risk. We will share the re-evaluated loss model with GAO.

- 2. To conduct future analysis comparing the performance of newer and older business and to make future enhancements to its loss model, Ex-Im should retain point-in-time, historical data on credit performance.**

Ex-Im Bank agrees with the recommendation. Starting in October 2012, the Bank initiated the retention of point-in-time historical data on credit performance. This information will be used to compare performance of newer and older business as well as further enhance the Bank's loss model.

- 3. To help Congress better understand the financial risks associated with Ex-Im's portfolio, Ex-Im should report its stress test scenarios and results to Congress when such information becomes available.**

Ex-Im Bank agrees with the recommendation. In late 2012, Ex-Im Bank began developing a systematic approach to stress testing based on best practices. The Bank's stress testing will be consistent with recommendations from the International Association of Credit Portfolio Managers. These recommendations include a "top down" stress-testing process to analyze the impact of extreme economic events on the credit risk of the overall credit portfolio along with a "bottom up" stress testing process to measure the impact of adverse events on sets of obligors, with significant exposure in the credit portfolio. Ex-Im Bank will provide the results of these stress tests in our default report, which it sends to the U.S. Congress pursuant to the Bank's 2012 reauthorization.

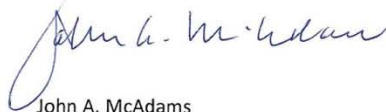
- 4. To help manage operational risk stemming from Ex-Im's increased business volume, Ex-Im should develop workload metrics and benchmarks on a functional and product line basis, monitor workload against these benchmarks, and examine activities to enhance controls and to mitigate risk.**

Ex-Im Bank agrees with the recommendation to further enhance our operational risk management. To foster the development of enterprise risk awareness, Ex-Im Bank

plans to establish an Enterprise Risk Committee (ERC), comprising senior management from the business, financial, legal, policy, resource and risk management areas. One of the first areas that the ERC will examine will be operational risk. This review and analysis will begin in fiscal year 2013.

Ex-Im Bank is committed to continuously improving our risk management practices. We have implemented significant improvements in the past few years and are implementing further improvements in fiscal year 2013. Ex-Im Bank also will implement, beginning in fiscal year 2013, all of the Recommendations for Executive Action identified in this GAO audit. Ex-Im Bank will report the implementation status to the U.S. Congress and the GAO within 120 days after officially receiving the Comptroller General report.

Sincerely,



John A. McAdams
Chief Operating Officer
Export-Import Bank of the United States

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Mathew J. Scirè, (202) 512-8678, or sciremj@gao.gov

Staff Acknowledgments

In addition to the individual named above, Steve Westley, Assistant Director; Daniel Alspaugh; Kathryn Bolduc; Marcia Carlsen; Pamela Davidson; Cole Haase; Michael Hoffman; Christine Houle; Susan Irving; Risto Laboski; Felicia Lopez; Colleen Moffatt Kimer; Melissa Kornblau; Robert Pollard; Barbara Roesmann; Jessica Sandler; Eva Su; and Celia Thomas made key contributions to this report.

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