Introductory Guide to the CRE Finance Council Investor Reporting Package™

Commonly Known as the CMSA Investor Reporting Package® (CMSA IRP®)

April 2010

CRE Finance Council

WHERE CAPITAL AND IDEAS MEET

Introductory Guide to the CRE Finance Council Investor Reporting Package™ (Commonly known as the CMSA Investor Reporting Package®)

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Section 1
History of the CMSA Investor Reporting Package®

The mission of the Commercial Real Estate Finance Council [formerly known as Commercial Mortgage Securities Association (CMSA)] is to promote the strength and liquidity of commercial real estate finance worldwide. The CMSA Investor Reporting Package (CMSA IRP® or IRP) was developed to further this mission by attempting to standardize the post-securitization reporting for all domestic issued Commercial Mortgage Backed Securities (CMBS) transactions. (It should be noted that CMSA IRP standards have also now been implemented in Europe, as well as Japan). The CMSA IRP for the U.S. evolved with the explosive CMBS growth from total domestic issuance of $26 billion in 1996 to cumulative issuance of more than $1.1 trillion by the end of 2007[1]. This rapid growth in issuance combined with the increasing complexity of the mortgage loan structures securing these transactions, has created ever increasing demands for information necessary to evaluate these transactions. These standards have evolved under the direction of the CMSA Investor Reporting Committee based on feedback from industry stakeholders, which have included Servicers, Trustees, commercial and investment banks, rating agencies, insurance companies, traders, B-piece buyers and investors. This evolution began with the initial CMSA 100 published in 1996 to the current CMSA IRP, version 5.0 (IRPv5.0). In addition to evolving content, the delivery standards are also evolving with the issuance of the first version using an eXtensible Markup Language ("XML") as detailed in Working Exposure Draft #1 of the IRPv6.0X issued in early 2009. These standards, which utilized the framework of the Mortgage Industry Standards Maintenance Organization (MISMO, a not for profit subsidiary of the Mortgage Bankers Association), have not been implemented due to the current economic environment.

The CMSA 100 was a data record layout of more than 100 loan-level fields used to achieve a level of standardization for disclosing loan level information on a pool-specific basis for the CMBS market. CMSA IRPv5.0 has grown to include loan, property and deal level data file standards and numerous report format standards. It also includes guidelines and the methodology to be used in connection with the loan administration required to aggregate and ultimately report all of this information.

The rapid CMBS growth, combined with the economic conditions and commercial real estate finance liquidity crisis that began in 2007, increased investor focus on the level and frequency of reported CMBS collateral information. This increase included existing investors seeking more information than they have in the past, as well as bringing new investors into the sector that were not as familiar with the CMSA IRP. As a result, the CRE Finance Council decided to create this Introductory Guide with the primary goal of helping the IRP consumers better understand the overall structure of the IRP, what information is available, how it may be derived and where they can find it in the IRPs prepared by the Servicer or Trustee.

[1] Credit Suisse CMBS Market Watch Weekly November 6, 2009.

Section 2
Structure of the CMSA IRP®

The IRP is structured to allow for various levels of use and review by investors and other users. The various levels include data points on a field specific basis in addition to reports (commonly referred to as surveillance or supplemental reports, and property operating performance reports), data files (at the bond, loan or property level), and templates (sample reports that serve as guides for standardizing reports related to servicing events and calculations).

All of the data fields, reports, data files and templates are defined and/or described in detail within the IRP. Additionally, the IRP provides extensive narrative on reporting processes such as normalization of operating statements, defeasance and partial release reporting, etc. Additionally, the IRP provides answers to common reporting questions such as:

- What information is available?
- What party prepares the information?
- What party receives the information, and when is the information delivered?
- In what format is the information delivered?
- What insight does the information provide to the investor or other user?

Data Fields and Legends

Data fields on an individual basis are not delivered to the investor or other users; however, consistency as related to the data field name, definition, and applied use is critical in navigating throughout the IRP. Over the course of several years, the need for the Data Dictionary was apparent amongst industry users in order to ensure consistency amongst information producers. As such, the Data Dictionary was developed. The Data Dictionary provides:

- An alphabetical listing of individual data fields used in the IRP by the exact data field name.
- Answers to the questions, "Is the field in the reporting package?," "Where is the data field used?," "What is the definition of the field?," and "How is a field used?" The search function can be used to locate a data field name or concept within the Data Dictionary.
- IRP Version coding to indicate in which IRP version (i.e. 2.0, 3.0, 4.0, etc.) the data field was last updated
- Headers on each page of the Data Dictionary to reflect abbreviated cross references that are used throughout the IRP and define the location of a field in a data file, report, or template. Examples are:
  - Data File – Example, L21 means Loan Periodic Update File, Field #21
  - Reports – Example, M means Historical Loan Modification and Corrected Mortgage Loan Report
  - Templates - Example, IS means Interest Shortfall Reconciliation Report

In addition to the Data Dictionary, the IRP Legend provides a detailed listing for any field in the Data Dictionary that can have multiple answers. For example:

- Workout Strategy – The Data Dictionary definition directs the user to "See Workout Strategy Legend." The Legend provides codes 1 through 13 with unique names for each code.

Reports

Reports within the CMSA IRP consist of Surveillance Reports (also referred to as Supplemental Reports) in addition to property operating performance reports. All of these reports are prepared by the Servicer and provided in Excel files. Specific details related to these reports are as follows:

a. Supplemental Reports (surveillance tools)

- These reports are delivered by the Servicer to the Trustee as part of the monthly reporting package.
- The report format provides a cross reference within the report header to the Data Dictionary. Depending on the report, information is shown at either the loan level or property level.
- The purpose of each report varies as follows:
  - Assets requiring additional surveillance or status updates **(Servicer Watch List, Delinquent Loan Status Report (DLSR), REO Status Report (REOSR),** and **Historical Loan Modification and Corrected Mortgage Loan Report (Hist Mod-Corr Loan))**
  - Information on property operating performance or available funds **(Comparative Financial Status Report, Loan Level Reserve/LOC Report,** and **Advance Recovery Report)**
  - Information on performance of pari passu loans serviced by one primary Servicer **(Total Loan Report)**

Three reports provide Servicer comments on the status or courses of action related to the loan or property; the **Delinquent Loan Status Report (DLSR), REO Status Report (REOSR),** and **Historical Loan Modification and Corrected Mortgage Loan Report (Hist Mod-Corr Loan).** See additional discussion in "Section 5, Troubled Loans."

b. Property Operating Performance Reports - Operating Statement Analysis Report ("OSAR") and NOI Adjustment Worksheet ("NOIWS")

Given the size of these reports (typically one for each property in a transaction), they may be delivered by the Servicer to the Trustee or posted to Servicer's website during the monthly reporting cycle. These reports are provided by the Servicer in an Excel format. See "Section 4, Loan and Property Information" for additional discussion.

Data Files

There are seven **Data Files** prepared by the Servicer, Special Servicer or Trustee. All data files are prepared in a CSV format (text file with data separated by commas). With the exception of the two files prepared by the Trustee, each field in a data file is cross referenced to the Data Dictionary. Data is reflected at the loan level or property level (depending on the data file).

Four data files are prepared by the Servicer. These data files are delivered by the Servicer to the Trustee during the monthly reporting cycle with the exception of the Loan Setup File that is only delivered at the beginning of a new securitization. The purpose of each data file is as follows:

- Loan Setup File - Reflects loan level data at securitization.
- Loan Periodic Update File - Reflects current loan and property status/performance data at a loan or "rolled up" level for loans with multiple properties**.**
- Property File - Reflects at securitization and current information of underlying collateral for each separate property related to a loan**.**
- Financial File - Reflects detailed revenue and expense line items for each property as used to develop the OSARs and NOIWSs**.**
    - Financial File Category Code Matrix and Master Coding Matrix - These are standardization guides which start on page 70 of the IRP to provide direction to the Servicer in analyzing operating statements These matrices are not delivered to any parties.

One data file is prepared by the Special Servicer (Special Servicer Data File**)**. It is only delivered to the Servicer (not the Trustee) during the monthly reporting cycle. This loan level file reflects data specific to events or information on specially serviced loans. The information contained within the Special Servicer Data File is found in other places within the IRP that are made available to users.

Two data files are prepared by the Trustee (Bond Level File and Collateral Summary File). The Trustee makes both data files available to investors on Distribution Date. The purpose of these deal level files is as follows:

- Bond Level File - Summarizes the bond payments, balances and other information typically contained in the Trustee Statements.
- Collateral Summary File - Summarizes the loan level information such as total balances, P&I payments, and delinquencies.

Templates

Templates are suggested formats to report common servicing events or calculations. Not all templates are required to be prepared as part of each monthly reporting package.

Two templates are prepared by the Servicer or Special Servicer in Excel, and are delivered to the Trustee during the monthly reporting cycle.

- Appraisal Reduction – Typically prepared by the Special Servicer and delivered to the Servicer for future delivery to the Trustee. Both the ARA (Appraisal Reduction Amount) and ASER (Accumulated Subordinate Entitlement Reduction) calculation are presented. This report is made available to investors by the Trustee.
- Servicer Realized Loss – Prepared by the Special Servicer and delivered to the Servicer for future delivery to the Trustee. The realized loss and key categories on this template are also reflected on the Loan Periodic Update File. This report is made available to investors by the Trustee.

Four templates are prepared by the Trustee, and are made available to investors and other users in a PDF format on the Distribution Date, generally in the Distribution Date Statement. These deal level reports are as follows:

- Reconciliation of Funds,
- Historical Liquidation Loss,
- Historical Bond/Collateral Realized Loss Reconciliation, and
- Interest Shortfall Reconciliation

One template, the Significant Insurance Event Report, is prepared by the Servicer as a result of possible property damage due to natural disaster or similar event. This Excel report may be delivered by the Servicer to the investor or other users outside of the normal monthly reporting cycle.

Section 3
Investor Access to the IRP Information

Third Party Providers

As the CMBS market matured, so did the reporting and technology. The industry acknowledges several third party providers which offer innovative CMBS research, surveillance reporting and bond analytical tools. The providers' databases are updated on a daily basis with the IRP information prepared by the Servicers and Trustees for each transaction. In addition, many providers offer sophisticated credit analytical tools which allow the user to create stress scenarios and then assess the impact of these scenarios on the CMBS bond structure, credit support levels and interest waterfall. Access to the proprietary software is generally provided on a subscription basis through their websites or made available through Bloomberg terminals. The following is a list of some of the third party providers.

Service Provider	Website Address
Backshop	www.cmbs.com
Bloomberg	www.bloomberg.com
Intex	www.intex.com
Trepp	www.trepp.com

In addition to third party providers, the Rating Agencies (Moody's, Fitch, S&P, DBRS and RealPoint) also analyze and provide commentary on the deals. The Rating Agencies have regular discussions with the Servicers about any problematic loans in the process of maintaining or revising their credit ratings on each CMBS transaction. These efforts result in periodic credit rating actions which may also include additional loan or property level information for each asset significantly impacting a CMBS pool. Access to certain reports such as deal views or focus reports is generally provided on a subscription basis through their websites.

Trustee Websites

[Note - While the CMBS industry largely associates the Trustee with having the responsibility of calculating and reporting on the payments made to investors, these duties are technically handled by the Certificate Administrator). While one party often acts as both Trustee and Certificate Administrator, frequently these responsibilities are divided. For simplicity of discussion, we will assume that this party is one in the same and refer to them as the Trustee.]

Parties interested in the IRP information can visit the Trustee websites. In addition to generating and posting the Distribution Date Statement, and certain CMSA Data Files and Templates, the Trustees also update their websites with periodic reporting provided by the Servicers. Additionally, they keep on hand certain Servicer files (ex. rent rolls and financial statements) that can be delivered via mail upon request.
Generally, the governing documents for each deal dictates what information the Trustee can provide on their website, when it can be posted and what is required of interested parties to access this information. The access requirements can vary depending on the type of information (ex. financial information is generally considered restricted) and whether the deal is public or private. Often, interested parties are required to complete an investor certification form and provide it to the Trustees before they can receive access to certain reports. Many deals also include a prospective investor certification form for parties who want to analyze potential investments. The investor certification and prospective investor certification forms can be found in the exhibits section of the PSAs (Pooling and Servicing Agreements) and/or on the Trustees' websites.

To expedite the process of gathering information, it is recommended that investors provide certifications for existing and prospective investments ahead of time. This will enable those parties to access the information as soon as it becomes available.

While the reporting requirements for the Trustees are dictated by each individual PSA, the following is a list of reports and files that are normally posted on the Trustees websites on each distribution date:

a. **Monthly Reporting***

Distribution Date Statement – The entire document is not defined by the IRP, but it often contains the CMSA Disclosure Templates as noted in the previous section.

i. CMSA Data Files
CMSA Trustee Data Files: Bond Level File and Collateral Summary File
CMSA Data Files: Loan Periodic Update, Property, and Financial Files

ii. CMSA Supplemental Reports
Supplemental Reports
OSAR/NOIWS (Operating Statement Analysis Report/Net Operating Income Adjustment Worksheet)

iii. CMSA Disclosure Templates
Reconciliation of Funds - Trustee
Historical Bond/Collateral Realized Loss Reconciliation - Trustee
Historical Liquidation Loss - Trustee
Interest Shortfall Reconciliation - Trustee
Servicer Realized Loss

b. **Static Information****

Pooling and Servicing Agreement (PSA) / Trust Agreement
Exhibits to the PSA / Trust Agreement
Prospectus / Prospectus Supplement (public deals only)
CMSA Loan Setup File

* Rent Rolls and Operating Statements are not posted to the Trustees' websites, but they are generally available upon request, but, depending on the transaction, may restrict the ability to trade certain bond classes.
** Private Placement Memorandums by and large are only available through the Issuers and/or the Issuers' Counsel

Servicer Websites

In addition to distributing their reporting to the Trustees, Servicers post a majority of the data files and reports they generate to their websites (list of Servicer websites). To access information on their websites, Servicers often require interested parties provide an investor certification or prospective investor certification as described in the Trustee Website section above. Depending on the Servicer, they may accept the certification directly or it may have to go through the Trustee.

On each Distribution Date, Servicers generally post the data files, supplemental reports and disclosure templates that they create. Additionally, Servicers often post Rent Rolls and operating statements as they are received. Going directly to the Servicer for their data and reports is often the quickest way to access this information. The following files are commonly found on the Servicers' websites:

Monthly Reporting

CMSA Data Files: Loan Setup, Loan Periodic Update, Property and Financial Files
Supplemental Reports
OSAR/NOIWS
Appraisal Reduction template
Servicer Realized Loss template
Significant Insurance Event Report template
Rent Rolls
Operating Statements

Section 4
Bond, Loan and Property Level Information

Bond Level Information

Information on CMBS bonds, such as principal payments, interest payments, and bond ratings, are generally provided on Distribution Date Statements made available to investors via the Trustee websites. In addition to these statements, the CMSA IRP includes detailed bond level information.

The *Bond Level File* is prepared by the Trustee and contains updated monthly information on the bonds. This file details each class of bond in a CMBS transaction. By accessing this file, investors can obtain information on the current balances, interest and principal payments, coupon rates, and debt ratings, if applicable, for each security. In addition to this periodic bond information, the *Reconciliation of Funds* statement will provide an aggregate summary of interest, principal, and prepayment premium/yield maintenance distributed to the bonds. This statement is generally incorporated within the Distribution Date Statement.

a. Interest

Various items can affect interest payments. Details regarding these items can be found in the IRP package and may include the following:

- ASERs – This is the amount by which principal and/or interest advances have been reduced due to an appraisal reduction event. ASER detail is available in the *Loan Periodic Update File* and *Interest Shortfall Reconciliation*. Deal level amounts can be found on the *Reconciliation of Funds.*

- Special Servicing Fees – This represents all Special Servicer fees paid (basis points and other collections) during the current reporting period. Such fees may include, but are not limited to workout fees and liquidation fees. Loan level information is available on the *Loan Periodic Update File* and *Interest Shortfall Reconciliation*. Aggregate Special Servicing Fees are available on the *Reconciliation of Funds*.

- Modified Interest Rates – A shortfall or excess may result from a loan modification when a rate is modified to be lower/higher than the original rate. The *Interest Shortfall Reconciliation* details the interest excess/shortfall to the bonds.

- Interest on Advances – These amounts are accrued and reimbursed interest on advances. These amounts can be found on the *Loan Periodic Update File* and *Interest Shortfall Reconciliation*. Deal level amounts can be found on the *Reconciliation of Funds*,

- Prepayment Premium / Yield Maintenance – Pursuant to the loan documents, this is an amount received from a borrower during the collection period in exchange for allowing a borrower to pay off a loan prior to the maturity or anticipated repayment date. Prepayment premiums generally allow investors to achieve the same yield as if the mortgage was not paid-off early. In addition to the bond level information provided on the *Bond Level File* and the aggregate information provided on the statement, the *Loan Periodic Update File* provides underlying detail of the specific loans that were prepaid.

- Prepayment Interest Excess (Shortfall) – For the related reporting period, this is the difference between the interest collected on a prepayment and the scheduled interest due to certificate holders, net of amounts otherwise offset by the Servicer as per the servicing agreement. The aggregate amount represents the impact to the trust and is reported on the *Interest Shortfall Reconciliation* statement. Loan level information is also available on the *Loan Periodic Update File*. Bond level information is available on the *Bond Level File*. Aggregate information is available on both the *Reconciliation of Funds*.

- Interest Adjustments – This reflects unscheduled interest adjustments and can be found on the *Loan Periodic Update File* and the *Reconciliation of Funds*.

- Reimbursed Advances – Reimbursed advances are the amount of advances recovered through interest or principal collections. The underlying documents will dictate whether advances are reimbursed through interest or principal collections. The *Advance Recovery Report*, *Loan Periodic Update File*, and *Interest Shortfall Reconciliation* provide loan level details of advances and advance reimbursements. The *Reconciliation of Funds* provides consolidated advance reimbursement information.

- Non-recoverable Scheduled Interest – These amounts are interest shortfalls resulting from a loan deemed non-recoverable by the Master Servicer/Special Servicer. The *Interest Shortfall Reconciliation* details the applicable loans. Loans which are nonrecoverable are flagged in the *Loan Periodic Update File*. For more information, see Section 5, Troubled Loans.

- Deferred Interest Collected – This amount reflects interest that was uncollected in the period which it was accrued, but has since been collected. Deferred Interest Collected can be found on the *Loan Periodic Update File* and the *Reconciliation of Funds*.

- Other (Shortfalls) / Refunds – This field includes any other shortfalls or refunds that are not otherwise included elsewhere. Amounts related to specific loans can be found in the *Interest Shortfall Reconciliation* and the *Loan Periodic Update File*. Total amounts can be found on the *Reconciliation of Funds*.

b. Principal and Balances

In addition to interest adjustments, various items may affect principal payments and bond balances. Details regarding these items can be found in the package and may include the following:

- Unscheduled Principal – These payments reflect unscheduled payments of principal, and may include straight prepayments, discounted payoffs, and/or proceeds related to liquidation, condemnation, or insurance settlements. The *Loan Periodic Update File* provides loan by loan detail for unscheduled principal. Aggregate amounts can be found on the *Reconciliation of Funds*, *Bond Level File*, and *Collateral Summary File*.

- Principal Adjustments – The adjustments reflect any amounts not considered scheduled or unscheduled principal amounts and can represent both cash and non-cash adjustments. This information can be found on the *Loan Periodic Update File* and *Reconciliation of Funds*.

- Reimbursed Advances –Reimbursed Advances are the amount of advances recovered through interest or principal collections. The underlying documents will dictate whether advances are reimbursed through interest or principal collections. The *Advance Recovery Report*, *Loan Periodic Update File,* and *Interest Shortfall Reconciliation* provide loan level details of advances and advance reimbursements. The *Reconciliation of Funds* provide consolidated advance reimbursement information.

- Realized Losses – These losses are the difference between net proceeds (after liquidation expenses) and the current balance. Loan level information is available on the *Loan Periodic Update File*, *Servicer Realized Loss Template,* and *Historical Loan Modification and Corrected Mortgage Loan Report*. Deal level information is available on the *Collateral Summary File* and *Historical Liquidation Loss Template*. The *Bond Level File* provides a breakdown by bond.

c. Ratings

In addition to the items affecting principal and interest, applicable current and original ratings are available for each of the bonds in the Bond Level File.

Loan and Property Level Information

One of the strengths in the CMBS asset class is the level of geographic and economic diversity that is available in a pool of CMBS loans. While the terms of the commercial mortgage collateral may not vary significantly (e.g. fixed versus floating rate), this diversity is due primarily to the potential variety of both the property types and the geographic locations of the properties that could secure the mortgage loans. This collateral diversity increases the type, level and frequency of post-issuance surveillance that may be required to monitor the on-going performance of the loans since the measures of operating success and risk will vary for different property types. Since most CMBS loans are non-recourse, the performance of the underlying property securing the loan is critical to the borrower's ability to meet the ongoing debt service obligation. Consequently, the IRP has clearly defined loan and property level reporting standards.

The *Loan Periodic Update File* provides the basis for bond reporting and the Trustee's remittance to bondholders. Any changes that impact the scheduled loan payments, such as delinquencies, modifications, loan level losses, and various servicing fees will impact the total distribution available to the bondholders. It impacts the bond principal and interest distributions and ultimately the bond balances. The loan level reporting allows the investor to track which loans have impacted the bonds and to what extent. Appraisal Reductions, a mechanism embedded within the PSA to ensure the Servicer is not advancing the full payment of a defaulted loan if the value of the collateral has eroded, have impacted the amount of interest that is advanced, the result is an ASER or an Accumulated Subordinate Entitlement Reduction. An ASER could reduce the interest payment to some of the subordinate bonds. Cumulative Servicer advances on principal and interest and other advances for protection of the collateral in addition to the servicing fees are reported in the loan level file. Ultimately these advances, fees and ASERs in addition to net sales proceeds will be used by the Trustee to calculate a loan's recovery and loss when the asset is resolved from the trust. Having these fields in the *Loan Periodic Update File* allows the user to tie out or estimate the total loan level loss that has been applied to the bonds.

It is important to understand other collateral securing the loan besides the property. This other collateral is often not captured in the property level file. One can look to the *Loan Level Reserve/LOC Report* for information on letters of credit, reserve funds and any holdbacks. The Loan Level Reserve/LOC Report has a legend that shows each reserve category.

Control of the property level cash flows is important to protect the security interest of the loan. Some loans are subject to a hard lockbox in which all deposits are funneled through an account that is cash managed; after property expenses, reserves and mortgage debt is paid, all excess proceeds are given back to the borrower. In the instance of a springing lockbox, the borrower and Servicer must establish a lockbox if certain performance triggers are not met. Springing lockboxes and triggers require that the Servicer is closely monitoring the cash and that the borrower's ability to misappropriate funds is limited. Information on the lockbox can be found in the *Loan Periodic Update File*.

It became common place to have interest only loans in the 2005-2008 vintage CMBS. The original *Loan Setup File* has a payment type legend which identifies the loan payment type, e.g., fully amortizing, interest only, etc. If the loan is partial interest only, one can use several fields within the Loan Periodic Update File to determine when an interest-only period expires and when amortization begins.

CMBS growth resulted in more complex commercial property finance structures with properties securing multiple types and levels of debt. These structures included participations in which there is pari passu debt outside the trust or there is subordinate debt in the form of a b-note either inside or outside of the trust. The loan structure can be identified from the Loan Structure Legend in the original *Loan Setup File*. The balance of this debt iscaptured in the *Total Loan Report*. And while the net cash flow for the property(ies) represent(s) the cash flow from all the collateral, the property level operating statements (OSARs) hold a place for the various levels of debt service such that an investor should be able to derive or see a debt service coverage ratio (DSCR) for the entire debt stack (to the extent such information is provided), including the piece of the loan that is within the CMBS trust (see OSAR discussion in Section 2, Property Performance section). In addition to the transaction's prospectus, the *Total Loan Report* is a good starting place to look for information on the loan's total debt stack. One should recognize that currently, it is the Servicer's responsibility to report only on debt that is in the trust. They have not been required to include the pieces in the debt stack that they don't service and therefore the Total Loan Report may not have all of the information on each piece of debt secured by a particular property. Therefore, it is incumbent upon the user to investigate further beyond the IRP.

Many investors are concerned about sponsor risk following some very large bankruptcy filings. Unfortunately, this is not captured in the current version of the IRP. Because these loans are often held by a special purpose entity (SPE), the common sponsor is not always apparent. Also because these loans can be assumed, there is not an easy way at this point to track changes in sponsorship on a go forward basis. At issuance, most Offering Memorandums disclose sponsor concentrations within the large loan disclosures and in the Annexes loans with related sponsors are often identified.

The property may be encumbered by a ground lease. This may impact collateral if the ground rent payment is not subordinate to the mortgage or if the ground lease terms are short posing refinance risk. The *Property File* has a "Ground Lease" field that identifies whether or not the property is subject to a ground lease.

Property Performance

Common commercial property performance measurements include net operating income and various occupancy statistics, while loan performance is commonly measured through the Debt Service Coverage Ratio (DSCR). Loan level DSCRs are available in different files and Supplemental Reports, including the Loan Periodic Update File and the Comparative Financial Status Report. The loan level DSCR is a function of the underlying property's financial performance as measured by its net operating income and net cash flow reported by the borrower. Since operating data is reported by borrowers in many different formats, a methodology for standardizing the analysis and reporting of this data was necessary. The MBA/CMSA Methodology for Analyzing and Reporting Property Income Statements (starting on page 70 of the IRP) provides industry reporting standards and guidance that facilitates consistent reporting of property level operating results between Servicers. The standard reports for these measurements are the Net Operating Income Adjustment Worksheet (NOIWS) and the Operating Statement Analysis Report (OSAR). These property level reports are used by the Servicer to support the reported loan level DSCR and provide more detail on the borrower reported property operating results. Since the measure of operating success and risk are different for specific property types, the IRP provides four property type specific templates used for both the NOIWS and OSAR, to accommodate these unique reporting needs. The four templates include:

- Commercial – including Office, Retail, Self Storage, Industrial, Warehouse and Mixed Use
- Multifamily – including Mobile Home and Co-op's
- Lodging
- Healthcare

The current IRP standards provide thirteen different primary property type classifications, one of which is securities which is used for defeased loans. The remaining twelve property types use the templates noted above in accordance with the current IRP standards. This reporting classification approach does not reflect the quality of the property (e.g. Class A, B or C), only its primary use. While the information provided in the annex or by the loan seller may provide more detailed property type descriptions, which may include a primary and secondary property type, all CMSA reporting will use the twelve property types noted above.

The OSAR and NOIWS detail the revenue and expense categories specific to these property types. The *Master Coding Matrix* support this reporting effort by classifying how various borrower reported revenue and expense categories identifying how items should be classified on the specific NOIWS and OSAR revenue and expense categories. This methodology section also provides normalization guidance to Servicers to facilitate consistency in the industry between Servicers and the approach used in the analysis required to calculate DSCRs. All reported DSCRs should be normalized to ensure that the property's ongoing reported operating results and loan performance are presented in a manner that is consistent with the issuer's initially reported underwriting. This is accomplished by the Servicer making various normalization and/or annualization adjustments that are documented on the *Net Operating Income Adjustment Worksheet (NOIWS)*. This normalization guidance is detailed in the IRP's methodology section starting on page 70 of the IRPv.5. The NOIWS is prepared by the Primary, Master or Special Servicer for each operating statement analyzed and the normalized results flow to the OSAR and other reports.

The OSAR is prepared by the Primary, Master or Special Servicer each fiscal year and at various interim periods during the year. Each column of the OSAR representing post-issuance operating results is supported by a separate NOIWS. However, only the most recent NOIWS is included in the Servicer's monthly IRP package. The OSAR provides current and historical occupancy, and normalized operating results including income, operating expenses, net operating income, capital items, net cash flow and debt service coverage. The operating results are presented for the most recent reporting period, the three most recent fiscal years and the underwritten amounts reported by the issuer in the annex or at deal closing. A detailed breakdown of the performance of each property securing the loan and supporting the reported loan level DSCR is available from the OSAR along with comments explaining significant variances from the prior year and from time of issuance. The OSAR provides lines on which to report DSCR's for different layers of the capital stack if the property secures multiple levels of debt. However, it should be noted that the availability of the amount of other outstanding debt and the related debt service for a loan secured by the same property may be limited if that loan is not serviced by the servicer preparing the OSAR. If the loan is secured by multiple properties, separate OSARs should be available for each property, as long as the borrower has provided operating statements for each property. In addition, all of the detailed financial information from the NOIWS and OSAR reports is available in an electronic format for every property included in the CMBS transaction in the *Financial File*.

Occupancy and tenant rollover for certain property types are also common measures of current and future loan and property performance. Generally, loan documents require borrowers to submit quarterly operating statements along with a current rent roll. The different property type OSAR reports provide occupancy for each reported operating period, if the borrower provides a current rent roll with each operating statement. Based on current IRP standards, the *Property File* provides additional tenancy information for the property type. This includes the square feet occupied and lease expiration dates for the top 3 tenants at each property, along with the percentage of lease expirations for each of the next 4 years and thereafter for the entire property. This information results from a lease rollover review performed by the Servicer at least annually.

The *Servicer Watchlist Report* also provides tenancy information whenever certain criteria are met as detailed in the *Portfolio Review Guidelines*. These criteria, which are referred to as Servicer Watchlist codes, include codes 4A through 4F and relate primarily to decreases in occupancy, significant tenant rollover, bankruptcy exposure, major tenant default, lease termination or store closings. If one of these conditions exists, this report will provide additional information as to the property impact and the borrower's plan for addressing the issue. While the borrowers provide complete rent rolls to the Servicer, only the top 3 tenants and overall property rollover information is included in the

Property File per the current IRP standards. The availability of more detailed rent roll information is at the discretion of the Servicer as some may make the borrower's rent roll documents available on their Investor Reporting web site. See Heading "Troubled Loans" under this Section 4 for additional information on the Servicer Watchlist.

Property Condition and Value

The property's ongoing performance and physical condition contribute to maintaining the property's value, which is initially reflected in the Issuer's reported appraised value. This value, which is reported in the original Annex and *Loan Set-up File*, continues to be included in the *Loan Periodic Update File* and *Property File*. Valuation updates will not occur unless a property is transferred to the Special Servicer. If that occurs, the Special Servicer will obtain an updated valuation from various sources, including a Broker's Price Opinion, Appraisal or Special Servicer estimate, depending on the Servicing Agreement. In these cases, both the original appraised value and the most recent value, along with the valuation source and the effective date, will be reported in the *Loan Periodic Update File* and *Property File*. These updated values are used on the appraisal reduction and advance recoverability analysis discussed in the loan level information section.

The Primary, Master or Special Servicer, through the performance of a periodic property inspection, shall monitor the performance of the borrower as to whether or not the physical condition of the property is being properly maintained, . The frequency of these inspections is generally dependent on the underlying servicing agreement since the loan documents generally provide for an inspection at the lender's discretion. In most CMBS transactions, properties are inspected annually with those representing smaller balance loans being inspected less frequently. The industry has moved toward a standard *Commercial Property Inspection Form* developed by the Mortgage Bankers Association (MBA). In addition to the standard forms, a Reference Guide for Commercial and Multifamily Inspection Reports was also prepared. The new Reference Guide provides a foundation for more consistent inspection results by providing information on how to complete due diligence for property inspections and properly fill out the form, while providing more detailed and standardized information for investors, inspectors and Servicers about the criteria used to make the overall property assessment. While this standard form and Reference Guide is not required, it has been accepted by the CMSA for property inspection reporting purposes.

The MBA inspection form provides flexibility, to accommodate the specific requirements that may exist under different servicing agreements as to the information captured during the inspection and the information that may be required for specific property types. This flexibility includes separate Multifamily and Healthcare tabs along with a detailed management interview and comprehensive property assessment rating. This approach allows the Servicer to perform various levels of property inspections that are appropriate for the property type, current performance issues or Investor concerns. The results of the Property Inspection are reported in the *Property File* through the Property Condition Legend along with the Date of Last Inspection. The *Portfolio Review Guidelines* include two Servicer Watch List codes, 3A and 3B, that are based on the property inspection results which could result in the loan appearing on the *Servicer Watchlist Report.*

Section 5
Troubled Loans

Servicer Watchlist and Portfolio Review Guidelines

While all loans have information reported on the various data files and reports described above, the IRP provides additional tools and reports geared toward providing additional information on troubled loans. Troubled loans include those on the Servicer Watchlist Report and those that have been transferred to Special Servicing. The tool for determining whether a loan should be included on the Servicer Watchlist Report (Watchlist) is the Portfolio Review Guidelines. The Portfolio Review Guidelines (PRG) have been developed and expanded over a number of IRP revisions and provide a list of criteria that can be applied systematically to determine whether a loan will be reported on the Watchlist and establish a release threshold that defines when a loan should be removed from the Watchlist. The PRG includes triggers for financial conditions such as delinquency and DSCR, borrower issues such as lockbox triggers and bankruptcy filings, property condition issues, tenant/vacancy issues, maturity and other reasons at the Servicer's discretion. When it becomes known to the Servicer that a loan meets one or more of the criteria on the PRG, the Servicer then reports the loan on the Watchlist in the next reporting cycle. The Watchlist includes loan identification information, certain financial information repeated from the Loan Periodic Update File, along with the Watchlist Code(s) and descriptive comments from the Servicer that are intended to indicate in more detail what the issue is and what additional information the Servicer has regarding the status. Many of the triggers are systematically applied and should be easily identifiable such as payment delinquency and DSCR. Others, such as reasons for why there might be a potential default, are more subjective and are at the Servicer's discretion.

The PRG have been developed to be quite broad and are intended to provide a tool for the investor to further stratify according to their investment needs. Some investors may be more concerned with certain triggers than others and by providing the specific Watchlist Codes, the investor will be able to determine which of the triggers they are most interested in.

Once a loan is on the Watchlist, the Servicer (either directly or through a primary servicer) will update the comments and Watchlist Codes (add or remove) based on research throughout the month which can produce additional financial information, market information or property information. This information is obtained through discussions with the borrower, sponsor, or property manager and/or through third party resources. Loans will be removed from the Watchlist when the release thresholds have been met for each Watchlist Code (when a problem has been resolved such as when a DSCR increases or payment delinquency is cured) or if the loan becomes a specially serviced mortgage loan—often the next step if a particular problem escalates or cannot be resolved within reasonable timeframes (as dictated by the applicable PSA).

Typically (though dependent on the language included in the PSAs), investors that hold a majority of the controlling class certificates (typically the majority subordinate bondholder, directing certificateholder or its designated Controlling Class Representative (CCR)) are afforded an opportunity to discuss the loans with the Servicer (and/or the Special Servicer) on a monthly basis.

Specially Serviced Mortgage Loans

Troubled loans that reach certain trigger events are transferred to Special Servicing. These trigger events are generally defined in PSAs within the definition of "Specially Serviced Mortgage Loan" or "Servicing Tranfer Event" and typically include payment delinquency (30-60 days), maturity default, borrower bankruptcy, receiver appointment, commencement of foreclosure, imminent default based on communication from the borrower, or other actual or imminent material default as determined by the Servicer or Special Servicer. While many PSAs require notices delivered to certain PSA parties when a loan transfers to Special Servicing, the first widely distributed notice of such event is the inclusion of a "Most Recent Special Servicer Transfer Date" on the Loan Periodic Update File, and the loan's inclusion on the Delinquent Loan Status Report. Some of the information, including the Special Servicer's commentary on the loan is repeated in the Trustee's Distribution Date Statement.

Common Areas of Interest for Troubled Loans

a. Delinquent Loans

There are several data fields designed to indicate the payment status of individual loans. Which fields an investor chooses to rely upon can often depend on whether they are a user of data files, Trustee Distribution Date Statements or if they rely on categorizations often provided by third party data providers.

i "Payment Status of Loan" – reported on the Loan Periodic Update File and includes a code corresponding to the description in the Legend. These codes range from "Payment Not Received But Still in Grace Period or Not Yet Due" to "90+ days delinquent" and also include indicators for whether the loan is matured but still making monthly payments (Performing Matured Balloon) or matured and not making monthly payments (Non-Performing Matured Balloon). This field is reported by the Servicer for all loans, including specially serviced loans.

ii "Paid Through Date" – reported on the Loan Periodic Update File and included on several Reports. This field provides the date the loan's scheduled principal and interest is paid through as of the determination date (one frequency less than the due date for the loan's next scheduled payment.) This field is reported by the Servicer for all loans, including specially serviced loans.

iii Stratification information for delinquent loans (<30, 30-59, 60-89 or 90+ days delinquent, in foreclosure or REO) can also be found in the Distribution Date Statements, the Delinquent Loan Status Report and the REO Status Report. This information is derived from a combination of the "Payment Status of Loan" (to indicate how delinquent the loan is) and also the "Foreclosure Start Date" and the "REO Date" fields. To determine whether a loan is REO, users should look to "REO Date" and if there is a date populated in this field, it is an REO loan. To determine which loans are in foreclosure, the user should look to "Foreclosure Start Date."

b. Maturing Loans

The Maturity Date for the loan is reported as a field on the Loan Periodic Update File. The date reported is the date that a final scheduled payment is due per the loan documents. For hyper-amortization loans, in addition to the Maturity Date, the anticipated repayment date (ARD) is reported on the Loan Periodic Update File and Loan Setup File in the field "Current Hyper Amortizing Date". Defeased loans will typically retain their original maturity date.

Matured loans are also reflected in the "Payment Status of Loan" field on the Loan Periodic Update File, which may indicate that a loan is matured but still making monthly payments (Performing Matured Balloon) or matured and not making monthly payments (Non-Performing Matured Balloon). Loans with either of these status indicators are also included on the Delinquent Loan Status Report.

Once a loan is within 90 days of its maturity date or anticipated repayment date for hyper-amortization loans, it will be added to the Servicer Watchlist. The loans will be removed from the Servicer Watchlist when they are extended or paid off, or for ARD loans when no other Watchlist trigger or event has occurred (essentially, if it begins to make the higher interest rate payments). If the loan is not extended or paid off, or does not meet the terms of the ARD loan payment requirements, it will likely transfer to special servicing. PSAs will include a specific definition as to when a loan will become a Specially Serviced Loan due to maturity payment default and common definitions require transfers to the Special Servicer either immediately upon maturity, or 60-90 days later if the borrower has provided written evidence of its efforts to refinance.

c. Appraisal reductions/ASER

Appraisal Reductions are triggered by certain events ("Appraisal Reduction Event") and generally lead to a calculation that is to be completed by either the Servicer or Special Servicer, dependent on the PSA. While the most prevalent trigger for producing an appraisal reduction is payment delinquency (often 60 or 90 days), there are other events such as placement of Receiver, bankruptcy filing or when the loan becomes REO. Once one of the events occurs, there are generally timeframes within which the Special Servicer is required to obtain an appraisal. Appraisal reduction calculations are based on the appraisal if it has been obtained, or, in certain circumstances, can be a percentage (typically 25%) of the Unpaid Principal Balance (UPB) until the appraisal is obtained. The Appraisal Reduction Amount (ARA) is then reported in the Loan Periodic Update File, Delinquent Loan Status Report and REO Status Report. Once the ARA amount is calculated, it is utilized by the Servicer to determine the amount of the Appraisal Subordinate Entitlement Reduction (ASER) if they are making P&I advances. The Cumulative ASER Amount, ARA and the ARA Date are reported on the Loan Periodic Update File, Delinquent Loan Status Report and REO Status Report and often on the Distribution Date Statement. Additionally, the Most Recent Net ASER Amount is reported on the Loan Periodic Update File and Interest Shortfall Reconciliation.

d. Non-Recoverable Determinations

Once advances on a loan have increased to a level where the Servicer or Special Servicer determines that additional advances may not be recovered from liquidation proceeds, they may make a Non-Recoverable Determination (NRD). Once an NRD has been made, the Servicer will stop making further P&I Advances and the amounts already advanced, along with the cumulative ASER amount will remain outstanding until the asset's liquidation. In a case where the Servicer determines that it has already advanced an amount that it considers non-recoverable, it may declare prior advances non-recoverable and recover those advances directly from the collection account. Whether a loan has been deemed non-recoverable is reported in the Loan Periodic Update File field entitled, "Non Recoverability Determined." The shortfall created by the non-recoverability determination is reported on the Interest Shortfall Reconciliation. It is common for Servicers to be conservative with respect to P&I Advances—often making a NRD when total advances reach 40-50% of anticipated recoveries, especially when significant future property protection advances are expected to be made prior to liquidation.

e. Modified loans

For loans in Special Servicing, one of the resolution methods available to the Special Servicer is to complete a workout of the loan. There are some cases where this can be completed under a short term forbearance during which the Special Servicer will typically retain the loan in Special Servicing for monitoring until the situation is resolved. In other cases, a modification of the loan terms is required. There are several data points and reports available to provide this information to investors.

The first indicator of a workout can be the Workout Strategy and special servicing commentary. The Workout Strategy is reported on the Loan Periodic Update File. If the Special Servicer has a clear indication of a modification as the strategy, it will report it as such to the Servicer. However, there are cases when a dual strategy is being employed in which case it may not be clear that a modification is also being pursued. An investor should look to the Special Servicer's commentary which is included in the Distribution Date Statement for further information.

Once a modification has been completed (documented and closed), the Special Servicer will report certain terms to the Servicer on the Special Servicer Loan File. These fields (which include Date of Last Modification, Modification Code, Modified Note Rate, Modified Payment Amount, Balance at Effective Date of Modification, Old Note Rate, Number of Months for Rate Change, Old P&I, Old Maturity Date, Total Months for Change of Modification, and Estimated Future Interest Loss to Trust $) are then reported by the Servicer on the Loan Periodic Update File and/or the Historical Loan Modification/Corrected Mortgage Loan Report. This report also contains a comment from the Special Servicer. This commentary is important as it can explain nuances of the modification, especially if there are stepped in rate, payment or other terms which cannot be fully reflected in the data fields. It should be noted; however, that per existing IRP guidelines, the Servicer is only required to populate the Historical Loan Modification report after a loan has been returned to the Servicer and is no longer a specially serviced loan.

[Revisions to this section of the IRP are currently being considered by a separate IRP task force, and should be forthcoming shortly].

f. REO (Real Estate Owned)

If a loan cannot be returned to performing status, one of the main resolution methods is to pursue conversion of title to lender. This is accomplished either by foreclosing on the collateral or taking a deed-in-lieu of foreclosure. In either event, the property will ultimately be owned by the CMBS trust (or a subsidiary) and at that point is considered real estate owned (REO). From the bondholders' perspective, the loan continues as before with ongoing payments (paid via P&I Advances or from property cash flow) and balance information. Information is also reported as before, with the new addition of the asset on the REO Status Report. REO assets are identified on both the Property File and the Loan Periodic Update File by inclusion of an "REO Date". The Property File will indicate the date property title was recorded in the name of the Trust (or its designee). The Loan Periodic Update File will also indicate this date, but for multiple property loans, it will include the date the first property became REO.

g. Exposure to natural disasters/significant events

In the wake of the 2005 hurricanes, the IRP incorporated a new template into the package called the Significant Insurance Event Report. This report is designed to provide investors information on affected properties and is prepared by the Servicer after request by an investor or interested party. The Servicer will then determine at its discretion and based upon its contractual agreements, whether providing the report is applicable and appropriate. The initial report is prepared within 5 business days of the of the request and may be updated within 10 business days thereafter. A Significant Event is defined as "an unplanned event with financial and/or structure impact to numerous commercial properties." The purpose, timing and details of the report are included in the template section of the IRP on page 102.

h. **Borrower vs. Sponsor bankruptcy/tenant bankruptcy** (might need to go in FAQs) (refer back to loan level info – sponsor)

One of the triggers that would cause a loan to transfer to Special Servicing is when the borrowing entity becomes subject to bankruptcy protection (voluntary or involuntary). This particular trigger; however, is typically related *only* to the SPE borrowing entity and not to tenant or sponsor bankruptcies. If the Servicer and/or Special Servicer have determined that a tenant or sponsor bankruptcy may have a material adverse affect on the loan, they may make a separate more subjective determination to transfer the loan to special servicing. If the borrowing entity has filed or has become subject to bankruptcy protection, the date of the bankruptcy filing will be reported on the Loan Periodic Update File in the field "Bankruptcy Date."