

RESPONSE ON REMAND FROM THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT
DELTA AIR LINES, INC. V. EXPORT-IMPORT BANK OF THE UNITED STATES (JUNE 18, 2013)

Response Two¹

I. Introduction and Summary Conclusion – The Benefits Of Ex-Im Bank’s Loan Guarantees In The Air India Transactions Substantially Outweigh Any Adverse Effect The Guarantees May Cause

In *Delta Airlines, Inc. v. Export-Import Bank of the United States*, the United States Court of Appeals for the District of Columbia Circuit considered whether the Export-Import Bank of the United States (“Ex-Im Bank” or the “Bank”) complied with its statutory obligation to assess the potential adverse economic effects of a transaction approved by the Bank, referenced in this paper as the “Air India Transactions.”² The Court did not vacate the Bank’s approval of the Air India Transactions and, instead, directed the District Court to remand the case to the Bank with several options. One of these options was that:

the Bank should ... (ii) adequately consider and explain any adverse effects that these particular Air India loan guarantees have on U.S. industries and U.S. jobs.³

On September 30, 2011, the Board of Directors of Ex-Im Bank⁴ approved final commitments to finance the purchase of Boeing 787 aircraft by Air India, an airline owned by the Government of India, through the issuance of loan guarantees. This paper responds to the Court of Appeals’ option on remand referenced above by analyzing the potential adverse effects of these loan guarantees on U.S. industries and U.S. jobs. The Bank concludes that these loan guarantees help support approximately 10,700 jobs in the U.S.; that there will be no direct competition to U.S. airlines from the aircraft financed in connection with these loan guarantees; that any adverse effects on U.S. airlines are likely to be negligible even if one assumes that there were to be direct competition; and, in any event, that any theoretical adverse effects are significantly outweighed by the substantial benefits to U.S. industries and U.S. jobs.

This paper also considers allegations raised by one U.S. airline, which has asserted that the Air India Transactions provided financing to Air India that was more favorable than the financing available to U.S. airlines, resulting in a significant competitive advantage for Air India. This U.S. airline has also asserted that Bank financing has encouraged foreign airlines to add capacity

¹ The Bank has also prepared a separate response entitled “Response One” to the remand from the Court of Appeals.

² 718 F.3d 974 (D.C. Cir. 2013).

³ *Id.* At 978.

⁴ Please see the attached Glossary for definitions of all defined terms and other technical terminology.

beyond what they otherwise would have added, creating oversupply in the market for airline services. The Bank concludes that neither of these allegations is valid.

II. Background

A. The Export-Import Bank

The Export-Import Bank of the United States is an independent agency of the U.S. Federal Government. Its mission is to provide loans, guarantees, and insurance to support American jobs by supporting U.S. exports. In Fiscal Year 2012, Ex-Im Bank authorized transactions of approximately \$35.8 billion, which supported approximately \$46.1 billion dollars in U.S. exports. According to the jobs calculation methodology the Bank utilizes (discussed more extensively below), these exports in turn supported approximately 255,000 jobs in the United States in Fiscal Year 2012.⁵

When supporting export financing, the Bank collects fees in return for its support. The Bank is self-sustaining and thus takes in more money than it expends. Its fees are equal to—and usually greater than—the Bank’s expenses, including any losses the Bank may sustain on transactions. From fiscal years 2008 through 2012, Ex-Im Bank transferred \$1.6 billion to the U.S. Treasury, representing fees in excess of losses and costs.⁶

B. Export Credit Agencies

Export Credit Agencies (“ECAs”) are agencies of national governments that provide financial support—in the form of loans, guarantees, or insurance—for exports from their home countries or by companies from their home countries. Ex-Im Bank is the official ECA of the United States. Most of the major industrialized countries have ECAs.

Ex-Im Bank and many ECAs from other countries work through the Organization for Economic Cooperation and Development (the “OECD”) to establish common guidelines for ECAs to follow in supporting exports. These guidelines are generally known as the Arrangement. Within the Arrangement, there is a separate set of guidelines, now known as the Aircraft Sector Understanding, applicable to ECA support for the export of aircraft. As explained in more detail below, these guidelines set out the most favorable financial terms that the Bank is permitted to provide for aircraft purchases.

C. The Aircraft Sector Understanding

Ex-Im Bank, as well as the European ECAs that support sales of Airbus aircraft, participate in the Aircraft Sector Understanding (“ASU”). The predecessor to the ASU was known as the Large

⁵ <http://www.exim.gov/newsandevents/releases/2013/Statement-of-Fred-P-Hochberg-on-Confirmation.cfm>.

⁶ <http://www.exim.gov/newsandevents/releases/2012/export-import-bank-earns-over-803-million-for-taxpayers-during-fiscal-year-just-ended.cfm>.

Aircraft Sector Understanding (“LASU”). The LASU and ASU govern the terms under which the ECAs can provide financing support for export sales of aircraft manufactured in their countries.

One of the major requirements of these agreements is that an ECA must charge a minimum risk fee for its support. This is essentially like an insurance premium. This minimum risk fee translates into a financial cost, much like up front points on a home mortgage or interest on a loan is a financial cost: The higher the risk fee, the higher the financial cost of the transaction. The minimum risk fee has been raised in various iterations of the ASU, in 2007 and again in 2011.

Under the 2011 ASU, which is currently in effect, the risk fee is indexed to a basket of private commercial financing rates. The intention is that the overall financial cost of a transaction supported by an ECA will be equivalent to the overall financial cost of a transaction in the private commercial markets without ECA support. Historically the financial costs of an ECA-supported transaction for the sale of wide-bodied aircraft has been less favorable than the financial costs of an equivalent transaction for U.S. airlines due to aspects of both U.S. tax law and U.S. bankruptcy law that benefitted the parties to these transactions involving U.S. airlines.

Significantly, the ASU also requires that the term of repayment be limited to 12 years and requires full amortization of the loan amount over the term of the financing. In other words, the transaction cannot be structured with a balloon payment at the end of the loan term. In contrast, many private commercial loans for purchasing wide-body aircraft include much longer repayment terms, and allow for variations in the amounts repaid throughout that term. These factors tend to make private commercial financing more attractive than ECA financing.

Today, the dominant commercial financing for purchases of aircraft by U.S. airlines is the enhanced equipment trust certificate (“EETC”). An EETC is a structure whereby investors can provide financing directly through the capital markets, as opposed to loan financing provided by banks. The EETCs provide significant cost advantages to U.S. airlines. The EETC is premised on § 1110 of the U.S. Bankruptcy Code, which only applies to U.S. airlines. Section 1110 permits a secured creditor of an airline in bankruptcy to obtain possession of the creditor’s collateral (*i.e.*, the aircraft) 60 days after the bankruptcy petition date, notwithstanding the automatic stay provision that applies to creditors of other types of debtors. This certainty of access to collateral—and thus to payment—significantly decreases the risk to creditors of U.S. airlines and allows these creditors to provide more favorable financing terms than creditors of foreign airlines (which lack equivalent protections).⁷ In the boom years of 2000 and 2001, U.S. airlines

⁷ Since November 2001 the situation has changed to some degree as a result of the Convention on International Interests in Mobile Equipment, and its Protocol on Matters Specific to Aircraft Equipment - November 16, 2001 (“Cape Town Convention”). If adopted by a country, the Cape Town Convention provides protections to creditors of foreign airlines that are comparable to the protections provided to creditors of U.S. airlines by §1110 of the U.S. Bankruptcy Code. However, an international EETC market that would be available to foreign airlines has only recently begun to develop.

raised \$19 billion in the EETC market purchasing new aircraft. In the economic recovery of 2012-2013, U.S. airlines have raised approximately \$3.2 billion in the EETC market.⁸

D. Ex-Im Bank Support Levels the Playing Field for U.S. Exporters

When Ex-Im Bank considers whether to provide support for a specific transaction, one key determinant is whether foreign ECA support would be available for financing the sales of a foreign competitor to the proposed U.S. exporter. When it comes to wide-body aircraft, such as those at issue in the Air India Transactions, there are only two manufacturers in the world: Boeing in the United States, and Airbus in Europe. Sales of Airbus aircraft are supported by the Export Credit Agencies of the United Kingdom, France and Germany.

ECA support in a specific transaction provides the buyer with the assurance that financing will be available for the purchase. In addition, ECA support assures the buyer that the financing will be on terms generally as favorable as terms provided by the competing ECA. In other words, Ex-Im Bank support assures the buyer that the financing terms for purchasing a U.S.-manufactured aircraft will be just as favorable as the financing terms for purchasing an Airbus aircraft manufactured in Europe. Thus, Ex-Im Bank support levels the playing field with regard to the financing costs of the aircraft, so that the sales competition between Boeing and Airbus can be fair and based on the price and quality of the aircraft.

The converse is true as well: If Ex-Im Bank support is *not* available for a particular transaction, then the competitive advantage tilts to Airbus. In such case, the foreign airline will most likely still purchase an aircraft, but it will be a European-manufactured Airbus aircraft; and it will most likely still use that European-manufactured Airbus aircraft in the same manner as it would have if it had purchased a U.S.-manufactured Boeing aircraft with Ex-Im Bank support. Indeed, many of the foreign airlines that have received Ex-Im Bank support readily switch between Boeing and Airbus and have a mixed fleet of Boeing and Airbus aircraft. Even the very few foreign airlines that traditionally have only either Boeing or Airbus aircraft can be persuaded to switch. Japan Airlines, for example, has recently placed a large order of Airbus aircraft after purchasing almost exclusively Boeing aircraft for the last 40 years.

E. Open Skies Agreements

The implications of aircraft financing must be understood in the context of the overall regulations that govern international airline competition. Generally, provided that there is an open skies agreement between the two relevant countries, airlines from one country may establish routes that fly into another country. India and the United States have such an open skies agreement. An airline from a foreign country may not then fly on to a second destination within the country it is visiting. This is known as cabotage. For example, Air France may fly

⁸ Bloomberg L.P. (2013) EETC senior tranche bond issuances from U.S. airlines using new aircraft as collateral, 1/1/12 to 11/18/13. Retrieved Nov. 18, 2013 from Bloomberg database.

from Paris to New York, but cannot then pick up passengers in New York and then fly to Chicago.⁹ The same rules generally apply to U.S. airlines flying into other countries.

These rules for flights between foreign countries are increasingly governed by bilateral aviation agreements and bilateral “open skies” agreements. The movement toward “open skies” agreements began in the early 1990s with considerable support from the U.S. airlines, which, at the time, were the largest and most successful airlines in the world. Over the past decade, the world has witnessed tremendous growth by foreign airlines in response to the huge economic growth in the emerging markets, led by China. Some of these foreign airlines, pursuant to the “open skies” agreements, have increasingly opened routes to the U.S., and the formerly dominant U.S. airlines have been forced to compete on those routes.

Air India, for example, currently has three routes to the following U.S. cities: New York, Newark, and Chicago. A foreign airline’s routes to the U.S. may change from time to time—sometimes fairly quickly—as demand for travel on those routes changes. Thus, in the past five years, Air India has added three routes but dropped two routes, and has moved to smaller aircraft on some routes.¹⁰

As a consequence of Open Skies agreements, and the restrictions against cabotage, foreign airlines generally only compete directly with U.S. airlines on routes to and from the U.S. For example, since Air India can only pick up passengers on one stop in the U.S., and U.S. airlines can only pick up passengers on one stop in India, direct competition only occurs between Air India and U.S. airlines on flights between the U.S. and India.¹¹ United Airlines is the only U.S. carrier that currently competes directly with Air India. United Airlines flies from Delhi to Newark and from Mumbai to Newark. Ex-Im Bank has not received any complaints from United Airlines regarding its competition with Air India.

In connection with the Air India Transactions, Air India represented to the Bank that it does not intend to use any of the Ex-Im Bank-financed aircraft to fly routes to the U.S. Consistent with that representation, of the ten aircraft delivered to Air India to date in connection with the Air India Transactions, none has been placed on routes flying to the U.S. Thus, Ex-Im Bank’s guarantees in connection with the Air India transactions will not cause any direct competition between Air India and U.S. airlines.

F. The Air India Transactions

On September 30, 2011, the Bank’s Board of Directors approved two applications, numbers AP0-82753[3]XX-India and AP0-82253[4]XX - India, referred to here as the Air India

⁹ The major international U.S. airlines, participate in “alliances” with a group of foreign airlines. They share flight and coding information, and the related revenues, so that one alliance airline can pass off its on-going passengers to another alliance airline. In this way, airlines ameliorate the restrictions on flights within foreign countries.

¹⁰ Air Carriers : U.S. Department of Transportation, Research and Innovative Technology Administration, T-100 International Segment (All Carriers), Available at:

http://www.transtats.bts.gov/DL_SelectFields.asp?Table_ID=261&DB_Short_Name=Air%20Carriers.

¹¹ Open Skies agreements are bilateral, and thus the terms can and do vary. Nonetheless, the description above applies generally.

Transactions. These approvals comprise two final commitments for loan guarantees to be issued to a commercial lender (to be chosen by Air India) for loans of up to \$1.273 billion for the purchase of new Boeing 787 aircraft by Air India.

Salient terms of the Bank's approval of the Air India Transactions include:

- Guarantee Amount: \$1.273 billion;
- The Bank requires the Sovereign Guarantee from the Republic of India;
- The Bank receives first priority liens on the financed aircraft;
- The financing is cross-collateralized by liens on all other Air India aircraft financed by Ex-Im Bank in past transactions; and
- Up to a 12-year term of repayment with full mortgage style amortization of loan.

Ex-Im Bank has not yet issued any guarantees in connection with the Air India Transactions. The ten aircraft delivered by Boeing to Air India to date were supported by short-term "bridge" financing provided by private entities, arranged by the Government of India and Air India. In accordance with its Board approval in 2011, sometime in the coming months Ex-Im Bank is expected to issue its loan guarantees in connection with the long-term financing, to be obtained by Air India, that will replace the bridge financing.

III. Analysis

For the reasons that follow, the benefits of the Bank's guarantees in the Air India Transactions significantly outweigh any potential adverse effects of such guarantees, if, indeed, there are any adverse effects.

A. The Bank's guarantees in the Air India Transactions support sales of U.S.-manufactured wide-body aircraft and related jobs

Ex-Im Bank's guarantees in this matter are expected to help support over 10,000 jobs in the U.S. The manufacture of wide-body aircraft is a highly complex and technical process involving thousands of jobs at the primary manufacturer, as well as at its suppliers throughout the U.S. An appraised market value of a Boeing 787 aircraft is approximately \$116 million. The manufacture of such an aircraft will require a significant supply chain and significant amounts of labor resources.

Ex-Im Bank's jobs estimate methodology is based on the jobs calculation methodology used by the Trade Promotion Coordinating Committee (TPCC). TPCC in turn uses employment data computed by the Bureau of Labor Statistics (BLS) to calculate the number of jobs associated with exports. The BLS produces an input-output table that quantifies the number of direct and indirect production-related jobs associated with a million dollars of final demand for 196 industries and adjusts for an average amount of foreign content per industry. The jobs figure includes "upstream" jobs—for example, suppliers to the exporters in the transaction. By supporting Boeing's sales of wide-body aircraft to foreign airlines, Ex-Im Bank supports jobs not

only at Boeing, but at all of the thousands of suppliers to Boeing. Using the TPCC methodology mentioned above, the Air India Transaction supported approximately 10,700 jobs in the United States.

To obtain this result, Ex-Im Bank followed a methodology that applies the average number of jobs per \$1 million of export value to the value of new transactions that Ex-Im Bank considers. Specifically, Ex-Im Bank uses the following steps to estimate the number of jobs it supports in a specific transaction:

- a) Associate each transaction it authorizes in the fiscal year with the appropriate industry code;
- b) Determine the value of all exports it supports in those transactions by industry code;
- c) Adjust the export value so that it is consistent with the dollar value that the BLS used in constructing its input-output tables, because the BLS data is based on prior years' dollar values;
- d) Multiply the adjusted export value for each industry by the number of jobs that BLS has determined is needed to support \$1 million in exports in each industry;
- e) Add the estimate of jobs across all industries;
- f) Divide the sum from step (e) by the total adjusted export value from step (c). This shows the average number of jobs Ex-Im has supported per \$1 million of exports during a given fiscal year.
- g) Multiply this average by the export value (not by the authorized guarantee amount) of the specific transaction

Using this methodology, the Bank determined that during Fiscal Year 2010, it sustained an average of 7.3 U.S. jobs per \$1 million in exports. Using the methodology explained above, the Bank calculated that the Air India authorization would have sustained approximately 10,700 jobs.

B. The aircraft involved in the Air India Transactions will not directly compete with any U.S. airlines and thus will not have any substantial adverse effect on U.S. industries or U.S Jobs

As noted above, Air India has represented to Ex-Im Bank that it does not intend to use any of the aircraft involved in the Air India Transactions to fly to the United States. Ten aircraft have been delivered based on short-term "bridge" financing, without the involvement of Ex-Im Bank financing. Since delivery of the first of these aircraft, none has been used on U.S.-India routes. Therefore, the specific aircraft-exports being supported by the Bank's guarantees do not, and are not expected to, compete with any U.S. airline. If none of the aircraft directly competes with any U.S. airline, there will not be an "adverse effect" on U.S. airlines within the meaning of the Bank's Charter.

Based on Air India's current and anticipated routes to the U.S., the Boeing 787 would not be the optimal aircraft for Air India to use for those routes. While the 787 is certainly capable of making the trip, it is not the largest aircraft in Air India's fleet that can make the trip. Generally, on a trip of that length an airline would want a larger aircraft, provided, of course, that the demand is sufficient for a larger aircraft. Since the demand for travel between the United States and India is very strong, it is expected that Air India would use other, larger aircraft for its routes between these two countries.

1. Ex-Im Bank's adverse impact analysis properly examines direct competition

In conducting an analysis of adverse economic impact, Ex-Im Bank looks at *direct* competition. This is true for transactions resulting in the production of goods as well as those resulting in the provision of services. Direct competition means competition that results from the Ex-Im Bank-supported U.S. export, and that competes directly with an equivalent U.S. product or service. In the context of the Air India Transactions, direct competition means competition from the specific aircraft being exported and which is flown on a route also flown by a U.S. airline. The basic reason for this approach is that an analysis of indirect competition is too speculative to provide a meaningful determination of adverse impact.

Consider a hypothetical transaction in which the Bank supported an export of equipment to be used by the foreign buyer to manufacture rolled steel. In this scenario, the Bank would examine the adverse effect on U.S. manufacturers of rolled steel. This would be direct competition. However, if the foreign buyer were to sell its rolled steel to a manufacturer of refrigerators, the Bank would *not* examine the potential adverse effects on U.S. manufacturers of refrigerators. That would be indirect competition. An assessment of potential adverse effects of the indirect competition resulting from the sale of the original steel-making equipment would be, essentially, impossible and highly theoretical. Reliance on such speculation would prejudice the original U.S. exporter of the steel-making equipment.

First, in order to analyze the indirect competition resulting from the foreign buyer's manufacture of rolled steel, the Bank would have to analyze hundreds if not thousands of industries that could potentially purchase the foreign buyer's rolled steel to manufacture other products. It would be impossible for the Bank to collect and analyze the data involving so many different industries in any time frame that would be reasonable. It is highly unlikely that Congress, knowing that Ex-Im Bank is an agency of only approximately 400 employees, expected the Bank to undertake such a mammoth task on any transaction, much less on all transactions.

Second, analyzing the competition to U.S. industries from each of those hundreds or thousands of industries purchasing the foreign buyer's rolled steel would involve innumerable variables. For example, in the rolled-steel example, in order to analyze the competitive effect on U.S. manufacturers of refrigerators (to pick just one example), the Bank would have to analyze, among other things: i) shipping costs of refrigerators from the foreign manufacturers' plants to their buyers, as compared to the shipping costs of refrigerators from U.S. manufacturers to their buyers; ii) the relative prices and quality of all the different refrigerator models made by

foreign manufacturers and U.S. manufacturers; iii) applicable tariffs or duty charges to the foreign manufacturer as opposed to the U.S. manufacturer in each of the countries to which each manufacturer could export its refrigerators; iv) labor costs for the foreign manufacturer as compared to U.S. manufacturers; and v) costs and availability of components or other materials necessary to manufacture the refrigerators in each country. These are just a few of the potential variables that would need to be reviewed for *all* of the potential manufacturers of refrigerators that could potentially purchase rolled steel from the original buyer of the steel-making equipment. And this process would have to be replicated across the hundreds or thousands of other industries that could, potentially, purchase the rolled steel from the original buyer of the steel-making equipment.

Needless to say, this would be an impossible burden to undertake on a single transaction. In addition, the difficulty of extrapolating meaningful conclusions increases geometrically as the number of variables increases. Even if the Bank were able to collect all of the hundreds of thousands of data points necessary for analyzing indirect competition, deriving reasonable conclusions about indirect competition would be impossible, because the connection of the Bank's loan guarantee to the decisions of secondary purchasers from the original buyer in the transaction is simply too attenuated.¹²

These complications would be compounded for transactions resulting in the provision of a service, such as the export of aircraft. For several reasons, transactions that result in the provision of a service by the foreign buyer are inherently more difficult to analyze in terms of adverse economic impact. Transactions resulting in the production of a good by the foreign buyer are relatively stable and measurable. Although a factory can be shut down and production moved to another site, this is a costly and relatively prolonged process, and thus the barriers to such change are significant. The far greater likelihood is that a plant, once built, will remain for a significant period of time. In addition, the goods manufactured at that plant can be tracked as they are shipped—and thus the relative trade flows can be more easily analyzed.

On the other hand, transactions resulting in the provision of most services are generally amorphous. There is no manufacturing facility and thus no significant barrier to changing the characteristics of the service very quickly. Airline services are a good example of this principle. Airlines fly routes, but routes can be changed relatively quickly. As noted above, in the past five years, Air India has added three routes to the U.S., dropped two routes, and moved to smaller

¹² The critique that the Bank should not confine itself to direct effects ignores the fundamental difference between the Bank's mission and that of regulatory entities. Regulatory agencies may be required to analyze both direct and indirect impacts of regulatory requirements, including using cost-benefit analysis that contemplates wide-reaching assessments of both direct and secondary benefits and building extensive economic models across a broad range of industries. However, the Bank must align its decision-making process within the prompt timeframes of a commercial transaction and the practical constraints for assessing the economic impact of its transactions, while carrying out its mission to support U.S. exports. Moreover, because the Bank is designed to facilitate U.S. exports in a competitive global market, it is inevitable that all of its transactions could be said to have ripple effects on the U.S. economy. As explained in the text, it is practically impossible to assess all such ripple effects.

aircraft on some routes. In addition, when an airline stops flying a certain route, those aircraft and crews can generally be quickly shifted, either to increase flights on existing routes or to create different new routes. Thus, closing a route is not, in and of itself, evidence of a harm or loss to that airline. On the contrary, it could just as well indicate that the airline has discovered a more profitable use for the aircraft and crew that had been used on the now-closed route.¹³

These inherent features of services make indirect comparisons even less feasible and less fruitful in the services context than in the goods context. For these reasons, the only reasonable approach to analyzing adverse effect in the airline context is to compare direct competition on a “route to route” basis. In the case of aircraft involved in the Air India Transactions, the airline has represented that it does not intend to use any of the aircraft on routes to the United States. Thus, there is no direct competition for purposes of the adverse effect analysis, and no adverse effect on the U.S. airline industry.

2. Objections to Ex-Im Bank’s “route to route” approach are unfounded

Three objections have been made to Ex-Im Bank’s “route-to-route” approach to adverse impact in aircraft transactions: i) even if a Bank-supported aircraft is not flown to the U.S., the Bank’s financing allows the foreign airline to “free up” another aircraft to fly to the U.S., and thus still results in competition with U.S. airlines; ii) indirect route competition should also be included in the analysis; and iii) purchasing newer, more fuel efficient aircraft inherently gives a competitive advantage to foreign airlines. These objections ignore the inherent nature of services, as described above.

Objection One: Even if an aircraft exported with Ex-Im Bank support is not flown to the U.S., it allows the foreign airline to “free up” another aircraft to fly to the U.S., and thus still results in competition with U.S. airlines.

This objection implicitly *assumes* that for every aircraft exported with Ex-Im Bank support, the foreign airline will open a new route to the U.S. or will add aircraft to an existing route. This is an unreasonable assumption. The Bank-financed aircraft may be used to replace existing aircraft rather than expand service, or they may be used on any of hundreds of routes in different parts of the world on which a foreign airline such as Air India could choose to deploy the aircraft. There is no basis for Ex-Im Bank to simply assume that the foreign airline will automatically opt to open routes to the United States or add aircraft to existing routes to the U.S. merely because it has acquired new aircraft. To the contrary, all evidence indicates that new routes are only opened after careful study.

¹³ The amorphous nature of transactions involving services raises the question as to whether there is any meaningful and reliable way to ascertain whether a specific transaction causes or would cause any adverse economic impact on U.S. industries or U.S. jobs. This applies to airlines as well. The malleable nature of airline services calls into question whether adverse impact that arises even from direct competition is permanent or reliably measurable. Nonetheless, in the airline context, adverse impact arising from indirect competition is simply speculative, and therefore the Bank looks to the effects of direct competition as the only feasible way of measuring any adverse impact that may arise.

Moreover, a foreign airline's decision whether to open a new route to the U.S. or to expand its existing service is generally not driven by the number of aircraft in its fleet. There are many reasons why a foreign airline might decide to open a route to the U.S. or to any other destination. One of those reasons might be that the airline has aircraft available or is acquiring new aircraft to establish that route. However, the far more likely reason is that the foreign airline has analyzed the potential traffic on the route, as well as the cost of operating on that route, and has determined that opening or expanding such a route would be a good business venture. This type of analysis is by no means limited to routes to the U.S., especially when one considers the continued expansion of the economies of Asia and other parts of the world, and the consequent growth in demand for air travel.

More importantly, Ex-Im Bank does not have access to the reasons why a foreign airline may decide to open or make changes to a route. The Bank relies on the representation of the foreign airline about its intended use of the aircraft, and limits its analysis to data to which it does have access and from which it can draw reasonable conclusions without venturing into speculation. That is why the Bank limits itself to analyzing the expected direct, head-to-head competition between the foreign airline and U.S. airlines.

The fallacy of this objection to the Bank's "route to route" competition approach is exemplified by Air India itself. Air India's recent history of opening and closing routes does *not* correlate to the number of aircraft it has purchased. In the past five years, Air India has opened three routes and closed two routes to the United States, for a net gain of one route. In addition, it has moved to smaller aircraft on some of these routes because, presumably, it determined that the larger aircraft load factor (i.e., seats filled) was too low. Furthermore, since the delivery of ten of the aircraft actually associated with the Air India Transactions, Air India has not opened any new routes or added to any routes to the U.S. If the objection to the Ex-Im Bank procedures were valid, then one would expect several new or expanded routes to the U.S. since the ten aircraft were delivered. But nothing of the sort has happened. This concrete example shows why Ex-Im Bank's approach of analyzing direct head-to-head competition is the more reasonable approach to follow.

Objection Two: Indirect route competition should also be included in the analysis.

Indirect route competition in this case refers to other routes that a passenger could take to get to the same destination. For example, a foreign airline such as Air India may fly between Mumbai and a U.S. city such as Newark, while a U.S. airline flies between Washington and Mumbai. The argument is that the Air India flight to and from Newark takes passengers away from the U.S. airline flight out of Washington because the Newark passengers otherwise would have gone to Washington to connect to Mumbai.

A second hypothetical scenario is the same, except involving a foreign city. Assume: a) that a U.S. airline has a direct nonstop flight between Newark and Frankfurt and then flies on to Shanghai (assuming also it is permitted to do so under the applicable open skies agreement); b) that Air India has a flight between Newark and Mumbai; and c). that Air India obtains new aircraft with Ex-Im Bank-supported financing and creates a new route from Mumbai to

Shanghai. The argument is that, for passengers that want to get to Shanghai from Newark, the new Air India route flight takes passengers away from the U.S. airline because those passengers now have a competing route to get between Newark and Shanghai, whereas before those passengers were likely to simply take the one-stop flight to Shanghai on the U.S. airline.

The kind of analysis suggested by this objection is untenable. To consider the adverse impact of indirect competition under these scenarios, Ex-Im Bank would be required to analyze the competitive effects of its support on all possible connections on all U.S. airlines between the U.S. and all foreign destinations which could logically be used as a way station to the ultimate destination. Using the foregoing hypothetical example, if Ex-Im Bank supports the sale of aircraft to Air India, then Ex-Im Bank would be required to determine virtually every city in the world to which any U.S. airline flies and from which the passenger could catch one or more connecting flights to cities that also have connecting flights to Mumbai. This approach would require the Bank to analyze hundreds of routes. For each person that travels, there are myriad factors that go into the decision of which flight to take. It would be highly speculative to derive any conclusion about hundreds of such decisions on each of hundreds of different routes.

In the first hypothetical scenario above, it is not reasonable to simply assume that a Newark passenger would necessarily fly to Washington to connect to Mumbai. Perhaps the Newark passenger would not have travelled at all absent a direct flight to Mumbai. Perhaps the Newark passenger would still prefer to fly on a U.S. airline, and so finds other transportation to Washington to catch the flight to Mumbai. Perhaps the departure time of the flight out of Newark is not as convenient as the departure time of the flight out of Washington? Perhaps there is a substantial price difference. Perhaps the passenger in question prefers airlines from his or her own country, no matter which U.S. city is the departure city. This list of “perhaps” could go on and on.

In short, in analyzing adverse impact of aircraft transactions, the Bank analyzes the direct head-to-head competition on specific routes because such an analysis can be done based on reasonably available data that will not require significant speculation in order to arrive at a conclusion that is fair to all interested parties. In this case, there is no anticipated direct competition between Air India and any U.S. airlines arising from the Air India Transactions. In the absence of direct competition, the reasonable approach to the analysis indicates that there will be no adverse impact resulting from the Bank’s loan guarantees in this matter within the meaning of the Bank’s Charter.

Objection Three: Purchasing newer, more fuel efficient aircraft inherently gives a competitive advantage to foreign airlines.

This “objection” to Ex-Im Bank’s mode of analyzing adverse impact is a truism. Naturally, purchasing more fuel-efficient aircraft will give a competitive advantage to any airline that buys them, as compared to any airline that does not buy them. If a U.S. airline makes a conscious decision to continue using its older, less fuel-efficient aircraft, then naturally it will have the relative disadvantage of having greater expenses in flying the older aircraft because fuel costs comprise a substantial portion of the costs of operating an aircraft. However, this “objection” is

akin to saying that hiring more efficient mechanics, or buying a more efficient ticketing and reservation system will give a competitive advantage. Of course they will. These are business choices that all airlines – and, indeed, all businesses – must make all the time. An airline such as Air India must choose between acquiring new, fuel-efficient aircraft and thereby taking on significant debt, or maintaining a fleet of older, less efficient aircraft but keeping its debt low. Air India has chosen the former approach. But this, in and of itself, is not a valid “objection” directed at Ex-Im Bank.

Inherent to this “objection” by a single U.S. airline is the assumption that either: a) the Ex-Im Bank financing induced the foreign airline to purchase the aircraft; or b) in the absence of Ex-Im Bank financing, the foreign airline would not be able to obtain the new, more fuel-efficient aircraft. Both assumptions are patently false.

As noted below, the value of aircraft such as the Boeing 787 aircraft, known as Dreamliners, involved in the Air India Transactions are approximately \$116 million each, and the costs of operating wide-body aircraft over the course of its expected 25 year lifetime exceed \$1 billion. The difference, *if any*, between the cost of ECA financing and the cost of private financing is extremely small in the context of these huge purchase and operating costs. It is highly unlikely that such a difference in financing costs would induce an airline to make a purchasing decision of this magnitude.

As to the ability to obtain the aircraft, Ex-Im Bank is not the only source of financing available. In the Air India Transactions, for example, Ex-Im Bank required the sovereign guarantee of the Government of India. That sovereign guarantee carries the equivalent of an investment grade credit rating. Given the Government of India’s willingness to provide such a sovereign guarantee, there is no reason to believe that Ex-Im Bank would be the only available source of financing. On the contrary, it is abundantly clear that if Ex-Im Bank financing had not been made available to support the export of U.S. manufactured aircraft, then Air India would simply have purchased equivalent aircraft from Airbus, with support from the several European ECAs in Airbus’s home countries.

C. Even assuming, *arguendo*, that Air India were to fly one or more of the aircraft involved to the U.S., the adverse effects on U.S. airlines would be insignificant in the context of airline competition

Because the Bank has determined that only direct competition with U.S. airlines should be analyzed for purposes of determining adverse effects on U.S. airlines under the Bank’s Charter, and because the Air India Transactions will not result in any direct competition with U.S. airlines, the Air India Transactions therefore will have *no* significant adverse effect on U.S. airlines. This determination satisfies the remand from the Court of Appeals, and the analysis could end here.

Nonetheless, the Bank has gone further, hypothetically assuming that some of the aircraft being financed would be flown to the U.S. and would compete directly with U.S. airlines. This hypothetical exercise will help elucidate the logic implicit in an adverse impact analysis relating

to aircraft, and will provide an illustration of the possible magnitude of any such adverse impact if the Air India Transactions were, hypothetically, to result in direct competition. This analysis has three basic steps:

- a) Determine if there is a “pricing advantage” arising out of Ex-Im Bank’s support;
- b) Assess the value of any adverse effects that may result from such a pricing advantage, if any; and
- c) Compare the benefits of the Bank’s guarantees to any adverse effects.

1. Analyze a price advantage

The first step in such a hypothetical analysis is to evaluate whether Ex-Im Bank support of the Air India Transactions would provide any financing cost advantage as compared to financing available to a U.S. airline.

To make the assessment in this first step, Ex-Im Bank compared the Air India Transactions to the most comparable U.S. airline transaction in the private market. Specifically, the Bank compared the financing terms Air India obtained (or could obtain) under the LASU, the 2007 ASU and the 2011 ASU with the financing terms of the September 2007 Southwest Airlines EETC issuance. The 2007 Southwest EETC is the most appropriate comparison for the Air India financing, because the 2007 Southwest EETC is the most recent by a U.S. investment grade airline, and because the aircraft are still far from the end of their operating life. Moreover, EETCs are essentially bonds that are traded on the open market. Consequently, the price at which the EETC trades – known as the “mid-yield” – is an appropriate measure of how the market perceives the credit risk of the EETC and thus provides appropriate data to conduct this analysis at various points in time.

In choosing a comparable EETC, Ex-Im Bank tried to match the credit rating of the airline and the quality of the collateral package with the credit rating of Air India and the collateral package of the Air India Transactions. In the Air India Transactions, Ex-Im Bank classifies Air India as an investment-grade credit because it is backed by the sovereign guarantee of the Government of India. The only comparable U.S. airline is Southwest Airlines because it is the only U.S. investment grade passenger airline. Even in transactions with collateral, the credit risk of the borrower is a significant element in determining the appropriate interest rate to charge. Just as in personal finances, the person with a better credit rating (*i.e.*, lower credit risk) is likely to obtain a more favorable interest rate.

This step of the analysis shows the annualized interest rate spreads over the Treasury rate for: i) Ex-Im Bank financing under each of the three OECD rule regimes (LASU, 2007 ASU, and 2011 ASU), and ii) the Southwest 2007 EETC financing. Each set of interest rate spreads is analyzed for two time periods: x) the date on which the Air India Transactions were authorized in September 2011; and y) September 2013.

Table 1 below summarizes the findings of the analysis. The “Estimated Market Financing for EETC Bond” column shows the annualized interest rate spread for the Southwest EETC, based on the trading levels of the bond for each period analyzed. The “Est. Ex-Im Financing for Air India” displays (i) Air India’s annualized interest rate spread based on typical commercial bank funding it could have obtained and (ii) the financing parameters of each of the three OECD rule regimes.

The difference between the Ex-Im Bank financing and market financing annualized interest rate spreads at the two illustrated times suggest that the Ex-Im Bank-supported Air India financing costs were, at a minimum, 1.4% higher than a comparable EETC issuance, and, at a maximum, 1.75% lower than a comparable EETC issuance.¹⁴

Table 1 - Interest Rate Spread Comparison: Estimated Ex-Im Financing for Air India Under Each of the OECD Rule Regimes Compared to Estimated Market Financing for EETC Bond as Spreads, 2011 and 2013

	Financing Options as Annualized Interest Rate Spreads ¹			
	Estimated Market Financing for EETC Bond ²	Estimated Ex-Im Financing for Air India Under Each OECD Rule Regime ³		
		LASU	2007 ASU	2011 ASU
September 2011	4.06%	2.31%	2.43%	3.07%
September 2013	2.17%	2.00%	2.12%	2.31%

¹ Each financing option reflects the spread over the relevant Treasury base rate.

² Est. Market Financing derived from trading levels of Southwest 2007 EETC bond in secondary market on given date.

³ Est. Ex-Im Financing calculated in accordance with relevant LASU/ASU regime.

¹⁴ It should be noted that these differences do not take into account various factors that make the Air India financing costs higher. These include the cost of the bridge financing for Air India and the financial cost of cross-collateralization required by Ex-Im Bank in the Air India Transactions, but not required in the Southwest 2007 EETC. By requiring Air India to secure these Air India Transactions with *all* aircraft that Air India has ever financed through Ex-Im Bank, the Bank effectively prevents Air India from re-financing those other aircraft. This restricts Air India’s liquidity and thus imposes a financial cost on Air India. The Bank has not factored this in because the value of such a financial cost cannot be reasonably quantified in the absence of a specific financing offer related to those other aircraft.

The analysis uses spreads over the relevant Treasury rate to capture and compare the risk spread. In other words, the general market condition is common to both Ex-Im Bank financing and EETC financing for U.S. airlines. The point of the analysis is to isolate and examine those factors that are not common to both sets of transactions so as to determine which is more favorable. The Bank's pricing comparison made adjustments to the transactions to account for differences such as the Average Weighted Life of the transaction and the Advance Rate (sometimes called the loan-to-value ratio). The Bank then accounted for the fact that the Air India Transactions required a minimum risk premium fee to be paid to Ex-Im Bank. Finally, the Bank also accounted for the cost of capital for the portion of the purchase price that is not financed. Ex-Im Bank's highest Advance Rate was up to 85% of the actual (or "net") purchase price, while EETC transactions can have varying Advance Rates, some of which go higher than 85% of net purchase price. These differences must be adjusted analytically in order to be able to make a true "apples to apples" comparison of the relative pricing advantages of the two transactions.

Because of the difference in structure between Ex-Im Bank financing under the OECD rule regimes and EETC issuances generally, Ex-Im Bank utilized a financial model to make adjustments to the terms of each financing to arrive at comparable interest rate spreads. The full models for each of the spreads listed in Table 1 may be found in Exhibit 1 (under charts A and B), and a full technical explanation of the model can be found in Exhibit 2 (both exhibits are included at the end of this paper).

In the fall of 2011, when Ex-Im Bank authorized the Air India Transactions, the most favorable rate a foreign airline possibly could have obtained would have been a LASU-based interest rate spread of 2.31% (the LASU column for Sept. 2013) compared to an EETC interest rate spread of 4.06% (the EETC column for Sept. 2011). In this comparison, LASU-based financing is 175 basis points (or 1.75%) less expensive than EETC-based financing.

The end of 2011 was a time of a significant spike in interest rates for any but the best borrowers, primarily due to the European sovereign debt crisis, and related European bank crisis. Today, the market dynamics have changed. Thus, doing the same pricing comparison as of today changes the relationship. The result is that EETC financing available to a U.S. airline would be roughly equivalent to the financing available to a foreign airline under any of the 3 LASU or ASU options.

These time-specific comparisons illustrate the theoretical difference between Ex-Im Bank financing under the different LASU and ASU rules and EETC financing available to U.S. airlines in the capital markets. However, these comparisons only indicate the possible range of comparability. In this specific transaction, Air India is only now preparing to obtain long-term financing for the Ex-Im Bank supported aircraft. Hence, the September 2013 row in Table 1 is the best comparison of actual costs of financing because it best reflects the actual, not theoretical, difference in pricing.

Furthermore, EETC financing affords U.S. airlines the flexibility of obtaining financing when the market is most favorable. A U.S. airline obtaining financing from the EETC market can use various tools to wait until the market is more favorable. For certain cash-rich airlines, they can purchase the aircraft with cash, and then re-finance the aircraft on the EETC market at a later point. For those airlines not quite so flush with cash, if the EETC market improves after an initial EETC issuance, those airlines can re-finance on the EETC market at that time. U.S. airlines can also pre-fund a purchase considerably in advance of the actual purchase of the aircraft if they anticipate a down-turn in the market. Thus, in the comparison in Table 1, it is more likely that the row represented by September 2013 is a better representation of the possible differences between EETC financing and Ex-Im Bank financing in the Air India Transactions because any U.S. airline would take advantage of the flexibility of EETC financing to go to that market in the improved conditions represented in 2013. Indeed, it is only since the markets have improved that U.S. airlines seem to be returning to the market to purchase new aircraft.

2. Analyze the trade flow with a hypothetical route

The next step attempts to quantify the possible effects of any pricing advantage on U.S. airlines. For this step of the analysis, Ex-Im Bank studied the effect on a U.S. airline resulting from the hypothetical addition of an Air India direct flight from Washington, D.C. to New Delhi. While no U.S. airline currently flies this route, it is possible to hypothesize that both a U.S. and a foreign airline could choose to fly between the capital cities of two large countries in the future. This hypothetical scenario will assume that a U.S. airline flies this route and provides daily service. This analysis will then examine the magnitude of hypothetical displacement costs imposed on the U.S. airline from the addition by Air India of one competing route using two Boeing 787 aircraft.¹⁵ Displacement cost, in this context, refers to a financial loss to the U.S. airline. We use Boeing 787 aircraft, also called the “Dreamliner,” because those are the aircraft involved in the Air India Transactions.

Before proceeding to the displacement analysis, however, it should be noted that there are reasons to doubt that the availability of Ex-Im Bank financing is likely to affect Air India’s behavior or provide it with a significant competitive advantage.

First, any theoretical financing cost advantage from the Air India Transactions is quite minimal when viewed in the larger context of the high cost of operating the aircraft. As shown in Table 1 above, comparing the LASU rate against EETC financing as of September 2011—the most conservative comparison—produces an interest rate spread of 1.75% (2.31% under the LASU as compared to a market rate of 4.06%). Financing a \$100 million aircraft over 12 years, this financing differential would produce a net savings in total interest of \$12.04 million. Amortized over the expected 25-year life of the aircraft, this total interest expense equates to \$482,000

¹⁵ Daily long-haul routes typically require at least two long-range aircraft, so it is reasonable to assume that two Boeing 787s would be used solely to provide daily non-stop service on this route.

savings per year.¹⁶ The average *annual* cost to operate a commercial wide-body aircraft—including fuel, landing fees, labor charges, maintenance and repairs, etc.—is between \$40 to \$70 million.¹⁷ Savings of \$482,000 per year is thus relatively minimal compared to the overall cost of operating an aircraft and is unlikely to influence an airline’s decision regarding whether to expand its fleet. This is not to suggest that such an effect should be ignored, but its significance must be viewed in the larger context of the cost of operating these aircraft.

Second, the difference is also minimal when viewed on a per-seat basis. Assuming the aircraft will fly only 400 annual trips (another conservative assumption), the conservative estimate of \$482,000 in annual savings results in \$1,205 saved per trip.¹⁸ Assuming the aircraft has 200 seats and averages a 75% load factor, this savings translates to \$8.33 per ticket. In other words, even using the conservative assumptions described above, the difference in financing costs means that each passenger might pay only \$8.33 more on the U.S. airline than the foreign airline financed by the Bank. In the context of a \$1,000 to \$2,000 economy class ticket, a potential \$8.33 difference in price is not likely to affect a passenger’s decision to fly with one airline rather than another. Any competitive advantage provided by Ex-Im Bank financing would likely be minimal.

The methodology for the displacement cost calculation is based on the assumptions set forth below. In assessing the reasonableness of these assumptions the Bank has relied upon decades of experience and knowledge in aircraft finance that it has accumulated over the years. In addition, in this displacement methodology the Bank has attempted to make reasonable conservative assumptions that would tend to increase any possible displacement cost. In other words, the Bank has relied on assumptions that are likely to over-estimate the degree of any adverse effect on competing U.S. airlines. In some cases, it was not feasible to make a conservative assumption, and those cases have been noted.

- a) Focus on economy passengers. When evaluating how many passengers on the current U.S. carrier flight might switch to the new Air India service, the Bank, for the sake of analysis only, assumes that only economy passengers are likely to switch in response to a difference in airfare. Economy passengers tend to be more price sensitive than other consumers and therefore, if there is a difference in ticket prices, are more likely to switch carriers than other passengers. The analysis would become unduly complicated if we were to add business class and first class passengers because there are additional

¹⁶ Ex-Im Bank only provides up to 12 year repayment terms, and thus the interest would only be paid over that period. However, the savings from that hypothetically lower financial cost would be enjoyed over the 25 year expected life of the aircraft.

¹⁷ Operating costs include crew, fuel, maintenance, landing fee, navigation fee, airplane station, and ground power. This is an average figure for operations derived from “Lessors and Appraisers Aircraft Economics Handbook,” September 2013, Created by Boeing Airline Economics Group.

¹⁸ These assumptions for the annual number of trips, number of seats and load factor are all conservatively low assumptions made for simplicity’s sake. The cumulative effect of these assumptions is to generate a relatively high estimate for the amount per seat that a foreign airline saves by using Ex-Im Bank financing. The real per-seat savings is likely lower.

immeasurable factors that could affect any decision by those passengers to switch to a new foreign airline. This assumption may tend to lower the amount of any possible displacement costs. However, in order to compensate for its sole focus on economy class seats, the Bank has, in the next step below, utilized a conservative range of assumptions to estimate how many passengers might switch to the new Air India Service.

- b) Two scenarios for the percent of economy passengers who switch. This analysis uses two percentages, a low estimate and a high estimate, to estimate the possible diversion of passengers away from the U.S. carrier's current service. The low estimate assumes that 10% of passengers would switch to the hypothetical new Air India service in the first year. The high estimate assumes that 20% of passengers would switch in the first year. This range was based on assumptions of passenger traffic displacement submitted by the only U.S. airline that has commented on the issue.¹⁹

There are reasons that the magnitude of displacement is unlikely to be quite so high²⁰. The magnitude of the displacement depends on various factors such as the demand for air travel and the strength of customer loyalty programs such as frequent flyer packages. The demand for air travel could be anticipated growth in demand resulting from general economic growth, especially in the developing economies, or new demand generated by the addition of the new carrier to the route. Given that India is forecast to experience economic growth exceeding most of the rest of the world, there is likely to be considerable growth in demand for air passenger services between India and the U.S. over time. Hence the U.S. carrier flight would very likely be operating at capacity within several years regardless of theoretical U.S. airline passenger shifts in the first year of the new hypothetical Air India service. Accordingly, starting with the 10% and 20% figures for displaced U.S. carrier economy passengers for the first year of the hypothetical new service, this displacement calculation will assume a 1% and 2% *decrease* in displaced passengers, for the low estimate and high estimate, respectively, per year following the initial displacement (of either 10% or 20%) in the first year.²¹

¹⁹ That U.S. airline commented that the range of passenger displacement could be anywhere from 5% to 30% of passengers, but this appeared to be wholly conjectural. The airline did not provide any basis for the figures it proposed. The Bank has rejected the outer points of that U.S. airline's assumption as being outliers, and chosen a range between the outer points of the U.S. airline's assumption.

²⁰ Aircraft such as the Dreamliner cost more than \$100 million to purchase, and cost \$40 to \$70 million to operate annually. It is highly doubtful that an airline would make that kind of capital investment based solely on the hope of stealing existing passengers who currently fly on other airlines. It is much more likely that airlines make these investment decisions based on their own demand analysis, according to which, demand may increase for any number of reasons, including the availability of additional flights.

²¹ Not all economy passengers on the hypothetical Washington DC-New Delhi flight are the same. Some are local passengers who only fly between Washington DC and New Delhi. These passengers are most likely to switch. Other economy passengers will be taking another flight as part of their overall trip. For example, a U.S. passenger may travel from Dallas to New Delhi via Washington, DC. These passengers are less likely to switch because they can purchase tickets for both legs entirely through the hypothetical U.S. carrier. Each group would in theory have a distinct percentage of passengers who would switch carriers when faced with a new competitor on the

- c) Airfare. The revenue loss from the potential displacement each year considers high and low ticket prices of \$1,000 and \$2,000²². This estimate is expensive for an economy fare. Thus, it is a conservative assumption because it assumes a higher displacement loss to the U.S. airline.
- d) Discount Rate. The present value of the revenue loss from potential displacement uses the prevailing Export-Import Bank direct loan interest rate for a 12-year repayment term for the discount rate.²³ This rate is a low rate that is equivalent to the Treasury rate. The lower the rate used as a discount of present value, then the higher the present value will be. Thus, this assumption is also a very conservative assumption that would tend to increase the value of any displacement cost to a U.S. airline in the hypothetical example being analyzed.
- e) Seats and Load Factor. On the hypothetical Washington-New Delhi route, the U.S. carrier uses a Boeing 777-200 aircraft with a seating capacity of 217 economy seats. Assuming an average annual load factor (the ratio of seats filled to total seats) of 81.70%, which is the overall load factor for U.S.- international flights,²⁴ the annual round-trip passengers for this route totals 64,710 passengers.

Applying the foregoing assumptions, Table 2 below shows two ranges of potential revenue loss from displacement of U.S. passengers by the hypothetical new Air India flights, based on the low and high scenarios for passenger switch rates, and for the range of airfares.

Washington, DC-New Delhi route. However, to avoid unnecessary complexity, this analysis assumes that the overall diversion percentage for all economy passengers in the first year lies within the 10% to 20% range, decreasing by 1% and 2%, respectively, every year thereafter. The subsequent decrease in the displacement is based on the assumption that demand for air travel between the United States and India will continue to grow as India continues to grow economically, which is expected.

²² On the NYC to DEL route: Air India charges \$2,162 for a ticket a month in advance and \$1,199 for a ticket two months in advance. (Air India Website <http://www.airindia.com/>, accessed on November 20, 2013)

A one-stop from WAS to DEL on a U.S. carrier costs \$1,463 for a ticket one month in advance. (Price on Delta Airlines; information available on www.kayak.com, accessed on November 20, 2013)

A one-stop from WAS to DEL on a foreign carrier costs \$901 for a ticket one month in advance. (Price on Etihad Airways; information available on www.kayak.com, accessed on November 20, 2013)

²³ August-September 2013 12-year repayment CIRR of 2.71%.

²⁴ See data for 2013 from the Research and Innovation Technology Administration, Bureau of Transportation Statistics. Accessible (average 2012) at http://www.transtats.bts.gov/Data_Elements.aspx?Data=1.

Table 2 - Revenue Loss from Economy Passenger Displacement, Present Value²⁵

	Percent of U.S. Airline Passengers Switching	
	10% initially decrease by 1% a year	20% initially decrease by 2% a year
Airfare = \$1,000	\$32.4 million	\$64.7 million
Airfare = \$2,000	\$64.7 million	\$129.5 million

3. Impact on U.S. Industries and U.S. Jobs

As noted, the foregoing hypothetical analysis makes several conservative assumptions that would tend to tip the analysis towards a finding of adverse impact. Nonetheless, even based on these conservative assumptions, the benefits of the Air India Transactions significantly outweigh any adverse effects.

The benefit to the U.S. economy resulting from the hypothetical transaction above is represented by the total value of two Boeing 787 aircraft exported to India and hypothesized to be used by Air India to create a new route between Washington and New Delhi. On a route such as this, it would take at least two aircraft in order to provide daily service. Therefore, we assume two aircraft. In this case, since the hypothetical involves aircraft from the Air India Transactions, these are assumed to be Boeing 787 Dreamliners. These two aircraft are valued at approximately \$232 million.²⁶ Thus, the benefit to U.S. industry is valued at approximately \$232 million.

The analysis above indicates a potential displacement of U.S. airline services over the 12-year repayment period, which could yield a total cost to the U.S. airline industry within the overall range of \$32.4 million to \$129.5 million.

Subtracting the costs to U.S. industry from the benefits to U.S. industry indicates that this transaction would result in a range of \$199.6 million to \$102.5 million as a net benefit to U.S. industry and U.S. jobs. Using the TPCC calculation method outlined above, the export of two aircraft worth \$232 million supports approximately 1,700 U.S. jobs. It should be noted that if the hypothetical were expanded to include more aircraft being used by Air India to open more routes, the net benefits would still significantly outweigh any adverse effects for the simple reason that the value of the U.S. aircraft being used on such routes would still exceed the adverse displacement costs of such routes on U.S. airlines.

²⁵ The present value was calculated on a quarterly basis.

²⁶ 2013 appraisal of \$116 million for one Boeing 787-8. See *The Guide, Volume 34*, Aviation Specialists Group. September 2013.

4. Ex-Im Bank's Disagreements with Assumptions Posed by A U.S. Airline

One U.S. airline has, through public comments submitted in connection with other airline transactions, made various assumptions about the proper way to conduct a displacement analysis²⁷. Those assumptions are, at a minimum, highly unlikely, and therefore not reasonable. The discussion below describes the questionable assumptions embodied in the approach of the single U.S. airline, along with the Bank's view of each:

- a) **Incorrect Assumption #1:** Ex-Im Bank enables foreign airlines to buy aircraft that would NOT otherwise be purchased by those foreign airlines.

Ex-Im Bank response: Given the competition from Airbus on every sale, supported by the three European ECAs, Ex-Im Bank financing affects only the *sourcing* of an aircraft, not the decision or ability of a foreign airline to purchase an aircraft. As noted above, any pricing advantage there may be to Ex-Im Bank financing is marginal in the context of both the \$116 million appraised market value of a single Dreamliner and the approximate \$40 to \$70 million in *annual* operating costs for a wide-body aircraft. No prudent airline would make an investment of that magnitude, and take on such massive operating costs, based solely on the theoretical savings in financing costs. This is yet another reason why the analysis above is conservative: Any displacement to U.S. airlines that is caused by the purchase of long-range aircraft by a foreign airline is likely to occur regardless of whether the foreign airline is able to obtain Ex-Im Bank financing because the foreign airline would simply purchase European-manufactured Airbus aircraft and operate that aircraft to the U.S.

- b) **Incorrect Assumption #2:** Ex-Im Bank financing induces passenger shifts in a range of up to 30%.

Ex-Im Bank response: Because financing is such a relatively small part of airline operating costs, even the largest hypothesized difference in financing costs would have a small impact on the price of a ticket. As noted above, the highest theoretical pricing advantage from Table 1 results in an annual financing cost savings of \$482,000 per aircraft, which translates to approximately \$8.33 per ticket. In other words, even using the conservative assumptions described above, the difference in financing costs means that each passenger might pay only \$8.33 more on the U.S. airline than the foreign airline financed by the Bank. In the context of a \$1,000 - \$2,000 ticket, a potential \$8.33 difference in ticket price is not likely to affect an economy passenger's decision to purchase a ticket on one airline versus another.

²⁷ This one U.S. airline's comments were submitted together with those of a smaller regional airline, and an airline-related union.

- c) **Incorrect Assumption #3:** U.S. airlines would not take any steps to mitigate their displacement cost losses.

Ex-Im Bank response: It is likely that any U.S. airline affected by any displacement costs would take steps to mitigate if not negate such losses. One example would be that the U.S. airline could shift its aircraft to another route where it could have a higher utilization. In other words, a U.S. airline faced with competition from a foreign airline would likely respond, not by absorbing losses from empty seats or by removing the aircraft from service altogether, but by deploying it on a different, more profitable route. Therefore, even assuming that Ex-Im Bank financing will lead to increased competition from foreign airlines, U.S. airlines more than likely will take steps to minimize any potential harm from such competition. This is yet another reason why any displacement hypothesized by the analysis above is an overly conservative estimate.

D. There is no oversupply in the world market for air travel services.

The one U.S. airline discussed above also asserts that while U.S. passenger demand for long-haul flights has remained level since 2002, Ex-Im Bank financing has encouraged foreign airlines to add capacity that they otherwise would not have added, thereby creating oversupply in the market. This assertion is incorrect.

First, Ex-Im Bank financing does not encourage foreign airlines to add capacity. Financing is far too small a factor to affect the decision to purchase highly expensive aircraft such as the Dreamliner. Even assuming, *arguendo*, that a significant pricing advantage existed, the financial benefit of such an advantage would be minimal as compared to the overall cost of operating wide-body aircraft and operating an international airline. As noted above, the appraised value of a Boeing 787 Dreamliner is approximately \$116 million. In addition, the approximate annual operating costs for a wide-body aircraft are an additional \$40 to \$70 million.²⁸ Over the 25 year expected life of an aircraft, these operating costs are \$1 billion to \$1.75 billion. In the face of these huge investments and expenses, it is highly improbable that the availability of Ex-Im Bank financing would encourage foreign airlines to add capacity that they otherwise would not add absent Ex-Im Bank financing. While the availability of financing can influence an airline's choice of manufacturer (Boeing versus Airbus), the airline's decision to make hugely expensive aircraft investments occurs well before (and is separate from) the airline's decision how and where to seek financing. Based on Ex-Im Bank's knowledge of the airline industry, only after an airline decides to purchase large aircraft do the issues of sourcing and financing options come into play.

Second, the Bank's outside experts have concluded that there is no oversupply in the international airline market. For the purpose of evaluating whether the relevant market is

²⁸ As noted above, the operating costs are in addition to the financing costs of the aircraft.

likely to be in “surplus,”²⁹ Ex-Im Bank determines whether there exists “structural oversupply” in the global marketplace. “Structural oversupply” refers to a long-term chronic excess of supply compared to demand, resulting from non-market factors such as government subsidies, ECA financing, control of landing rights and other matters. Structural oversupply is an ongoing dynamic in which non-commercial influences are so powerful and endemic in the industry that global capacity in the industry, over the long-term, stabilizes at levels well above those warranted by long-run market forces. In the aviation field, non-commercial influences could include government actions such as subsidies or route allocations.

In 2013, Ex-Im Bank engaged a recognized, independent expert in the aviation field, ICF SH&E, to determine whether there is a structural oversupply in the global air transport industry. To conduct its oversupply analysis, ICF SH&E looked at a number of factors, including what non-commercial influences exist in the global airline industry that could have a long-term impact on supply, and whether these influences exist to such a degree that they adversely and significantly affect global supply. Examples of some of these non-commercial influences included: subsidies; international Air Service Agreements; price controls; ownership restrictions; and enforcement or lack of enforcement of safety and security regulations. The expert report issued concluded that ICF SH&E “do[es] not believe that non-market interventions, when taken collectively, are likely to cause a dominant, significant and adverse long-term impact on oversupply on the global air transport industry during the 2013 – 2015 period.”

The one U.S. airline alleging that there is oversupply in the world airline market has asserted that, as compared to other industries, the capital investments by airlines yield a very low return. The suggestion is that this low return on investment necessarily is caused by an oversupply of aircraft. The logic appears to be that airlines could derive a higher return on investment if there were fewer aircraft in the market. In other words, this airline wants to restrict the supply of aircraft so that it can raise its ticket prices. Moreover, this argument assumes that the only factor impacting airline industry returns is the size of global commercial aircraft fleet relative to worldwide travel demand. In fact, a number of factors, including product quality, management quality, regulatory policies, and others, also impact worldwide airline returns. As such, it does not necessarily follow that a low level of airline industry return is, by itself, indicative of global commercial aircraft oversupply.

²⁹ The term “surplus” is set forth in Section 2(e)(1)(A)(i) of the Bank’s charter. The Bank interprets this provision to refer to “structural” oversupply. It does so because markets are cyclical and fluctuates constantly between oversupply and undersupply. Sometimes supply exceeds demand (oversupply) and then the market adjusts and demand exceeds supply (undersupply) and then back again. If Congress intended the Bank to halt support of transactions in which the market in question is in “cyclical” oversupply, the Bank would have to monitor hundreds of different markets in such a way that the Bank could react immediately when that market went into “surplus.” In most cases, by the time the Bank could have investigated, the relevant market would have long-since adjusted itself. Thus, any interpretation that requires the Bank to rely on cyclical oversupply would directly contradict the numerous Congressional directives to support U.S. exports. Since cyclical surplus is caused by market forces, Congress must have meant - structural oversupply only. Hence, the Bank applies the concept of “structural” oversupply—namely, surplus that is caused by non-market forces—to its analysis.

Finally, even if one were to examine indicators of *cyclical* oversupply, the weight of the evidence indicates that the airline industry is not in cyclical oversupply. Specifically, in the past 20 years there has been consistent growth in demand for air travel, and that growth continues today; over the past several years, the “load factors” (*i.e.*, how full the aircraft is) have continued to increase steadily; the numbers of aircraft in “parked fleets” (*i.e.*, available aircraft not being used) is very low and has continued to decline; and utilization rates of aircraft (*i.e.*, how frequently an aircraft is actually used) is on a continued upswing. All of these factors reinforce the conclusion that even cyclical oversupply does not currently exist.

Conclusion

Even making several conservative assumptions regarding adverse impact, the thousands of jobs in the United States supported by the Air India Transactions far outweigh any minimal adverse effect on U.S. industries and U.S. jobs that might be hypothesized.

November 22, 2013

Export-Import Bank of the United States
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Glossary

<p>“Adverse Economic Impact”</p>	<p>is the short-hand term used to refer to any serious negative effects on U.S. industries or U.S. jobs, as set forth in the Bank’s Charter, that result from Ex-Im Bank loans, guarantees or insurance. The Bank’s Charter contains three provisions that address adverse economic impact, found at: 12 U.S.C. §§ 635(b)(1), 635a-2; 635(e)</p>
<p>“Air India”</p>	<p>is an airline owned by the Government of the Republic of India.</p>
<p>“Air India Transactions”</p>	<p>are the two final commitments, approved by Ex-Im Bank on September 30, 2011, for loan guarantees for the purchase of a number of 787 “Dreamliner” aircraft from Boeing, and to be financed by a commercial lender not identified at the time. As of the date of this paper, Ex-Im Bank has not issued any of its loan guarantees, but is expected to do so in the coming months. Ten of the aircraft involved in these two final commitments have been delivered to Air India and are in use by Air India on routes outside the United States. The deliveries of the ten aircraft were made using private short-term financing as to which Ex-Im Bank had no involvement.</p>
<p>“Airbus”</p>	<p>Airbus SAS is a Europe-based manufacturer of large commercial aircraft. Airbus is the only competitor to Boeing, the U.S. manufacturer. Airbus sales are supported by the ECAs of Germany, France, and the U.K.</p>
<p>“Aircraft Sector Understanding”</p>	<p>also known as the ASU, is an agreement among members of the OECD that manufacture aircraft and Brazil. The ASU requires that Export Credit Agencies that support the export of aircraft follow certain rules and restrictions that set forth the most favorable terms that can be provided. These rules and restrictions include: the Export Credit Agency must charge a minimum risk premium which is determined by the ASU; the term of any loan made by or supported by the Export Credit Agency for the purchase of aircraft cannot exceed 12 years; the Export Credit Agency today can lend or guarantee only up to 85% of the actual purchase price of the aircraft being exported, and the use of risk mitigants. The ASU was preceded by the Large Aircraft Sector Understanding which governed these issues until the enactment of the 2007 ASU. The ASU was again updated and revised in 2011. (See also the Large Aircraft Sector Understanding.)</p>
<p>“Arrangement”</p>	<p>is the agreement among Export Credit Agencies governing the terms by which they will provide loans, guarantees or insurance in support of exports from their respective countries. Among other things, the Arrangement requires Export Credit Agencies</p>

	to charge a minimum risk premium, which is governed by the Arrangement. See also Organization for Economic Cooperation and Development.
“ASU”	see Aircraft Sector Understanding.
“Average Weighted Life”	for purposes of this paper, refers to the average number of years that each dollar of unpaid principal on a loan remains outstanding. For example, a loan with equal principal payments throughout the loan term will have an average weighted life close to the middle of the whole loan term.
“Bank Act”	is the Export-Import Bank Act of 1945, 12 U.S.C. §635, as amended.
“Bank Advisory Committee”	is the official Advisory Committee of the Bank appointed in accordance with the Bank Act and the Advisory Committee Act. The Bank Advisory Committee is comprised of representatives of various industry and market sectors, as well as representatives of labor and international trade experts.
“Basis points”	are a numerical measure applied to interest rates. One basis point equals 1/100 th of one percent; or 100 basis points equals one percent.
“Capital Equipment”	is equipment used to manufacture a product, provide a service, or sell, store or deliver merchandise. A wide-body aircraft is a piece of capital equipment.
“Charter”	is the Bank Act and the provisions of the Export-Import Bank Reauthorization Act of 2012 (P.L. 112-122) that are not codified in the Bank Act.
“Dreamliner”	is the name given to a Boeing 787 wide-body commercial aircraft.
“ECA”	see Export Credit Agencies
“Economic Impact Procedures”	are procedures adopted by Ex-Im Bank to assess whether transactions supported by the Bank cause a serious adverse economic impact to U.S. industries and U.S. jobs. See also Adverse Economic Impact.
“EETC”	see Enhanced Equipment Trust Certificate.
“Enhanced Equipment Trust Certificate”	also known as an EETC, is a type of secured bond issued by a borrower in the capital markets. The EETC is secured by the equipment being purchased with the proceeds of the bond issuance. EETCs are used primarily for aircraft and since the late 1990s has been the dominant financing tool used by U.S. airlines to purchase aircraft. Section 1110 of the U.S. Bankruptcy Code—which allows creditors of aircraft borrowers to obtain their collateral within 60 days if the payments on their debt is not current – has provided creditors of U.S. airlines a level of comfort not available to creditors of foreign airlines until

	recently. This generally provided U.S. airlines with a significant financial advantage vis a vis their foreign competitors. Recently the adoption of the Cape Town Convention and the related Aircraft Equipment Protocol has provided creditors of foreign airlines with protections similar to the protections provided by section 1110 of the U.S. Bankruptcy Code. Recently this has led to the beginnings of an international EETC market.
“Equipment Trust Certificate”	also known as an ETC, was the predecessor to the Enhanced Equipment Trust Certificate.
“ETC”	see Equipment Trust Certificate
“Ex-Im Bank” or “Bank”	See: The Export-Import Bank of the United States
“Export Credit Agencies”	are agencies or ministries of government that have the official role of providing loans, guarantees or insurance in support of exports from their respective countries, or in support of exports by sales of companies from their respective countries. Ex-Im Bank is the official Export Credit Agency of the United States of America.
“exportable goods screen”	is a screen or filter adopted by Ex-Im Bank in its 2001 Economic Impact Procedures. The exportable goods screen is utilized, along with other screens, to balance the Bank’s obligation to consider the adverse economic effects of its transactions on U.S. industries and U.S. jobs with the Bank’s mandate to support U.S. export transactions in a timely manner so as to fully support the exporter’s business opportunity. The exportable goods screen filtered out transactions that supported exports which could only be used by a foreign buyer to provide services, rather than produce goods
“Export-Import Bank of the United States”	is an independent agency of the Federal Government of the United States of America. Also known as “Ex-Im Bank”. Ex-Im Bank’s mission is to support U.S. jobs by supporting U.S. exports. See 12 U.S.C. 635 <i>et seq.</i>
“Exposure Fee”	is the risk premium charged by Ex-Im Bank in exchange for its guarantee in certain transactions. The exposure fee must be at least equal to the minimum risk premium required by the terms of the Arrangement and the Aircraft Sector Understanding.
“Foreign Sales Corporation”	is a company created under the terms of a former provision of the U.S. Internal Revenue Code. Foreign Sales Corporations received significant tax benefits.
“FSC”	see Foreign Sales Corporation
“Investment Tax Credit”	is a credit permitted under the U.S. Internal Revenue Code for the purchase of certain types of equipment in certain circumstances. See also Leveraged Leases
“KfW”	the development bank for the Federal Republic of Germany.

	KFW is an Export Credit Agency, but it also operates through a “market window” which is not subject to the Home Market Rule. Thus, KFW provides support to Airbus for its sales of aircraft to U.S. airlines. The United States does not have an equivalent institution and Ex-Im Bank does not have a “market window”.
“Large Aircraft Sector Understanding”	also known as LASU, was the predecessor to the Aircraft Sector Understanding. The LASU governed the same general issues as are set forth in the Aircraft Sector Understanding except that the minimum risk premium was lower than that required in the 2007 ASU and 2011 ASU. When the 2007 ASU was enacted, grandfathering provisions allowed ECA-supported financing for a limited number of aircraft to be governed by LASU.
“LASU”	see Large Aircraft Sector Understanding.
“Leveraged Lease”	is a lease of equipment and is designed to allow the lessor to take advantage of certain tax code provisions, such as the depreciation deduction and the investment tax credit, while allowing the lessee to obtain the equipment involved at a significantly lower cost. Leveraged Leases were a very popular means for U.S. airlines to acquire aircraft throughout the 1980s and 1990s. The value of the tax deductions to the lessor were significant so that the implicit interest rate in the lease payments by the U.S. airline were extremely low. Usually the U.S. airline did not have sufficient profit to take advantage of the favorable tax code provisions. By using a leveraged lease, another company that could shelter income by using the tax code provisions would buy the equipment and lease the equipment to the U.S. airline. Usually, at the end of the lease term, the U.S. airline would purchase the aircraft.
“LIBOR”	is the London Inter-bank Offering Rate. It is commonly used as a reference rate in loan transactions that have floating, or adjustable, interest rates. LIBOR reflects the rate at which banks will lend money to each other. LIBOR is set for various loan terms (e.g., 3 months, 6 months, etc) and is widely published, making it a convenient rate to use as a reference rate.
“Net price”	is the price paid after all discounts have been deducted. The net price is the actual price paid for a piece of equipment. In aircraft transactions, pursuant to the ASU, Ex-Im Bank will only support up to 85% of the net price of an aircraft. EETC transactions, on the other hand, often support the nominal purchase price of an aircraft, and thus result in a significantly higher amount financed.
“OECD”	see the Organization for Economic Cooperation and Development.

Open Skies Agreement	Is a type of bilateral agreement between countries that govern the rights of airlines from the two countries to fly into the other country. Open Skies Agreements generally allow free access to fly as many routes to a country as an airline may choose, but then usually restrict the ability to fly within the other country. Generally it is a “fly in and out” rule, although there are exceptions.
“Organization for Economic Cooperation and Development”	also known as the OECD, is an organization comprised of 34 member countries that work together to promote development. The United States is a member. With regard to Ex-Im Bank, the OECD is the organization through which the U.S. Government negotiates an agreement among Export Credit Agencies known as the Arrangement and the ASU (and its predecessor, the LASU).
“Pass Through Certificate”	also known as a PTC, is a group of Equipment Trust Certificates pooled together to form the basis for a bond issuance.
“PTC”	See Pass Through Certificate
“Ryanair”	is a low-cost Irish airline that began business after European deregulation of airlines in 1997. Ryanair rapidly expanded during the first decade of the 2000s, creating significant competition for other airlines.
“Screens”	are a type of filter used by Ex-Im Bank in its Economic Impact Procedures. Screens are designed to identify those transactions which are not likely to cause an adverse economic impact to U.S. industries or U.S. jobs, so that such transactions can be processed more quickly and efficiently as required by the Bank Act.
“Substantial Injury”	is a term defined in Ex-Im Bank’s Charter to be applied in connection with the Bank’s economic impact procedures. 12 U.S.C. §635(e)(4). The Charter states “...the extension of any credit or guarantee by the Bank will cause substantial injury if the amount of the capacity for production established, or the amount of the increase in such capacity expanded, by such credit or guarantee equals or exceeds 1 percent of United States production”.
“TPCC”	see Trade Promotion Coordinating Committee.
“Trade Promotion Coordinating Committee”	also known as the TPCC, is an interagency committee of the U.S. Government, chaired by the Secretary of Commerce. It was established under the Export Enhancement Act of 1992 to provide a unifying framework to coordinate the export promotion and export financing activities of the U.S. government and to develop a government-wide strategic plan for carrying out such programs.
“Trade Sanctions”	refers to any of a number of sanctions imposed by the U.S. Government against companies, countries, industries, or

	<p>products, usually as a result of an accusation of adjudication of a violation of an international trade agreement. The Bank Act requires Ex-Im Bank to take certain trade sanctions into account in its economic impact procedures.</p>
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Market (EETC) and Ex-Im (Air India) Pricing Comparison: at Air India's Authorization (September 2011)

Line Item		Definition and/or note	Market Pricing (EETC)	Ex-Im Financing (Air India)		
			<i>LUV 2007-1</i> ¹ (trading level on 9-30-11)	<i>LASU</i>	<i>2007 ASU</i>	<i>2011 ASU</i>
Original Values	Airline credit rating	Rating of airline/obligor & ASU risk category	BBB ²	N/A ³	1 ⁴	1 ⁵
	Average weighted life (AWL)	Term of AWL	6.83 ⁶	6.25 ⁷	6.25 ⁷	6.25 ⁷
	Advance rate	Estimated Loan-to-Value (LTV)	81.3% ⁸	85.0% ⁹	85.0% ¹⁰	80.0% ¹¹
	Adjusted advance rate	LTV adjusted to reflect total financing package	100.0% ¹²	100.0% ¹²	100.0% ¹²	100.0% ¹²
Adjustments	Nominal interest rate	Interest rate on A tranche (EETC) and commercial bank rate (ASU)	5.28% ¹³	2.50% ¹⁴	2.50% ¹⁴	2.50% ¹⁴
	Cost of Risk Mitigant	Average cost of one "A" risk mitigant	N/A ¹⁵	0.07% ¹⁶	0.07% ¹⁶	N/A ¹⁷
	Cost of Commitment Fee	Required under the 2011 ASU Transitional Arrangements	N/A ¹⁸	0.05% ¹⁹	0.03% ²⁰	N/A ²¹
	Risk fees as spread	L/ASU Risk premium for borrower	N/A ²²	0.49% ²³	0.66% ²⁴	1.37% ²⁵
	Explicit interest rate	Nominal rate plus fees	5.28% ²⁶	3.11% ²⁷	3.25% ²⁸	3.87% ²⁹
	Internal Cost of Capital	Interest rate on B tranche	6.19% ³⁰	6.19% ³⁰	6.19% ³⁰	6.19% ³⁰
Total interest rate, fixed rate basis		Blended rate (weighted explicit rate and corporate cost of capital) on fixed rate basis	5.45% ³¹	3.57% ³²	3.69% ³³	4.33% ³⁴

Final Rate	Treasury base	Interpolated Treasury rate	-1.39% ³⁵	-1.26% ³⁶	-1.26% ³⁶	-1.26% ³⁶
	<i>Total interest rate, spread basis</i>	<i>Total interest rate less Treasury base (bps)</i>	406 ³⁷	231 ³⁸	243 ³⁸	307 ³⁸
				{297} ³⁹	{310} ³⁹	

Footnotes

- 1 This analysis uses the Southwest (LUV) 2007-1 EETC as a proxy for comparing pricing available to an investment grade U.S. airline in the market to the pricing that an investment grade airline could obtain under the ASU. Because Southwest is the only investment grade U.S. passenger airline, EETCs issued by this airline are the only appropriate proxies for comparison. The most recent Southwest EETC was issued in 2007 ("LUV 2007-1"). This analysis makes use of current trading levels of LUV- 2007-1 as the reference cost for U.S. airline. However, there are significant limitations associated with using this specific EETC issuance due to its age. For example, LUV 2007-1 was four years old when trading at the levels used in this analysis, and the EETC structure has evolved since the bond's issuance, specifically with regards to cross-default and cross-collateralization features. Further, the underlying collateral in the bond (737-700) is less marketable now with the introduction of newer and more fuel efficient narrow-body aircraft (A320Neo and B737MAX). Nonetheless, given that the risk fees charged under the 2011 ASU depend on the credit rating of the airline, it is necessary to use an EETC issued by an investment grade U.S. airline as the reference basis. Analytical exercises designed to isolate the implications of these specific credit quality differences on the spread basis indicate that the spreads exhibited in this bond could easily be higher than a post-2009 EETC with the same term and security for the same airline.
- 2 Fitch rated Southwest (LUV) as "BBB" in 2011 (and as an "A" when the EETC was issued in 2007).
- 3 Risk rating of obligor not required under LASU.
- 4 The Government of India, Guarantor for the Air India transaction, classified as risk category 1 under the 2007 ASU.
- 5 The Government of India, Guarantor for the Air India transaction, classified as risk category 1 under the 2011 ASU.
- 6 Average weighted life for A tranche of LUV 2007-1 based on avg. life date of July 2018.
- 7 Standard AWL for LASU, 2007 ASU, and 2011 ASU
- 8 Estimated Current Market LTV. Class A tranche LTV per LUV 2007-1 EETC = 65%; adjusted to estimated current market value by adding standard 25% increase in initial LTV (from prospectus) to JPM's current market value (CMV) LTV: $[65% + (.25 * 65%)] = 81.3%$
- 9 Maximum advance rate of 85% allowable under LASU
- 10 Standard advance rate for 2007 ASU
- 11 Standard advance rate for 2011 ASU Risk Category 1 (investment grade) buyers
- 12 Adjusted advance rate to equal total financing package of 100% of cost of aircraft
- 13 Average of Bid Yield (5.451%) and Offer Yield (5.116%) for A tranche LUV 2007-1 secondary pricing as of 03-Oct-11 per the JPM EETC Trading Market Update.
- 14 Rate generated using Bloomberg swap manager (SWPM)--value shown swaps the commercial bank LIBOR into fixed Treasury on 30-Sep-11 with maturation date (30-Sep-23) and adds 72 bp spread (average margin benchmark spread on US Ex-Im aircraft deals excluding capital markets issuances + 22 bps per JPM derivatives desk advice); Bloomberg swap manager generated 2.49515% in par coupon field.
- 15 Mitigant fees not charged under EETC
- 16 Estimated cost of obtaining the Government of India sovereign guarantee, which Ex-Im assumes is equivalent to the cost of one risk mitigant under the 2011 ASU regimes. Note that the cost of risk mitigants is debatable with 7 basis points (bps) being a conservative (low) estimate; an alternative Ex-Im analysis using the 2011 ASU MPR calculator model indicates the cost of one risk mitigant to be 5 bps.
- 17 Mitigant fees not charged under 2011 ASU.

- 18 Commitment fee not charged under EETC.
- 19 Under the 2011 ASU Transitional Arrangement for LASU transactions, a commitment fee of 35 bps per annum is required to be charged from the earlier of the date of the final commitment or 31-Mar-11, until the aircraft is delivered. Using the anticipated delivery date by which all aircraft financed under the LASU transaction were anticipated to have been delivered—and the Ex-Im financing supporting these aircraft would have been disbursed—on December 31st, 2012, this analysis charges an annualized cost of 5.1bps per year over the total 12 year aircraft financing. (Calculation of 5.1bps figure: March 31, 2011 – December 31, 2012 = 1 year, 9 months. At 35bps per year over the 1 year 9 months a total of 61.25bps commitment fee will be accrued. 31.25bps divided by 12 years = 5.1bps per year over the 12 year financing.)
- 20 Under the 2011 ASU Transitional Arrangement for 2007 ASU transactions, a commitment fee of 20 bps per annum is required to be charged from the earlier of the date of the final commitment or 31-Jan-11, until the aircraft is delivered. Using the anticipated delivery date by which all aircraft financed under the 2007 ASU transaction were anticipated to have been delivered—and the Ex-Im financing supporting these aircraft would have been disbursed—on December 31, 2012, this analysis charges an annualized cost of 3.19bps per year over the total 12 year aircraft financing. (Calculation of 3.19bps figure: January 31, 2011 – December 31, 2012 = 1 year, 11 months. At 20bps per year over the 1 year 11 months a total of 38.3bps commitment fee will be accrued. 38.3bps divided by 12 years = 3.19bps per year over the 12 year financing.)
- 21 Commitment fee not charged under 2011 ASU.
- 22 L/ASU risk fees not charged under EETC.
- 23 3% upfront LASU fee on a per annum basis yields a spread of 49bps using the 2007 ASU fee calculator model and the LASU rate for the period of 21-Sep-11 through 04-Oct-11
- 24 Using the 2007 aircraft fee calculator, translate the 4.00% upfront fee for Category 1 buyer into a per annum spread based on the applicable ASU CIRR (2.83) on 30-Sep-11.
- 25 risk fees as spread for Category 1 airline for the period of Q3 2011
- 26 = nominal interest rate + no fees = 5.28%
- 27 = 2.5% + 0.07% + 0.05% + 0.49% = 3.11% (nominal interest rate + cost of risk mitigant + cost of commitment fee + risk fees as spread)
- 28 = 2.5% + 0.07% + 0.03% + 0.66 = 3.25% (nominal interest rate + cost of risk mitigant + cost of commitment fee + risk fees as spread)
- 29 = the nominal interest rate, or the commercial bank rate, plus the ASU risk fee as a spread (2.50% + 1.37% = 3.87%)
- 30 Average of Bid Yield (6.368%) and Offer Yield (6.004%) for B tranche LUV 2007-1 secondary pricing as of 03-Oct-13 per the JPM EETC Trading Market Update. Use coupon rate on B tranche as proxy for estimated internal cost of capital to be used for remaining financing beyond LTV/advance rate
- 31 = weight nominal interest rate as portion adjusted LTV is of 100% financing, and corporate cost of capital rate as difference between adjusted LTV and total 100% financing (5.28%*.813)+(6.19%*.187) = 5.45%
- 32 = weight nominal interest rate as portion advance rate is of 100% financing, and corporate cost of capital rate as difference between advance rate and total 100% financing (3.11%*.8)+(6.19%*.2) = 3.57%
- 33 = weight nominal interest rate as portion advance rate is of 100% financing, and corporate cost of capital rate as difference between advance rate and total 100% financing (3.25%*.85)+(6.19%*.15) = 3.67%
- 34 weight nominal interest rate as portion advance rate is of 100% financing, and internal cost of capital rate as difference between advance rate and total 100% financing (3.87%*.8)+(6.19%*.2) = 4.33%
- 35 interpolated 6.83 year Treasury on 30-Sep-11 (to match AWL of LUV 2007-1) to determine total interest rate on a spread basis
- 36 interpolated 6.25 year Treasury on 26-Sep-13 (to match standard L/ASU AWL) to determine total interest rate on a spread basis
- 37 = total market financing reflected on a spread basis (after removal of Treasury base)
- 38 = total Ex-Im financing reflected on a spread basis (after removal of Treasury base)
- 39 = total LASU/2007 ASU interest rate reflected on a spread basis (after removal of Treasury base) where estimated cost of attaining the Government of India sovereign guarantee is 85 bps as opposed to 7 bps. See footnote # 16 above.

Exhibit 1: Chart B

Market (EETC) and Ex-Im (Air India) Pricing Comparison: currently (September 2013)

Line Item		Definition and/or note	Market Pricing (EETC)	Ex-Im Financing (Air India)		
			LUV 2007-1 ¹ (trading level on 9-26-13)	LASU	2007 ASU	2011 ASU
Original Values	Airline credit rating	Rating of airline/obligor & ASU risk category	BBB ²	N/A ³	1 ⁴	1 ⁵
	Average weighted life (AWL)	term of AWL	4.83 ⁶	6.25 ⁷	6.25 ⁷	6.25 ⁷
	Advance rate	Estimated Loan-to-Value (LTV)	81.3% ⁸	85.0% ⁹	85.0% ¹⁰	80.0% ¹¹
	Adjusted advance rate	LTV adjusted to reflect total financing package	100.0% ¹²	100.0% ¹²	100.0% ¹²	100.0% ¹²
Adjustments	Nominal interest rate	coupon on A tranche (EETC) and commercial bank rate (ASU)	3.29% ¹³	3.03% ¹⁴	3.03% ¹⁴	3.03% ¹⁴
	Cost of Risk Mitigant	Average cost of 1 "A" risk mitigant	N/A ¹⁵	0.07% ¹⁶	0.07% ¹⁶	N/A ¹⁷
	Cost of Commitment Fee	Required under the 2011 ASU Transitional Arrangements	N/A ¹⁸	0.08% ¹⁹	0.05% ²⁰	N/A ²¹
	Risk fees as spread	L/ASU Risk premium for borrower	N/A ²²	0.50% ²³	0.66% ²⁴	0.98% ²⁵
	Explicit interest rate	nominal rate plus fees	3.29% ²⁶	3.68% ²⁷	3.81% ²⁸	4.01% ²⁹
	Internal Cost of Capital	coupon on B tranche	4.63% ³⁰	4.63% ³⁰	4.63% ³⁰	4.63% ³⁰
	Total interest rate, fixed rate basis	Blended rate (weighted explicit rate and corporate cost of capital) on fixed rate basis	3.54% ³¹	3.82% ³²	3.94% ³³	4.13% ³⁴

Final Rate	Treasury base	Interpolated Treasury rate	-1.37% ³⁵	-1.82% ³⁶	-1.82% ³⁶	-1.82% ³⁶
	Total interest rate, spread basis	Total interest rate less Treasury base (bps)	217 ³⁷	200 ³⁸	212 ³⁸	231 ³⁸
				{267} ³⁹	{278} ³⁹	

Footnotes

- 1 This analysis uses the Southwest (LUV) 2007-1 EETC as a proxy for comparing pricing available to an investment grade U.S. airline in the market to the pricing that an investment grade airline could obtain under the ASU. Because Southwest is the only investment grade U.S. passenger airline, EETCs issued by this airline are the only appropriate proxies for comparison. The most recent Southwest EETC was issued in 2007 ("LUV 2007-1"). This analysis makes use of current trading levels of LUV- 2007-1 as the reference cost for U.S. airline. However, there are significant limitations associated with using this specific EETC issuance due to its age. For example, LUV 2007-1 is currently six years old and the EETC structure has evolved since the bond's issuance, specifically with regards to cross-default and cross-collateralization features. Further, the underlying collateral in the bond (737-700) is less marketable now with the introduction of newer and more fuel efficient narrow-body aircraft (A320Neo and B737MAX). Nonetheless, given that the risk fees charged under the 2011 ASU depend on the credit rating of the airline, it is necessary to use an EETC issued by an investment grade U.S. airline as the reference basis. Analytical exercises designed to isolate the implications of these specific credit quality differences on the spread basis indicate that the spreads exhibited in this bond could easily be higher than a post-2009 EETC with the same term and security for the same airline.
- 2 Fitch rated Southwest (LUV) as "BBB" in 2011 (and as an "A" when the EETC was issued in 2007).
- 3 Risk rating of obligor not required under LASU.
- 4 The Government of India, Guarantor for the Air India transaction, classified as risk category 1 under the 2007 ASU.
- 5 The Government of India, Guarantor for the Air India transaction, classified as risk category 1 under the 2011 ASU.
- 6 Average weighted life for A tranche of LUV 2007-1 based on avg. life date of July 2018.
- 7 Standard AWL for LASU, 2007 ASU, and 2011 ASU
- 8 Estimated Current Market LTV. Class A tranche LTV per LUV 2007-1 EETC = 65%; adjusted to estimated current market value by adding standard 25% increase in initial LTV (from prospectus) to JPM's current market value (CMV) LTV: $[65\% + (.25 * 65\%)] = 81.3\%$
- 9 Maximum advance rate of 85% allowable under LASU
- 10 Standard advance rate for 2007 ASU
- 11 Standard advance rate for 2011 ASU Risk Category 1 (investment grade) buyers
- 12 Adjusted advance rate of the EETC to equal total financing package of 100% of cost of aircraft
- 13 Mid Yield for A tranche LUV 2007-1 secondary pricing as of 23-Sep-13 per the JPM EETC Trading Market Update.
- 14 Rate generated using Bloomberg swap manager (SWPM)--value shown swaps the commercial bank LIBOR into fixed Treasury on 26-Sep-13 with maturation date (26-Sep-25) and adds 72 bp spread (average margin benchmark spread on US Ex-Im aircraft deals excluding capital markets issuances + 22 bps per JPM derivatives desk advice): Bloomberg swap manager generated 3.032229% in par coupon field.
- 15 Mitigant fees not charged under EETC
- 16 Estimated cost of obtaining the Government of India sovereign guarantee, which Ex-Im assumes is equivalent to the cost of one risk mitigant under the 2011 ASU regimes. Note that the cost of risk mitigants is debatable with 7 basis points (bps) being a conservative (low) estimate; an alternative Ex-Im analysis using the 2011 ASU MPR calculator model indicates the cost of one risk mitigant to be 5 bps.
- 17 Mitigant fees not charged under 2011 ASU.

18 Commitment fee not charged under EETC.

19 Under the 2011 ASU Transitional Arrangement for LASU transactions, a commitment fee of 35 bps per annum is required to be charged from the earlier of the date of the final commitment or 31-Mar-11, until the aircraft is delivered. Using the conservative assumption that all aircraft financed under the LASU transaction will be delivered—and the Ex-Im financing supporting these aircraft will be disbursed—on October 31st, 2013, this analysis charges an annualized cost of 7.5bps per year over the total 12 year aircraft financing. (Calculation of 7.5 bps figure: March 31, 2011 – October 31, 2013 = 2 years, 7 months. At 35bps per year over the 2 years 7 months a total of 90bps commitment fee will be accrued. 90bps divided by 12 years = 7.5bps per year over the 12 year financing.)

20 Under the 2011 ASU Transitional Arrangement for 2007 ASU transactions, a commitment fee of 20 bps per annum is required to be charged from the earlier of the date of the final commitment or 31-Jan-11, until the aircraft is delivered. Using the conservative assumption that all aircraft financed under the LASU transaction will be delivered—and the Ex-Im financing supporting these aircraft will be disbursed—on October 31st, 2013, this analysis charges an annualized cost of 4.58bps per year over the total 12 year aircraft financing. (Calculation of 4.58 bps figure: January 31, 2011 – October 31, 2013 = 2 years, 9 months. At 20bps per year over the 2 years 9 months a total of 55bps commitment fee will be accrued. 55bps divided by 12 years = 4.58bps per year over the 12 year financing.)

21 Commitment fee not charged under 2011 ASU.

22 L/ASU risk fees not charged under EETC.

23 3% upfront LASU fee on a per annum basis yields a spread of 50bps using the 2007 ASU fee calculator model and the LASU rate for the period of 18-Sep-13 through 01-Oct-13

24 Using the 2007 aircraft fee calculator, translate the 4.00% upfront fee for Category 1 buyer into a per annum spread based on the applicable ASU CIRR (3.35) on 26-Sep-13.

25 risk fees as spread for Category 1 airline for the period of Q3 2013

26 = nominal interest rate + no fees = 3.29%

27 = 3.03% + 0.07% + 0.08% + 0.50% = 3.68% (nominal interest rate + cost of risk mitigant + cost of commitment fee + risk fees as spread)

28 = 3.03% + 0.07% + 0.05% + 0.66% = 3.81% (nominal interest rate + cost of risk mitigant + cost of commitment fee + risk fees as spread)

29 = the nominal interest rate, or the commercial bank rate, plus the ASU risk fee as a spread (3.03% + 0.98% = 4.01%)

30 Mid Yield for B tranche LUV 2007-1 secondary pricing as of 23-Sep-13 per the JPM EETC Trading Market Update. Use coupon rate on B tranche as proxy for estimated internal cost of capital to be used for remaining financing beyond LTV/advance rate

31 = weight nominal interest rate as portion adjusted LTV is of 100% financing, and corporate cost of capital rate as difference between adjusted LTV and total 100% financing (3.29%*.813)+(4.63%*.187) = 3.54%

32 = weight nominal interest rate as portion advance rate is of 100% financing, and corporate cost of capital rate as difference between advance rate and total 100% financing (3.68%*.8)+(4.63%*.2) = 3.82%

33 = weight nominal interest rate as portion advance rate is of 100% financing, and corporate cost of capital rate as difference between advance rate and total 100% financing (3.81%*.85)+(4.63%*.15) = 3.94%

34 weight nominal interest rate as portion advance rate is of 100% financing, and corporate cost of capital rate as difference between advance rate and total 100% financing (4.01%*.8)+(4.63%*.2) = 4.13%

35 interpolated 4.83 year Treasury on 26-Sep-13 (to match AWL of LUV 2007-1) to determine total interest rate on a spread basis

36 interpolated 6.25 year Treasury on 26-Sep-13 (to match standard L/ASU AWL) to determine total interest rate on a spread basis

37 = total market financing reflected on a spread basis (after removal of Treasury base)

38 = total Ex-Im financing reflected on a spread basis (after removal of Treasury base)

39 = total LASU/2007 ASU interest rate reflected on a spread basis (after removal of Treasury base) where estimated cost of attaining the Government of India sovereign guarantee is 85 bps as opposed to 7 bps. See footnote # 16 above.

Exhibit 2: Technical Appendix

Aircraft Financing Price Comparison – ECA-Backed v. Commercial Market

Ex-Im Bank developed a model that enables the Bank to compare the relative costs of its financing for large aircraft transactions and commercial market financing for large aircraft transactions achieved through the Enhanced Equipment Trust Certificate structure. This Technical Appendix explains: (1) the parameters of ECA-backed financing; (2) adjustments to the components of both the ECA and EETC structures to make the two structures comparable; and (3) limitations of the methodology.

Ex-Im Bank Financing under the 2011 ASU

All Ex-Im Bank's aircraft financings are governed by the terms and conditions of the Aircraft Sector Understanding, an aircraft-specific annex to the OECD Arrangement on Officially Supported Export Credits. While there have been modifications and updates to the ASU terms and conditions over time, the most current version went into effect in February 2011 ("the 2011 ASU"). The primary goals of the 2011 ASU are the following:

1. [Equalize] competitive financial conditions between Participants,
2. [Neutralize] official support among the Participants as a [competitive] factor in the choice among competing goods and services..., and
3. [Avoid] distortion of competition among the Participants to [2011 ASU] and any other source of financing [including private market financing].

The 2011 ASU includes certain structuring requirements for all aircraft transactions it governs. Specifically, all aircraft transactions governed by the 2011 ASU must adhere to the following structuring requirements:

1. Advance Rate / Loan-to-Value

a. Investment grade buyers are only eligible to receive 80% financing of the net price of the aircraft (requires 20% down payment).

b. Non-investment grade buyers are eligible to receive up to a maximum of 85% of the net price of the aircraft (requires minimum of 15% down payment), however airlines with

worse credit ratings (e.g., BB- or weaker) may not receive the full 85% advance rate given the risk mitigant requirements under the 2011 ASU.

2. Repayment term – cannot exceed 12 years

3. Asset-backed financing that meets the following criteria:

a. Cross defaulted and cross collateralized with other aircraft and engines financed by the ECA extending the financing

b. First priority security interest

4. Risk Mitigant requirements – depending on the credit rating of the airline seeking financing, a certain number of risk mitigants are required. For airlines rated BB- and worse, 1-3 “A” risk mitigants are required, with the weaker credits requiring a higher number of the following risk mitigants:

a. Reduced advance rate, which reduces the financing the buyer is eligible for and therefore requires the buyer to put more cash down obtain an unsecured junior loan at a higher interest rate.

b. Straight-line amortization, which, when compared to mortgage-style amortization, accelerates the repayment of the loan.

c. Reduced repayment term, which shortens the time period that the loan is outstanding so the creditor gets repaid more quickly.

Similar to how the credit rating of an airline impacts the structure of the financing under the 2011 ASU, the credit rating of an airline also determines the minimum premium rate, or exposure fee, the airline is charged. Under the 2011 ASU, the exposure fees are composed of a minimum risk-based rate, which is updated annually and based on the 4-year moving average of the annual Moody’s Loss Given Default, and a market reflective surcharge, which is updated quarterly and based on the 90-day moving average of Moody’s Median Credit Spreads. As the composition of the exposure fee suggests, the 2011 ASU fees are tied to and designed to reflect current market conditions. However, given that the 2011 ASU uses actual market data and not projections or forecasts, the 2011 ASU exposure fees are a lagging indicator of current market conditions.

EETC as a proxy for “market financing” – detailed explanation of the Ex-Im EETC-ASU Side-by-Side Comparison Model

Comparing Ex-Im Bank financing to that available in commercial markets presents several challenges. First, the market financing most comparable to Ex-Im Bank (ASU) financing in

structure and underwriting practices is private commercial bank aircraft financing. However, the actual interest rate on such a financing is business confidential and cannot be known to parties not directly participating in the transaction. As such, the Enhanced Equipment Trust Certificate (EETC) market has been identified as the next best proxy for commercial financing rates as the information is publically available and the structure of EETC issuances is generally similar to the structure required by the ASU.

Second, while the EETC structure is generally similar to that which is required under the ASU terms and conditions (asset-backed large commercial aircraft financing) it is not identical. As such, in an effort to accurately compare the two financing sources several adjustments need to be made. To demonstrate these adjustments, Ex-Im Bank has developed a side-by-side comparison model for a specific EETC issuance compared to the ASU pricing available to a similarly rated airline at a specific point in time. Detailed explanation of the components that Ex-Im Bank's side-by-side comparison model considers are described below:

- Airline credit rating: given that the pricing under the ASU is driven by the senior unsecured credit rating of airline, the Ex-Im Bank side-by-side comparison model seeks to ensure that both the EETC issuance and the ASU equivalent entities are evaluated on this common basis. As such, while EETCs undergo a separate rating process than the underlying airline issuing the EETC, in the Ex-Im Bank side-by-side model the senior unsecured rating of the underlying airline (not the rating of the EETC) was used in the analysis.
- Average weighted life (AWL): given that different repayment terms impact the coupon or interest rate of a financing, the Ex-Im Bank model seeks to neutralize this difference by adjusting for differences in AWL between the EETC issuance and the ASU equivalent.
- Advance rate (or estimated Loan-to-Value or LTV): the advance rate or loan-to-value is critical in the evaluation or comparison of two financing packages because it essentially determines the amount of financing a borrower is able to receive for the assets, in this case aircraft, which they are seeking to finance. A higher LTV means that the airline has to put less cash down and therefore the financing package is more attractive from the standpoint of the borrowing airline. Given that the ASU has strict rules about the allowable advance rate on aircraft financings (based on the credit rating of the underlying airline), when evaluating EETC financing against ASU financing, it is critical that any LTV differentials are neutralized so that the financing packages are comparable.
- Adjusted advance rate: the Ex-Im Bank side-by-side comparison model assumes that an airline will need to finance 100% of the aircraft.
- Nominal interest rate: This is the interest rate to be charged on up to 85% of the aircraft (with 85% being the maximum advance rate allowable under the ASU). For the ASU equivalent,

the nominal interest rate is the floating rate LIBOR interest rate charged by the commercial lender swapped into a fixed rate equivalent to make it comparable to the fixed rate coupon on the A tranche of the EETC issuance.

- Risk fee as a spread: In addition to the interest rate charged by the guaranteed lender on an Ex-Im Bank ASU transaction, Ex-Im Bank also charges the obligor an exposure fee or risk premium as referenced above.
- Explicit Interest Rate: Nominal interest rate plus risk fees to yield the total interest rate applied to the portion of the financing carrying the A tranche interest rate (in the EETC case) or the ASU interest rate (in the case of the ASU).
- Internal Cost of Capital: the B tranche coupon rate of the EETC is used as a proxy for the (higher) interest rate assumed for the remaining roughly 15% to 20% of the total aircraft cost not financed by the A tranche (in the EETC case) or the ASU nominal rate (in the ASU case).
- Total interest rate - fixed rate basis: weighting the A and B tranche coupons in the case of the EETC, and the ASU nominal interest rate and the B tranche coupon as a proxy for the internal cost of funds, this figure reflects the total fixed interest rate unadjusted for differences in term between the EETC case and the ASU equivalent case.
- Treasury base: subtraction of the Treasury base corresponding to the average weighted life of the EETC instrument or the ASU Equivalent. By subtracting the Treasury base out of the equation the Ex-Im Bank side-by-side model is able to equalize differences in term between the EETC case and the ASU equivalent case to arrive at a total interest rate spread.
- Total interest rate – spread basis: This row indicates an equivalent interest rate spread over the interpolated Treasury associated with the relevant AWL for the EETC case and the ASU Equivalent case. Because the various differences between the two instruments have been equalized as a result of the adjustments described above, the total interest rate – spread basis reflects like terms to compare the financing under the EETC and the financing under the ASU at a specific point in time for an airline of the specified credit rating.

Limitations of Pricing Comparison Methodology

There are several limitations associated with comparing EETC and 2011 ASU pricing. Specifically, the EETC rate reflects the price that the market commands (i.e. the price at which the issuer is willing to sell and the purchaser is willing to buy) at a specific point in time. Many variables can influence the price the market commands at the time of issuance; these variables include but are not limited to the value/quality of the underlying asset; the risk and rating associated with both the EETC issuance and the airline; the general interest rate environment; competing

alternative investment opportunities, and; the perceived liquidity of the security. The specific weighting of each of these factors is known only to the EETC underwriters. Consequently, unlike the total adjusted interest rate available under the 2011 ASU, Ex-Im Bank cannot break down the interest rate on the EETC into all of its component parts—the coupon on the issuance only indicates how the market valued the sum of the components at the moment the bond was issued; the yield shows how the bond is traded on the secondary market and the market's current perception of the risk.