2011 Aircraft Sector Understanding – Overview and Summary

AVIATION WORKING GROUP
Topics Covered

• 2011 ASU in Perspective
• 2011 Pricing and other Terms and Conditions
• Transition Rules
  – Grandfathering (2007 ASU)
  – Great-grandfathering (LASU)
• Periodic Fee Adjustment - Complexity and Volatility
• Risk Assessment System
• Review
• Back up information and data
Background to 2011 ASU

- **Pre-2007**
  - Large aircraft export credit regulated by OECD rules set out in an annex to the original ASU (LASU). Low pricing, promoting exports – maintaining a manufacturer level playing. Low perceived risk
  - Regional aircraft regulated by WTO framework, as Brazil was not ASU party
  - No perceived competition between large / regional aircraft; limited concern about the relationship between export credit pricing and commercial markets

- **2007 ASU**
  - Brazil enters OECD system. Bifurcated system (Cat 1 v. Cat 2/3 aircraft). Increased pricing, and tighter terms, reflecting emerging concerns about relationship with commercial markets

- **Post 2007 (Reasons for Review Leading to 2011 ASU)**
  - Bombardier CSeries – bifurcated system untenable
  - Financial crisis: increased use of export credit; large pricing difference w/ markets
  - Expressed concerns of home market airlines (airline level playing field)

- **2011 ASU – effective 1 February 2011**
# Evolution of Export Credit Rules

**Pre-2007 -- 2007 ASU -- 2011 ASU**

<table>
<thead>
<tr>
<th>Pre-2007 (July)</th>
<th>2007 ASU</th>
<th>2011 ASU</th>
</tr>
</thead>
<tbody>
<tr>
<td>• LASU among U.S., U.K., Germany, France, Spain (Boeing, Airbus)</td>
<td>• Added Brazil and become relevant for Canada and Japan</td>
<td>• Single set of rules apply all countries to OECD countries plus Brazil</td>
</tr>
<tr>
<td>• WTO framework between Brazil and Canada (Embraer, Bombardier)</td>
<td>• Embraer, Bombardier, MJET, ATR operating under in OECD framework</td>
<td></td>
</tr>
<tr>
<td>• 3% fee (discretionary increases for weaker credits) (LASU)</td>
<td>• Increased premium based on risk classification (4.0% - 7.5%)(Cat 1)</td>
<td>• Further increased premium based on risk classification plus market adjustments (initial 7.72% - 14.74%; 137 – 257 bps). Complex w/ volatility</td>
</tr>
<tr>
<td>• Market pricing (non-LASU)</td>
<td>• Spread 16 – 249 bps (Cat 2)</td>
<td></td>
</tr>
<tr>
<td>• No universal risk classification process (LASU)</td>
<td>• Bifurcated system, including pricing</td>
<td>• Single system, including one risk classification process for all borrowers</td>
</tr>
<tr>
<td></td>
<td>– Cat 1 - Large aircraft – 5 classes, 12 yr term</td>
<td>– 8 risk classes</td>
</tr>
<tr>
<td></td>
<td>– Cat 2 - Other aircraft – 15 classes (includes 737-600, A318), 15 yr term</td>
<td>– 12 yr term</td>
</tr>
<tr>
<td>• Discretionary structural flexibility – wraps, soars allowed (LASU)</td>
<td>• Mandatory structural risk mitigants for Cat 1 but not Cat 2; no wraps, soars for either</td>
<td>• Increased mandatory structural risk mitigants required; no wraps, soars</td>
</tr>
<tr>
<td>• Only Ex-Im bank provided discount for Cape Town (1/3)(LASU)</td>
<td>• Variable max. CT discounts, Cat 1 (5-20%); 10% (often deemed) for Cat 2</td>
<td>• 10% max discount for Cape Town</td>
</tr>
<tr>
<td>• Home market rule observed (LASU)</td>
<td>• Same as Pre-2007</td>
<td>• Same as 2007, unless C-series competition (matching contemplated)</td>
</tr>
<tr>
<td>• Brazil and Canada did not recognise home market rule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Long transition</td>
<td></td>
<td>• Shorter but significant transition</td>
</tr>
</tbody>
</table>

*LASU: Long and Shorter Approaches to Underwriting and Limiting Policies*
2011 ASU Results

• Maintains manufacturer level playing field – assuming domestic matching, where needed, which is up to the relevant government (not an ASU point)

• Adjusts the relationship, by minimizing competition, between export credit agency and commercial market financing (by substantially raising fees and tightening terms (including lower advance rates in most cases))

• In consequence: seeks to address airline level playing field, without prejudice to home market practices

• Provides reasonable transition period to new agreement, easing impact on airline customers and honoring some existing “grandfathered” and “great grandfathered” transactions

• Incentives maintained and leveled for ratifying Cape Town Treaty (depending on borrower risk classification, value between .72% and 1.47%)

• Continues to provides review clause to address issues and make adjustments as necessary

• Complex system with the potential for significant volatility

Attempts to balance many competing interests
Risk Assessment System

ASU Risk Category | Risk Ratings
--- | ---
1 | AAA to BBB-
2 | BB+ to BB
3 | BB-
4 | B+
5 | B
6 | B-
7 | CCC
8 | CC to C

- Determined by ECAs
- All airlines on one common ratings list
- Consensus sought for each rating required
- Process for addressing rating disagreements (see below)

Effectiveness of rating system to be determined
## Overview: ASU 2011 and ASU 2007 Comparison

<table>
<thead>
<tr>
<th>ASU 2007 Bifurcated System</th>
<th>ASU 2011 Single System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cat. 1</strong></td>
<td><strong>Cat. 2/3</strong></td>
</tr>
<tr>
<td>Risk Categories</td>
<td>5</td>
</tr>
<tr>
<td><strong>Pricing in Terms of Spread or Fee</strong></td>
<td></td>
</tr>
<tr>
<td>Upfront Fee</td>
<td>Annual Spread</td>
</tr>
<tr>
<td>Payments</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Maximum Official Support</td>
<td>85%</td>
</tr>
<tr>
<td>Maximum Term</td>
<td>12 years</td>
</tr>
<tr>
<td>Risk Mitigants (RM)</td>
<td>0 for BB and up</td>
</tr>
<tr>
<td></td>
<td>1 for BB- to B+,</td>
</tr>
<tr>
<td></td>
<td>2 for B to B-,</td>
</tr>
<tr>
<td></td>
<td>3 for CCC to C</td>
</tr>
<tr>
<td>Cape Town Convention Discount</td>
<td>Differentiated maximum:</td>
</tr>
<tr>
<td></td>
<td>5% for BBB- up</td>
</tr>
<tr>
<td></td>
<td>10% for BB+ to B+</td>
</tr>
<tr>
<td></td>
<td>15% for B to B-</td>
</tr>
<tr>
<td>Minimum Direct Lending Interest Rates</td>
<td>Choice of CIRR-2 or swap rates</td>
</tr>
<tr>
<td>Minimum Premium Rates (MPR)</td>
<td>Direct lending annual spreads updated annually (based on historical 1st lien bank loan LGDs)</td>
</tr>
</tbody>
</table>
# ASU Nominal Fee Schedule*

## Comparison of 2011 Single System to 2007 Category 1 MPR (Upfront Fees)

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Risk Classification</th>
<th>2007 ASU C1</th>
<th>2011 ASU C1</th>
<th>MPR Increase</th>
<th>2007 ASU C1</th>
<th>2011 ASU C1</th>
<th>MPR Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AAA to BBB-</td>
<td>4.00</td>
<td>7.72</td>
<td>93%</td>
<td>3.80</td>
<td>6.95</td>
<td>83%</td>
</tr>
<tr>
<td>2</td>
<td>BB+ to BB</td>
<td>4.75</td>
<td>10.44</td>
<td>120%</td>
<td>4.28</td>
<td>9.40</td>
<td>120%</td>
</tr>
<tr>
<td>3</td>
<td>BB-</td>
<td>5.50</td>
<td>11.03</td>
<td>101%</td>
<td>4.95</td>
<td>9.93</td>
<td>101%</td>
</tr>
<tr>
<td>4</td>
<td>B+</td>
<td>5.50</td>
<td>11.85</td>
<td>115%</td>
<td>4.95</td>
<td>10.67</td>
<td>115%</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
<td>6.25</td>
<td>13.38</td>
<td>114%</td>
<td>5.31</td>
<td>12.04</td>
<td>127%</td>
</tr>
<tr>
<td>6</td>
<td>B-</td>
<td>6.25</td>
<td>13.50</td>
<td>116%</td>
<td>5.31</td>
<td>12.15</td>
<td>129%</td>
</tr>
<tr>
<td>7</td>
<td>CCC</td>
<td>7.50</td>
<td>14.45</td>
<td>93%</td>
<td>6.00</td>
<td>13.01</td>
<td>117%</td>
</tr>
<tr>
<td>8</td>
<td>CC to C</td>
<td>7.50</td>
<td>14.74</td>
<td>97%</td>
<td>6.00</td>
<td>13.27</td>
<td>121%</td>
</tr>
</tbody>
</table>

| Average       |                    | 106%        |             |               | Average      | 114%        |             |

*This comparison of nominal upfront fees does not take into account differences in terms and conditions under 2007 ASU Category 1 and 2011 ASU (in particular differences in risk mitigants in 2007 ASU Category 1 and 2011 ASU). Furthermore, this document does not provide any comparison of 2011 ASU annual spreads and 2007 ASU Category 2 and Category 3 annual spreads due to significant differences in terms and conditions (in particular, addition of up to 4 risk mitigants in 2011 ASU vs. no risk mitigants in 2007 ASU Category 2 and 3). A meaningful comparison would require taking into account these differences.*
ASU Nominal Fee Schedule*  
Comparison of 2011 Single System to 2007 Category 1 MPR (Upfront Fees)

*Does not take into account differences in terms and conditions under 2007 ASU for Category 1 and 2011 ASU Single System.
## Risk Mitigants and Related Items

### 2007 ASU (Cat 1)
- None for BB and up
- 1 for BB- to B+
- 2 for B to B-
- 3 for CCC to C

- **Mandatory risk mitigants**
  - Each 5% reduction from the permitted 85% advance rate of net price
  - Equal principal repayments
  - 10-year repayment term

- **3-month repayment interval**
  - No principal payment grace period

- **Max 85% of net price advance rate**

- **No mandatory cross default / cross collateralization**

- **Mortgage style amortization schedule**

### 2011 ASU
- None for BB and up (NB: 80% max credit for BBB- and up)
- 1 (A) for BB-
- 2 (1-A and 1-B) for B and B+
- 3 (2-A and 1-B) for B-
- 4 (3-A and 1-B) for CCC to C

- **Mandatory “A” & “B” risk mitigants**
  - **“A” risk mitigants**
    - Each 5% reduction from the permitted 85% advance rate of net price
    - Equal principal repayments
    - 10-year repayment term
    - NB: 15% surcharge on exposure fee (one time) may replace one of the above A risk mitigants

  - **“B” risk mitigants**
    - Security deposit (one quarter of principal and interest payments)
    - Lease payments in advance
    - Maintenance reserves

- **3-month repayment interval**
  - No principal payment grace period

- **Max 85% of net price advance rate**

- **No mandatory cross default / cross collateralization**

- **Mortgage style amortization schedule**

- **85% of net price advance rate (80% risk cat. 1)**

- **Mandatory cross default / cross collateralization**

- **Mortgage style amortization schedule**
Great-Grandfathered/Grandfathered Transactions

**Great Grandfathered - LASU**

- ASU does not govern great grandfathered transactions, except limiting the minimum fee to 3%
  - Governed by existing LASU
- Great Grandfathered transactions
  - 69 aircraft each for 2007 ASU Category 1 country (represents historical percentage of export credit)
    - Defined as a binding commitment between manufacturer and customer (including sale-leasebacks >= 5 years)
  - Deliveries *originally scheduled* through 31/12/2010
  - No limitation on delivery date
  - Minimum 3% Exp Fee
- Commitment fee of 35 basis point per annum accruing from the earlier of (i) final commitment or (ii) 31 March 2011, payable at delivery

**Grandfathered – 2007 ASU**

- ASU does not govern grandfathered transactions
  - Governed by existing 2007 ASU
- Grandfathered transactions
  - Firm contracts concluded by 31/12/2010
  - Deliveries completed by 31/12/2012 for 2007 ASU Category 1 aircraft and 31/12/2013 for 2007 ASU Category 2 and 3 aircraft.
- Commitment fee of 20 basis point per annum accruing from the earlier of (i) final commitment or (ii) 31 January 2011 (2007 ASU Category 1 aircraft)/ 30 June 2011 (2007 ASU Category 2 and 3 aircraft)/, payable at delivery

Note – Category 2 countries allowed additional 92 aircraft grandfathered to 2007 ASU agreement with no delivery date limitation for aircraft contracted by 31 December 2010 with a 20 basis point per annum commitment fee accruing from the earlier of (i) final commitment or (ii) 30 June 2011, payable at delivery.
Great-grandfathered/Grandfathered Timelines

Great Grandfathered – LASU
• 69 aircraft each for 2007 ASU Category 1 country

Grandfathered – 2007 ASU

Transition allows time to absorb change
Periodic Fee Adjustment - Complexity and Volatility

• Risk Based Rates (RBR)
  – Reset annually based on 4 year moving average of annual Moody’s Loss Given Default (LGD) for first lien bank loans
  – Reset range from 0% to 32% of RBR (based on year-to-year LGD changes)
  – First reset scheduled for 1st quarter 2012

• Market Reflective Surcharge (MRS)
  – Reset quarterly based on Moody’s median credit spreads (MCS)
  – Adjusted MRS become effective on 15 April, 15 July, 15 October, and 15 January
  – MRS based on 90 day moving average of MCS
  – MRS only applied if positive and exceeds 25 bps
  – Increases to MRS capped at 10% per quarter

• See backup materials indicating complexity and potential for volatility

Complex and potentially volatile system
Risk Classification Process

- **Establishment of the List of Risk Classifications**
  - Participants to agree on list of risk classifications for buyers/borrowers prior to entry into force of the ASU
    - OECD Secretariat to maintain the list; Available to Participants on confidential basis
    - Rating binding at any stage of the transaction (e.g. campaign and delivery)
- **Updates to the List**
  - Ad hoc basis for classification change or new buyer/borrower
  - No Identification of Participant requesting classification decision
  - Parties allowed 10 working days to challenge, otherwise agreed to
- **Resolution of Disagreements**
  - Challenge to a risk classification provides an additional 10 working days to resolve between interested Participants
  - Inability to reach agreement triggers referral to all Participants to resolve within 5 working days
  - In the absence of a final agreement, classification will be determined by a Credit Rating Agency and become binding
- **Validity Period of Classifications**
  - 12 month maximum validity period from date recorded in List by Secretariat; subject to revision if material change (e.g. new rating by CRA)
  - Extension of 18 months possible
- **Buyer/Borrower Risk Classification Request**
  - Indicative risk classification from a CRA at its own expense if not on list; classification not binding on Participants
Review Process

• Review process
  – First scheduled review: 2015
  – Ad hoc reviews may be called by any OECD Participant
  – Upon 3 months written notice
  – Written explanation of reason and objectives
  – Summary of consultations preceding the request

*Given history, review may occur sooner than 2015*
Backup Slides – Additional Information

relating to

the Methodology used for, and Historical Simulations indicative of, Resets and Adjustments under the ASU
Risk Base Rate (RBR) Adjustment Calculation

- Annual RBR adjustment based on 4 year moving average of Moody’s Loss Given Default (LGD)

<table>
<thead>
<tr>
<th>4-Year Moving Average</th>
<th>LGD Considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥45%</td>
<td>25%</td>
</tr>
<tr>
<td>≥35%&lt;45%</td>
<td>23%</td>
</tr>
<tr>
<td>≥30%&lt;35%</td>
<td>21%</td>
</tr>
<tr>
<td>&lt;30%</td>
<td>19%</td>
</tr>
</tbody>
</table>

- Adjustment Factor Formula
- \( \text{LGD Considered} = \text{RBR Adjustment Factor} \)
  
  19%

- Example: LGD Considered = 21%
  
  21% = RBR Factor of 1.11
  19%

Base fees adjusted annually
MRS Adjustment Calculation

• For each risk category, a Market Reflective Surcharge shall be calculated as follows:
  – MRS = B*[(0.5*MCS)-RBR]

• MCS is a 90-day moving average of Moody’s Median Credit Spreads with an average life of 7 years

• B is a blend coefficient varying from 0.7 to 0.35 according to each risk category as per the table below.

<table>
<thead>
<tr>
<th>Risk Ratings</th>
<th>ASU Risk Category</th>
<th>Blend Factor %</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>AA</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>BBB+</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>BBB</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>BBB-</td>
<td>1</td>
<td>70%</td>
</tr>
<tr>
<td>BB+</td>
<td>2</td>
<td>65%</td>
</tr>
<tr>
<td>BB</td>
<td>2</td>
<td>65%</td>
</tr>
<tr>
<td>BB-</td>
<td>3</td>
<td>50%</td>
</tr>
<tr>
<td>B+</td>
<td>4</td>
<td>45%</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>40%</td>
</tr>
<tr>
<td>B-</td>
<td>6</td>
<td>35%</td>
</tr>
<tr>
<td>CCC</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>CC</td>
<td>8</td>
<td>35%</td>
</tr>
<tr>
<td>C</td>
<td>8</td>
<td>35%</td>
</tr>
</tbody>
</table>

Surcharge adjusted quarterly
MRS Adjustment Calculation (Continued)

• MCS is a 90-day moving average of Moody’s Median Credit Spreads (MCS) with an average life of 7 years.

• Where risk categories include more than one risk rating, the spreads shall be averaged. In risk category 1, the BBB- spread shall be used.

• The MCS spreads shall be discounted by 50% to account for the asset-security. The MCS discounted spreads shall then be adjusted by a blend factor ranging from 70% to 35% as per Table 4 below, applied on the difference between the MCS discounted spreads and the RBR. Any negative spreads resulting from the blending shall not be deducted.

• MRS shall be applied only if and when it is positive and exceeds 25 bps.

• The increase in minimum premium rates resulting from the MRS update shall not exceed 10% of the previous quarterly minimum premium rates. The minimum premium rates (which result from adding the risk-based rates and the market reflective surcharge) shall not exceed the risk-based rates by more than 100%.