CMBS 101®
Pooling and Servicing Agreements
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Sponsored by:

15th Annual Convention
June 8-10, 2009
Waldorf-Astoria, New York City

re Structured Finance
Commercial Mortgage Securities Association
Objectives for Today’s Course

- Outline of the Pooling and Servicing Agreement (PSA).
- Who are the parties and what do they do?
- Major PSA provisions and how they are structured in a typical CMBS transaction.
The Pooling & Servicing Agreement

It is critical to understand that each PSA is unique to a particular transaction.

The document has continued to evolve into 400+ pages, as CMBS transactions have become more complex by involving multiple parties and loans with multiple layers of debt, some of which may not be in the securitization.

The goal for today’s course is to provide a general outline of the PSA and its significant provisions.
Typical PSA Provisions

– Article I – Definitions
– Article II – Conveyance of the Pooled Mortgage Loans
– Article III – Administration and Servicing of the Trust Fund
– Article IV – Payments to the Certificateholders
– Article V – The Certificates
– Article VI – The Depositor, Master Servicer and Special Servicer
– Article VII – Servicer Default and Remedies
– Article VIII – Trustee, Custodian & Tax Administrator
– Article IX – Termination upon payoff and compliance with
  – common law relating to Trusts
– Article X – Additional Tax Provisions (REMIC)
– Article XI – Reg AB
– Article XII – Miscellaneous Provisions
Article I - Definitions

Definitions include:

> Key collection, remittance and reporting dates.
> Terms related to securities structure (class definitions, including definitions related to interest accruals and principal/notional balances).
> Definitions relating to transfer of the assets, such as what documents must be contained in the “Mortgage File” and what constitutes a “Material Breach” of representation.
> Terms related to servicing status, such as when to transfer to special servicing, when to obtain an appraisal, how to calculate Appraisal Reduction Amounts for purposes of P&I advances.
> REMIC (tax structure) definitions.
> Reg AB terms.
> Terms in relation to multiple loan groups, non-trust serviced loans, split loan structures.
Article II – Conveyance of the Pooled Mortgage Loans

> Creation of the Trust

> Governs the conveyance of the Mortgage Loans into the Trust Fund. Specifies what documents must be delivered as part of the Mortgage File, when they must be delivered, trustee/custodian process for certifying file deliveries.

> Depositor assigns rights and remedies under each Loan Sellers’ Mortgage Loan Purchase Agreement to the Trust, including for breach of loan representations and warranties.

> Describes defaults/remedies for Loan Seller breach of loan representations and warranties.

> Contains some of the REMIC provisions.

> Corporate entity representations and warranties of the parties to the PSA.
Article III – Administration and Servicing of the Trust Fund

> Contains the “guts” of the servicing duties.

> Includes provisions relating to account administration (Collection Account, Escrow Accounts, Reserve Accounts), remittances, servicer reporting to trustee/paying agent and others.

> Process for Servicing Advances (property protection advances), handling assignments and assumptions, handling other consents and approvals, process for Special Servicer to deal with foreclosure, management of REO and liquidations.

> Addresses split loan structures and their servicing.
Article IV – Payments to the Certificateholders

> Contains the main “waterfall” provisions that provide for investor distributions and trustee/paying agent reporting to investors.

> Tells the Trustee how much to distribute to each class of investors as interest, principal and prepayment premiums/yield maintenance charges.

> Also contains main provisions regarding P&I Advances and related Nonrecoverability determinations.
Article V – The Certificates

Contains the main provisions for the form of Certificate (“bond”), transfers, restrictions on transfers of certificates, including securities law, tax (important for Class R residual certificates) and ERISA restrictions (ability of employee benefit plans to invest in investment-grade securities but restricting their investment in below-investment grade classes without an investor-based exemption).
Article VI – The Depositor, Master Servicer and Special Servicer

> Addresses limit on liability, indemnity, qualification and resignation of Master Servicer and Special Servicer.

> Negligence (not gross negligence) is the liability/indemnity standard.
Article VII – Default

Article VIII – Trustee, Custodian & Tax Administrator

Article VII
Contains provisions that define when the servicers are considered to be in default under the PSA and provisions for Trustee (in its role as a backup servicer) to take over the servicing function.

Article VIII
Contains provisions relating to the Trustee/Paying Agent’s duties, legal protections, indemnification, eligibility (must have minimum debt ratings from the rating agencies who rate the transaction) and its ability – in limited circumstances – to resign.
Article IX – Termination
Article X – Additional Tax Provisions

Article IX
Contains provisions regarding clean-up call, plus automatic termination upon payoff of all the loans. Also has provisions that are intended to ensure compliance with common law relating to trusts.

Article X
Requires all the PSA parties to comply with REMIC rules. Requires parties to indemnify the Trust Fund if they err in a way that results in taxation of the Trust Fund.
Article XI – Reg AB
Article XII – Miscellaneous Provisions

Article XI
Deals with securities law reporting that is now required under SEC Regulation AB, such as Form 8-K for special events, Form 10-D for monthly distributions and Form 10-K for annual servicer compliance, such as accountants attestation report, compliance certificates, Sarbanes-Oxley Certificates, etc.

Article XII
Contains requirements for amending the PSA, including categories of amendment that do require investor consent and categories of amendments that do not require investor consent. Also has standard contract provisions, such as what law governs (typically New York law), identifying anyone who is not an investor or a PSA party, but who may have certain notice and/or approval rights (Rating Agencies, Controlling Class).
Parties to the PSA – The Depositor

> The Depositor transfers the Pooled Mortgage Loans and related rights to the Trustee for the benefit of the certificateholders.

> The Depositor assigns its rights and remedies against each Loan Seller under the Mortgage Loan Purchase Agreement, including the Loan Seller’s representations and warranties and obligation to deliver the Mortgage File.

> The PSA contains provisions acknowledging that each Loan Seller is obligated, per the Mortgage Loan Purchase Agreement, to deliver a full Mortgage File and any Additional Collateral to the Trustee.
Parties to the PSA – The Trustee

> Accepts receipt on behalf of the Trust of the Mortgage Files and certifies as to contents of the Mortgage Loan Files.

> Calculates and distributes funds to the certificateholders.

> Facilitates the distribution of Master and Special Servicer information to investors, rating agencies, issuers and third party providers (Trepp, Intex).

> Back-up advancer to the Master Servicer.

> “A+” minimum rating requirement.
Parties to the PSA – Master Servicer

> Collects payments and financial information from borrowers and passes it onto Trustee.

> Advancing of late payments and property protection expenses including on Specially Serviced Loans.

> Must be approved by the Rating Agencies.

> Customer relations with borrowers.

> Mortgage performance reporting using CMSA forms.

> Oversees primary servicers and sub-servicers; responsible for their performance.

> Has the power to handle customary and routine matters for performing loans (I.E. Small Lease Reviews).

> Visits assets once per year at its expense (small loans every other year).
## Master Servicers Ranked by Volume (2000-2008)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Master Servicer</th>
<th>Volume ($BB)</th>
<th>Deal Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wells Fargo</td>
<td>422.8</td>
<td>336</td>
</tr>
<tr>
<td>2.</td>
<td>Midland Loan Services</td>
<td>146.2</td>
<td>141</td>
</tr>
<tr>
<td>3.</td>
<td>CapMark Services</td>
<td>143.8</td>
<td>152</td>
</tr>
<tr>
<td>4.</td>
<td>KeyCorp</td>
<td>92.1</td>
<td>79</td>
</tr>
<tr>
<td>5.</td>
<td>Bank of America</td>
<td>90.8</td>
<td>68</td>
</tr>
<tr>
<td>6.</td>
<td>Prudential Asset Resources</td>
<td>13.5</td>
<td>27</td>
</tr>
<tr>
<td>7.</td>
<td>GEMSA Loan Services</td>
<td>12.9</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Commercial Mortgage Alert
Parties to the PSA – Special Servicer

> Evaluates the facts and circumstances of a defaulted loan and develops the best strategy for either workout or liquidation with the goal of maximization of the recovery of principal and interest on a Net Present Value basis.

> Manages REO assets.

> May be replaced by the most subordinate bondholder (Controlling Class). Often times, the Special Servicer, or its affiliate, is also the initial Controlling Class bondholder.

> Decisions are not left solely to the Special Servicer’s discretion, but are governed by the Servicing Standard.
Servicing Standard

The Master Servicer and the Special Servicer must service and administer the Mortgage Loans in the best interests and for the benefit of the Certificateholders as a collective whole in accordance with applicable law and the terms of the PSA and the respective Mortgage Loans and, to the extent consistent with the foregoing, in accordance with the following standards:

(a) with the same care, skill, prudence and diligence as it services and administers comparable mortgage loans and manages real properties on behalf of third parties or on behalf of itself, whichever is the higher standard

(b) with a view to: (i) in the case of a Master Servicer, the timely collection of all scheduled payments of principal and interest and (ii) in the case of the Special Servicer the maximization of recovery on such Mortgage Loan to the Certificateholders, as a collective whole, on a present value basis (the relevant discounting of anticipated collections to be performed at a rate determined by the Special Servicer but in no event less than the related Net Mortgage Rate [Note: discount rate varies by deal; sometimes specified as Mortgage Rate; sometimes no rate specified]
Servicing Standard

> The Master Servicer and Special Servicer must act without regard to:

- Any other relationship either party may have with the related mortgagor
- The ownership of any certificate, B Note or companion note
- The Master Servicer’s obligation to make advances
- The right to receive reimbursement of costs, or the sufficiency of any compensation payable to it
- The obligation of the servicer or any affiliate to repurchase any mortgage loan from the trust as seller
### Special Servicers Ranked by Volume (2000-2008)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Special Servicer</th>
<th>Volume ($BB)</th>
<th>Deal Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>LNR Partners</td>
<td>291.54</td>
<td>188</td>
</tr>
<tr>
<td>2.</td>
<td>Midland Loan Services</td>
<td>122.56</td>
<td>118</td>
</tr>
<tr>
<td>3.</td>
<td>Centerline</td>
<td>107.35</td>
<td>74</td>
</tr>
<tr>
<td>4.</td>
<td>CW Capital</td>
<td>78.76</td>
<td>40</td>
</tr>
<tr>
<td>5.</td>
<td>CapMark</td>
<td>66.55</td>
<td>87</td>
</tr>
<tr>
<td>6.</td>
<td>J.E. Robert Cos.</td>
<td>54.67</td>
<td>49</td>
</tr>
<tr>
<td>7.</td>
<td>Wells Fargo</td>
<td>48.9</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: Commercial Mortgage Alert
Parties to the PSA – Controlling Class

> The “Controlling Class” is defined as the most subordinate class having a remaining certificate balance equal to at least 25% of the initial principal balance of such class.

> With respect to certain split loan structures, the B note holder/junior participant may be designated as the Controlling Class for that loan only.

> The Controlling Class has the right to designate a “Controlling Class Representative” or “Directing Certificateholder” which may provide input on recommended actions for Specially Serviced loans; however the Special Servicer has the ultimate authority and responsibility under the Servicing Standard.
Parties to the PSA – Controlling Class

Rights of the Controlling Class:

> Receives Asset Status Reports (ASR) from Special Servicer.
> The Special Servicer must notify the Controlling Class of:

- Foreclosure
- Modification, amendment or waiver of monetary items
- Acceptance of a discounted payoff
- Environmental issues on REO assets
- Release of collateral, substitutions, release of LOC
- Replacement of property managers
- Waiver on due on encumbrance
Mortgage Loan File

> Each Loan Seller is obligated, per the Mortgage Loan Purchase Agreement, to deliver a full Mortgage File and any Additional Collateral to the Trustee.

> Definition of Mortgage Loan File (all may not apply)
  - Executed Mortgage Note
  - Original or copy of Mortgage, with evidence of recording
  - Original or copy of Assignment of Leases
  - Original or copy of lender’s title insurance
  - UCC financing statements
  - Assignment of Mortgage
  - Executed Ground leases
  - Cash management agreements
  - Management agreements / Franchise Agreements
  - Environmental indemnity agreements
  - Copies of assumption, guaranty, modification, substitution, intercreditor agreements and original LOC

> Generally, within 30-45 days after Closing, the Trustee records its interest in the files.

> Each Loan Seller must deliver loan level financials, third party reports, insurance policies, leases, tenant estoppels etc. to the Master Servicer within 45 days of Closing.
Where the Money Goes

**Master Servicer**
- P & I
- Late Fees/Default Interest
- Liquidation Proceeds
- Condemnation Proceeds
- Casualty Proceeds
- Insurance Proceeds
- Loan Purchase Proceeds
- Net REO Revenues

**Collection Account**
- P & I
- Late Fees/Default Interest
- Liquidation Proceeds
- Condemnation Proceeds
- Casualty Proceeds
- Insurance Proceeds
- Loan Purchase Proceeds
- Net REO Revenues

**Escrow Account**
- Real Estate Taxes
- Insurance Premiums
- Ground Lease Payments

**Reserve Account**
- Tenant Improvement Funds
- Leasing Commission Funds
- Capital Expenditure Funds
- Debt Service Reserve Funds

**Borrower**
- P&I
- Lender Reimbursements
- Ground Lease Payments
- Late Charges/Default Interest
- Escrows
- Reserves
Where the Money Goes

Master Servicer → Trustee → Distribution Account

- Funds in the Collection Account
- Less: Fees & Expenses
- Plus: Advances (subject to Appraisal Reduction)
- Less: Fees & Expenses of the Trust if not paid by the Master Servicer

Certificate Holders
Collection Account

> The Master Servicer may withdraw from the Collection Account To:
  – Reimburse for P&I advances
  – Pay Master Servicer Fee, Special Servicer Fee, Workout Fee, Liquidation Fee
  – Reimburse for Servicing Advances
  – Pay Interest (at Prime Rate) on Advances
  – Reimburse for unreimbursed Nonrecoverable Advances
  – Pay any Additional Servicing Compensation
  – Pay certain other amounts

> Reimbursements are paid first out of related borrower payments, fees/charges that are collected from that loan, next out of general collections.

> The Collection Account must be an Eligible Account ("AA" rating).
Distribution Account

> The Master Servicer sends the funds from the Collection Account (the Remittance Amount) plus any Advances on the Remittance Date to the Trustee.

> These funds are deposited by the Trustee, less a Trustee Fee and any Trust expenses not paid by the Master Servicer, into the Distribution Account for payment to the certificateholders on the Distribution Date.

> The Distribution Account must be an Eligible Account (“AA” rating).
Escrow Accounts

> Master Servicer Withdrawals from the Escrow Accounts are to:

– Pay real estate taxes, insurance premiums and ground rents
– Reimburse Master Servicer, Special Servicer or Trustee for unreimbursed servicing advances relating to any of the escrow payments
– Refund the borrower for overpayments
– Pay interest to the borrower on their balances in the account, if required by the mortgage loan document
– Disburse insurance proceeds for repair or restoration
– After a default, pay principal and interest on the related loan

> The Escrow Account must be an Eligible Account ("AA" rating), unless the loan documents require otherwise.
Reserve Accounts

> Withdrawals from Reserve Accounts to be used for:
  - Tenant improvement allowance
  - Leasing commissions
  - Capital expenditures
  - Environmental remediation
  - Debt service reserves
  - Specific funds set aside per the loan documents

> If a Letter of Credit was posted for such costs, funds converted from the letter of credit are deposited into the Reserve Account.

> The Reserve Account must be an Eligible Account ("AA" rating), unless the loan documents require otherwise.
Escrow and Reserve Accounts

> The Master Servicer must use reasonable efforts to make all payments of taxes or premiums prior to the applicable penalty or termination date.

> The Master Servicer shall use reasonable efforts consistent with the Servicing Standard to cause the Borrowers to maintain all other insurance as stated in the loan documents (including terrorism).

> If the Borrower does not maintain insurance, the Master Servicer must obtain coverage by force placement.

> If loans do not require escrow payments, the Master Servicer or Special Servicer (if applicable) must make reasonable efforts to enforce the requirement of payment of such items before their due date including making a Servicing Advance, if necessary.

> Escrow Account and Reserve Account funds may only be invested in Permitted Investments (generally obligations backed by the full faith and credit of the United States), unless the loan documents require otherwise.
What Causes a Loan to be Transferred to Special Servicing?

Definition of a Specially Serviced Loan

> A monthly payment is 60+ days delinquent
> Payment default at maturity
> Determination by the Master Servicer that a payment or other material default is imminent and not likely to be cured within 60 days
> Decree or order of bankruptcy that has not been discharged or unstayed for a period of 60 days
> Mortgagor consents to the appointment of a conservator or receiver
> Mortgagor admits in writing its inability to pay its debts as they become due
> There is a notice of foreclosure or proposed foreclosure
What are the Special Servicer’s Alternatives?

1. Workout/Modification
2. Loan Sale
3. Foreclosure
What are the Special Servicer’s Alternatives?

Modification/Waivers

> The Special Servicer may agree to any modification, waiver or amendment of any term, extend the maturity, defer or forgive interest (including ARD or Default Interest) on principal, defer or forgive late payment charges prepayment premiums and yield maintenance charges, permit the release or substitution of collateral, borrower or any guarantor.

> All such actions must be in the best interest of the certificateholders.

> All actions must be taken in accordance with the Servicing Standard.

> Workout Fees (1% of all future P/I payments) are earned for loans that remain performing for 3+ months.
What are the Special Servicer’s Alternatives?

Loan Sale

The Controlling Class or Special Servicer have the option to purchase the loan from the Trust at the Fair Value:

– If the Special Servicer or its affiliate purchases the Loan, the Trustee confirms that the Fair Value is accurate and in the best interests of the certificateholders.
– To determine Fair Value, the Special Servicer takes into account the appraisal, market conditions and third party opinions, and any other relevant information.
– Determination of Fair Value must be made as soon as possible, but no later than 30 days after receipt of a new Appraisal.
What are the Special Servicer’s Alternatives?

Foreclosure/REO Liquidation

> The PSA gives the Special Servicer the authority to pursue foreclosure and enforcement proceedings on Specially Serviced loans that remain in default and as to which no satisfactory arrangements can be made for the collection of delinquent payments.

> The Special Servicer is paid a Liquidation Fee (1% of loan balance) upon the sale of a Loan or REO asset (unless they purchase the loan).

> The Special Servicer must use reasonable efforts consistent with the Servicing Standard to solicit bids for REO. The Special Servicer has the obligation to accept the highest bid.

> The Special Servicer may bid for any REO asset.
What are the Special Servicer’s Options?

Foreclosure/REO Liquidation

- A cash bid from the Controlling Class or Special Servicer shall not constitute a fair price unless it is the highest cash bid and at least two other independent bids have been received.
- The Trustee ultimately determines if the Special Servicer’s bid is at fair value.
- Until fair value is determined, Master Servicer continues to advances scheduled P/I and various other expenses.
Servicer Advancing

> Master Servicer advances P&I, property protection (Taxes, Insurance) and trust expenses on delinquent Specially Serviced assets.

> Advances are subject to recoverability determination and intended to provide liquidity and preserve the long term value of the collateral.

> This liquidity is necessary for the creation of highly-rated securities backed by less liquid assets.

> The Master Servicer is reimbursed for amounts advanced plus interest on a priority basis at the top of the distribution waterfall.

> The recoverability determination is governed by Appraisal Reductions (“ARA”).
Appraisal Reduction

> Appraisal Reductions ("ARA") are designed to limit advancing on amounts that may not be ultimately recovered in a liquidation.

> The PSA requires the Special Servicer to obtain an Appraisal once a loan is transferred to the Special Servicer so the Master Servicer may calculate an Appraisal Reduction Amount. Generally, ARA(s) are completed with 60 – 90 days from a loan being transferred to Special Servicing.

> Required Appraisal Loan/Trigger Events:
  – After a loan becomes a Specially Serviced loan
  – REO loan
  – Modification
  – Borrower bankruptcy
  – 60 days past due – servicing transfer event

> Appraisal Reduction = Loan Balance plus all amounts owed under PSA minus 90% of appraised value plus all escrow/reserve amounts and letters of credit.

> Appraisal Reductions can change over time. Assets can be reappraised multiple times during the period a loan is with the Special Servicer.
### Appraisal Reduction

- **ARA** = \(\text{(Loan Balance + All Servicer Advances)}\) - \(\text{(90\% of new appraised value + All escrow / reserve amounts and letters of credit)}\)  
  \[
  (A - B)
  \]

**Assumptions:**
- Loan was transferred to Special Servicing for 60 Day delinquency and subsequently reappraised
- No Reserves currently in place

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Current Loan Balance</th>
<th>Advanced Expenses</th>
<th>Revised Appraised Value</th>
<th>90% of New Appraisal</th>
<th>Escrow / Reserves</th>
<th>ARA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division Street Mall</td>
<td>72,000,000</td>
<td>408,808</td>
<td>44,500,000</td>
<td>40,050,000</td>
<td>$0</td>
<td>$32,358,808</td>
</tr>
</tbody>
</table>

- If the calculated ARA is negative or zero, the servicer advances P/I payments in full.

- Once the ARA becomes positive, the servicer will stop advancing full interest payments.

- Principal payments are advanced in full regardless of the ARA.
ASER / Interest Shortfalls

- The concept of an ASER, Appraisal Subordinate Entitlement Reduction, determines how much the servicer will advance on a loan.
  - Advancing of interest payments is determined by the ARA.
  - Full principal payments are advanced regardless of the ARA.
- Interest Shortfalls are caused by ASER(s) or the difference between the full P/I payment due and actual amount advanced to the certificateholders based on the ARA.
- ASER(s) are calculated using the net coupon rate

ASER Calculation: \[
\frac{(\text{Current Loan Balance} - \text{ARA})}{\text{Current Loan Balance}} = A
\]

\[
(A) \times \text{Scheduled Interest Due to Trust} = B
\]

\[
\text{Scheduled Interest Due to Trust} - (B) = \text{ASER}
\]
Appraisal Reduction / ASER

- Interest shortfalls to the bondholders can be significant, especially if there are many related loans within a pool.

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Current Loan Balance</th>
<th>ARA</th>
<th>Monthly P/I Payment Expected to be Advanced</th>
<th>Monthly Principal Expected to be Advanced</th>
<th>Monthly Interest Expected to be Advanced</th>
<th>Monthly Interest Actually Advanced</th>
<th>ASER</th>
<th>Actual P/I Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oakland Mall Retail</td>
<td>19,000,000</td>
<td>8,307,880</td>
<td>107,880</td>
<td>20,797</td>
<td>87,083</td>
<td>$49,006</td>
<td>38,077</td>
<td>$69,803</td>
</tr>
<tr>
<td>North Ave Retail</td>
<td>17,000,000</td>
<td>7,196,524</td>
<td>96,524</td>
<td>18,607</td>
<td>77,917</td>
<td>$44,933</td>
<td>32,984</td>
<td>$63,540</td>
</tr>
<tr>
<td>Bosworth Mixed Use</td>
<td>15,000,000</td>
<td>7,435,168</td>
<td>85,168</td>
<td>16,418</td>
<td>68,750</td>
<td>$34,672</td>
<td>34,078</td>
<td>$51,090</td>
</tr>
<tr>
<td>Cortez Ave Retail</td>
<td>11,000,000</td>
<td>5,662,457</td>
<td>62,457</td>
<td>12,040</td>
<td>50,417</td>
<td>$24,464</td>
<td>25,953</td>
<td>$36,504</td>
</tr>
<tr>
<td>Lake Geneva Power Center</td>
<td>10,000,000</td>
<td>3,756,779</td>
<td>56,779</td>
<td>10,946</td>
<td>45,833</td>
<td>$28,615</td>
<td>17,218</td>
<td>$39,561</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>72,000,000</strong></td>
<td><strong>32,358,808</strong></td>
<td><strong>408,808</strong></td>
<td><strong>78,808</strong></td>
<td><strong>330,000</strong></td>
<td><strong>$181,690</strong></td>
<td><strong>$148,310</strong></td>
<td><strong>$260,498</strong></td>
</tr>
</tbody>
</table>
ASER / Interest Shortfalls

> Interest Shortfalls are applied in reverse sequential order.

> Shortfalls in the previous example were sufficient to short interest to 3 classes of certificates in the hypothetical trust.

> Shortfalls reached the N Class (B).

> Recovery of Interest Shortfalls take priority to recovery of principal to the Sr. Classes.

<table>
<thead>
<tr>
<th>Class</th>
<th>Face Amount</th>
<th>Original Rating</th>
<th>Interest Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>31,927,000</td>
<td>A</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>17,192,000</td>
<td>A-</td>
<td>0</td>
</tr>
<tr>
<td>F</td>
<td>22,103,000</td>
<td>BBB+</td>
<td>0</td>
</tr>
<tr>
<td>G</td>
<td>17,192,000</td>
<td>BBB</td>
<td>0</td>
</tr>
<tr>
<td>H</td>
<td>22,103,000</td>
<td>BBB-</td>
<td>0</td>
</tr>
<tr>
<td>J</td>
<td>12,280,000</td>
<td>BB+</td>
<td>0</td>
</tr>
<tr>
<td>K</td>
<td>7,368,000</td>
<td>BB</td>
<td>0</td>
</tr>
<tr>
<td>L</td>
<td>7,367,000</td>
<td>BB-</td>
<td>0</td>
</tr>
<tr>
<td>M</td>
<td>2,456,000</td>
<td>B+</td>
<td>0</td>
</tr>
<tr>
<td>N</td>
<td>7,368,000</td>
<td>B</td>
<td>1,154</td>
</tr>
<tr>
<td>O</td>
<td>4,912,000</td>
<td>B-</td>
<td>22,681</td>
</tr>
<tr>
<td>P</td>
<td>27,015,808</td>
<td>NR</td>
<td>124,475</td>
</tr>
<tr>
<td>XW*</td>
<td>1,944,128,718</td>
<td>AAA</td>
<td>0</td>
</tr>
</tbody>
</table>
Interest Shortfalls

> Shortfalls are only recoverable to the extent funds are available at the time of loan resolution and are in excess of the outstanding servicer advances.

> The Master Servicer, (with the consent of the Special Servicer) may make payments of Nonrecoverable Servicing Advances if it is determined to be in the best interest of the certificateholders. Examples of this include property protection advances.

> Once a non-recoverability determination is made, the Master Servicer has the right to immediate reimbursement from general collections.

> To avoid serious shortfalls, Master Servicers have often voluntarily spread their reimbursements over a number of months. This “spreading” is voluntary, although authorized by most PSAs.

> Most recent transactions have mitigated the risk of interest shortfalls by requiring the Master Servicer to make payments and reimbursements from principal collections on the mortgage loans.

> This delays the payment of principal to the AAA certificateholders and the most junior class is forced to take a realized loss.
Interest Shortfalls

It is possible to have an ARA and no ASER

(1) In the case where the loan is in special servicing, yet the loan is current and the servicer has no need to advance.

(2) In the case where the loan is deemed non-recoverable, therefore the servicer does not advance and there is no ASER.
Interest Shortfalls

Shortfalls result primarily from default-related scenarios:

- Advancing of P&I or property protection payments that are not recoverable.

- Following a loan workout or foreclosure when actual proceeds are insufficient to pay advanced amounts and other amounts due under the mortgage loan.

- Extraordinary or nonrecoverable trust expenses.
  - Extraordinary Trust expenses include Special Servicer fees, legal fees, force placed insurance premiums, etc.
  - Nonrecoverable advances can occur on assets if a sharp decline in value occurs in a short period of time (hotel, healthcare).

Some shortfalls are caused by loans that were restructured.
  - If the loan becomes current, the Master Servicer can recover all advances from current payments. Depending on the amount of the reimbursement, these shortfalls can be significant.
Loan Modification

Assumptions

• $12.00MM Loan
• Property transferred to special servicing due to imminent default
• ARA of $2.00MM
• Cumulative P/I advances total $666,842
• Property was sold for $9.715MM to new borrower
• Loan was modified and assumed by the new borrower for a re-written amount of $9.0MM
• Cumulative ASER and Servicer Advances were recovered via $715,000 excess of purchase price versus re-written loan balance
• A $1,834,593 loss was allocated to Class P
Loan Modification

Total Expense Calculation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P&amp;I advances</td>
<td>666,842</td>
</tr>
<tr>
<td>Property Protection Adv</td>
<td>30,250</td>
</tr>
<tr>
<td>Unpaid Interest on Adv</td>
<td>3,400</td>
</tr>
<tr>
<td>ASER</td>
<td>14,508</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>715,000</strong></td>
</tr>
</tbody>
</table>

Loss Calculation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales Proceeds</td>
<td>9,715,000</td>
</tr>
<tr>
<td>Fees, Advances, Expenses</td>
<td>715,000</td>
</tr>
<tr>
<td>Proceeds Available for Distribution</td>
<td>9,000,000</td>
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<tr>
<td>Month 15 Balance</td>
<td>10,834,593</td>
</tr>
<tr>
<td><em>Loss to the Trust</em></td>
<td><strong>-1,834,593</strong></td>
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Loss to Trust

<table>
<thead>
<tr>
<th>Class</th>
<th>Current Balance</th>
<th>Original Rating</th>
<th>Cumulative Bond Loss</th>
</tr>
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<tbody>
<tr>
<td>L</td>
<td>7,367,000</td>
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<td>0</td>
</tr>
<tr>
<td>M</td>
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<td>B+</td>
<td>0</td>
</tr>
<tr>
<td>N</td>
<td>7,368,000</td>
<td>B</td>
<td>0</td>
</tr>
<tr>
<td>O</td>
<td>4,912,000</td>
<td>B-</td>
<td>0</td>
</tr>
<tr>
<td>P</td>
<td>27,015,808</td>
<td>NR</td>
<td>-1,834,593</td>
</tr>
<tr>
<td>XW*</td>
<td>1,944,128,718</td>
<td>AAA</td>
<td>0</td>
</tr>
</tbody>
</table>

Cumulative Advances were recovered via excess of purchase price versus re-written loan balance
Losses were allocated to the Class P
Foreclosure / Loan Sale

Assumptions

- $12.00MM Loan
- Transferred to Special Servicer after Mortgagor admits in writing its inability to pay debt service
- ARA of $2.00MM
- Cumulative P/I advances total $666,842
- The loan is foreclosed and sold for $9.5MM
- All fees, advances and Interest Shortfalls ($714,750) are recovered prior to the repayment of principal to Sr. Classes
- Cumulative loss to the trust of $2.049MM. Loss allocated to Class P
- Principal paydown of $8.785MM allocated to Class A-1
# Foreclosure / Loan Sale

## Total Expense Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>P&amp;I advances</td>
<td>666,842</td>
</tr>
<tr>
<td>Property Protection Advances</td>
<td>10,000</td>
</tr>
<tr>
<td>Unpaid Interest on Advances</td>
<td>3,400</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>20,000</td>
</tr>
<tr>
<td>ASER</td>
<td>14,508</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>714,750</strong></td>
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</table>

## Loss Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales Proceeds</td>
<td>9,500,000</td>
</tr>
<tr>
<td>Fees, Advances, Expenses</td>
<td>714,750</td>
</tr>
<tr>
<td>Proceeds Available for Distribution</td>
<td>8,785,250</td>
</tr>
<tr>
<td>Loan Balance</td>
<td>10,834,593</td>
</tr>
<tr>
<td><strong>Loss to the Trust</strong></td>
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## Prepayment to Trust

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<th>Current Balance</th>
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<th>Principal Paydown</th>
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<td>$ 8,785,250</td>
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<td>A-1A</td>
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<td>A-2</td>
<td>43,500,000</td>
<td>AAA</td>
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<tr>
<td>A-3</td>
<td>60,000,000</td>
<td>AAA</td>
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</table>

## Cumulative Loss ($2.049MM) allocated to Class P

<table>
<thead>
<tr>
<th>Class</th>
<th>Current Balance</th>
<th>Original Rating</th>
<th>Cumulative Bond Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>7,368,000</td>
<td>B</td>
<td>0</td>
</tr>
<tr>
<td>O</td>
<td>4,912,000</td>
<td>B-</td>
<td>0</td>
</tr>
<tr>
<td>P</td>
<td>27,015,808</td>
<td>NR</td>
<td><strong>2,049,343</strong></td>
</tr>
<tr>
<td>XW*</td>
<td>1,944,128,718</td>
<td>AAA</td>
<td>0</td>
</tr>
</tbody>
</table>
Special Servicer Actions

> All Special Servicer decisions are substantiated in the Asset Status Report.

> Special Servicers must consider the cost and timing of an asset remodel, release and/or repositioning before determining to accept a sale or payoff.

> Special Servicers must sell an REO asset within 3 years of acquiring the deed (REMIC issue).

> Special Servicer is required to inspect an asset within 60 days of its becoming a specially serviced loan. As long as the asset remains in special servicing, physical inspections should be performed once per year. The Special Servicer’s costs for these inspections are reimbursable as Servicing Advances.