



Methodology

*Rating Global Structured Finance  
CDO Restructurings*

DECEMBER 2011



*Insight beyond the rating.*

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This methodology replaces and supersedes all related prior methodologies. This methodology may be replaced or amended from time to time and, therefore, DBRS recommends that readers consult [www.dbrs.com](http://www.dbrs.com) for the latest version of its methodologies.



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# Rating Global Structured Finance CDO Restructurings

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# Introduction

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## EXECUTIVE SUMMARY

Structured finance collateralized debt obligations (“SF CDOs”) are securitizations typically backed by combinations of residential mortgage-backed securities (“RMBS”), commercial mortgage-backed securities (“CMBS”), collateralized loan obligations (“CLOs”), other collateralized debt obligations (“CDOs”), asset-backed securities (“ABS”) backed by consumer and commercial receivables, and other securitized asset types (collectively, “SF Assets”). SF CDOs, therefore, can be characterized as resecuritizations of other SF Assets. Market participants have approached DBRS to seek ratings on (a) restructurings of tranches issued by existing SF CDOs, (b) ratings on new SF CDOs that contain an existing pool of SF Assets and (c) ratings on interest rate swap payments and other deterministic cash flow streams potentially payable by SF CDOs (collectively, “SF CDO Restructurings”). The purpose of this report is to summarize DBRS’s approach to rating these types of products.

DBRS analyzes both qualitative and quantitative factors when rating SF CDO Restructurings, which include the following:

- Proposed capital structure, priority of payments, credit enhancement and other transaction features;
- Loss projections on each underlying loan pool;
- Cash flow analysis;
- Legal structure and opinions;
- Financial condition and operational expertise and of related counterparties;
- Event of default provisions and waterfalls;
- Collateral manager condition and performance (if applicable as described below).

This revised methodology provides a framework for analyzing SF CDO Restructurings. DBRS ratings are assigned on a transaction-by-transaction basis that considers the circumstances of each transaction. Proposed transaction structures and portfolios may contain risks not contemplated by this framework. Where unique risks are identified that fall outside the scope of this framework, DBRS will supplement this methodology with appropriate analytic judgment. Such judgment may result in further deterministic analysis in addition to this framework. If unique risks present themselves, these risks and any additional analysis would be addressed in the transaction-specific rating action commentary.

The purpose of this methodology is to update and restate the methodology “Rating U.S. & European Structured Finance CDO Restructurings” published in July, 2010. The key change to this methodology is the incorporation of the updated US RMBS rating analysis, “RMBS Insight: U.S. Residential Mortgage-Backed Securities Loss Model and Rating Methodology”, published in October, 2011.

## APPLICATION OF METHODOLOGY

The diagram on the following page describes the overall process used by DBRS to analyze an SF CDO Restructuring. The steps are as follows:

- (1) DBRS conducts a statistical loan-level analysis on the pools backing each SF Asset in the portfolio. The analysis of each SF Asset is independent of the other SF Assets within the pool.
- (2) DBRS uses the results from the statistical loan-level analysis to derive rating-based lifetime default and loss severity rate vectors for each underlying loan pool. Each pool has its own unique vectors based on delinquencies, vintage, loan types, and other fundamental factors.



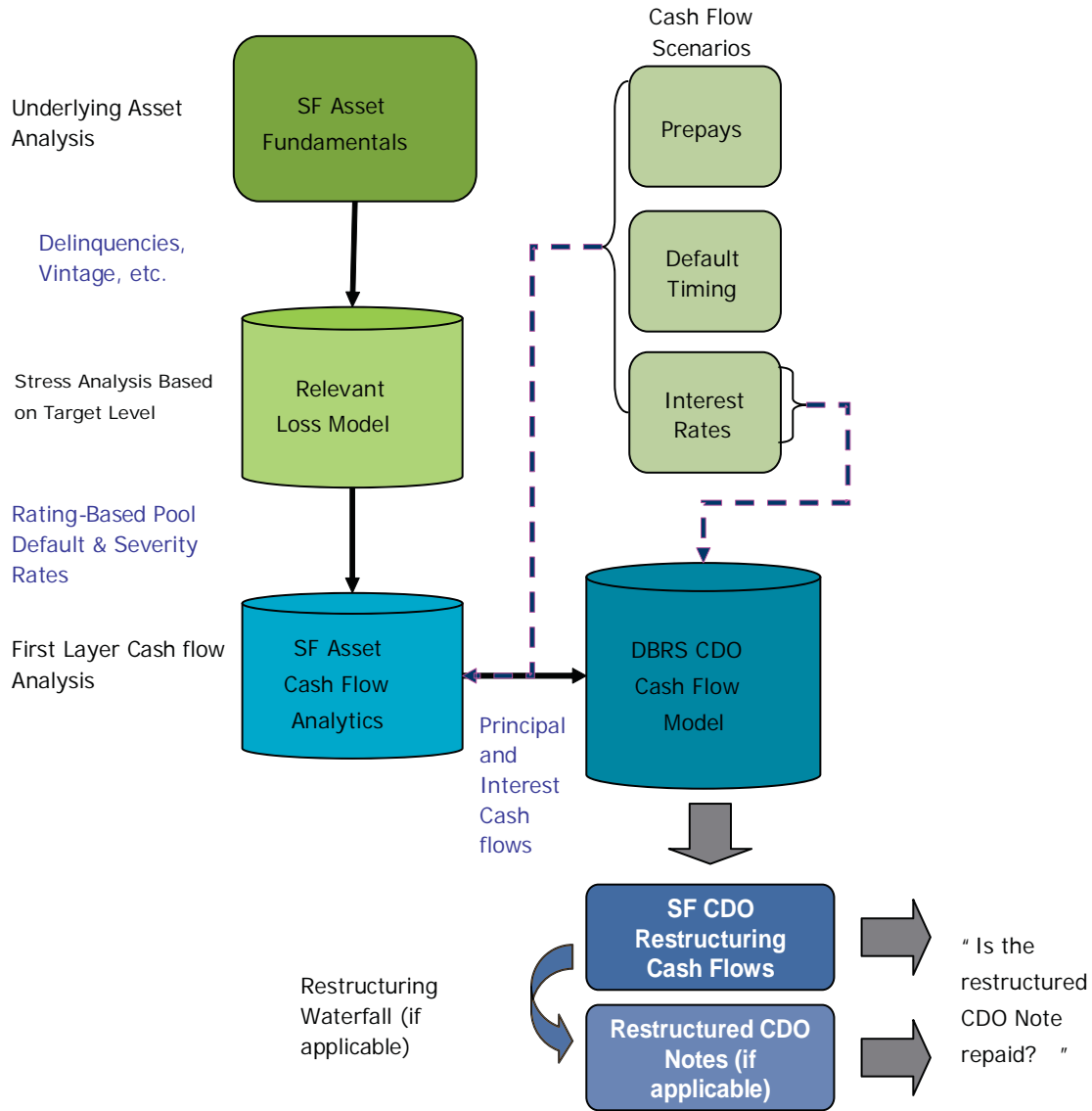
- (3) The analysis uses a tentative rating level or levels based on the tentative rating(s) for the SF CDO Restructuring. This level can be thought of as the common factor that ties together all of the analysis. Every SF Asset within the pool is analyzed at stresses associated with each applicable rating level.
- (4) DBRS projects interest and principal cash flows for each SF Asset across various cash flow scenarios, including variations in interest rates, prepayments, default and loss timing. The lifetime default and loss severity rate used are determined by the tentative rating level(s).
- (5) DBRS aggregates the interest and principal cash flows projected across all of the SF Assets for each cash flow scenario.
- (6) The aggregated interest and principal cash flows are used as inputs into the DBRS CDO cash flow model, flowing through the CDO deal structure to forecast the cash flows paid to the SF CDO Restructuring. This analysis is performed for each cash flow scenario at the tentative rating level(s).
- (7) The projected cash flows paid to the SF CDO Restructuring are then passed through the mechanics of the additional restructuring layer, if applicable, to determine whether sufficient cash flow is available to repay the SF CDO Restructuring in each cash flow scenario.
- (8) Depending upon the tentative rating level, DBRS determines whether the SF CDO Restructuring is fully paid in the requisite number of cash flow scenarios as described below.
- (9) A review of the legal documents that govern any SF CDO Restructuring layer is undertaken and consideration of any qualitative factors is made.

For transactions with high loss expectations and/or maturities longer than 12 months, SF CDO Restructurings might not achieve the highest ratings. This methodology might not be applicable for SF CDO Restructurings with target ratings below the average default probability for the pool.

The DBRS CDO cash flow model is a substantial component of the DBRS rating process. A three or more notch rating difference from the rating resulting from the application of the DBRS CDO cash flow model would be defined as a material deviation.



## DBRS RATING PROCESS FOR SF CDO RESTRUCTURINGS



## Qualitative Methodology

The guidelines below are intended to provide a basic outline of the qualitative framework applied by DBRS when an SF CDO Restructuring is evaluated. DBRS considers the unique characteristics and provisions of each transaction when applying our methodology.



## LEGAL DOCUMENTATION

DBRS analyzes the legal structure of the proposed transaction by reviewing the primary and ancillary transaction documents as well as all relevant legal opinions. External counsel may be engaged by DBRS on a case-by-case basis.

## EVENT OF DEFAULT

Payment failures resulting in defaults are likely scenarios for distressed SF CDOs, to the extent that such events have not already occurred. Events of default (“EODs”) could be either beneficial or detrimental to SF CDO Restructurings. They could also introduce risks (such as market value risks) which present analytical challenges. DBRS considers the risks presented to SF CDOs in both EOD and non-EOD scenarios. This may include evaluating non-EOD scenarios for deals already in default.

Interest rate swaps and other derivatives pose particular challenges to SF CDOs, especially where SF CDOs pay a fixed rate and receive a floating rate on a notional amount not directly tied to that of the assets. In all cases, DBRS models existing or proposed hedges as part of its cash flow analysis, and determines whether or not any such derivatives will experience a termination event due to failure to pay on the part of the SF CDO. If such termination events occur in any of the cash flow scenarios, DBRS analyzes the additional risk such termination event poses to the repayment of the rated SF CDO Restructuring. Analysis of interest rate swap payments also looks to the point at which such termination may occur. Please see “Rating Interest Rate Swap Payments for SF CDOs” below.

## COLLATERAL MANAGER

DBRS generally conducts operational reviews of CDO collateral managers. If an SF CDO or SF CDO Restructuring is static, or is designed to include portfolio trading but the collateral manager is no longer able to purchase assets, an operational risk review may not be relevant to the analysis.

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# Quantitative Methodology

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## PROCESS OVERVIEW

The DBRS approach to rating SF CDO Restructurings has more in common with analyzing cross-collateralized transactions that combine existing real estate mortgage investment conduits (ReREMICs) than with traditional corporate CDO analysis. For a tentative rating level, stress scenarios are applied to the loans underlying each SF Asset, and the resulting cash flows for each SF Asset are aggregated across the SF CDO pool for a given cash flow scenario. The resulting aggregate interest and principal cash flows are then applied to the DBRS CDO cash flow model for each successive level of resecuritization (to the SF CDO, and then to the SF CDO Restructuring, etc.) to determine if the SF CDO Restructuring passes at the given rating level.

DBRS begins the rating process by re-analyzing each SF Asset in the SF CDO. To generate lifetime portfolio loss rates at each rating level for a portfolio of SF Assets, DBRS relies on the fundamental analysis of each SF Asset as incrementally additive components to the analysis of an SF CDO Restructuring.

DBRS relies on each of its respective SF analytics teams to analyze the underlying loan pools for each SF Asset according to its own methodology. For each rating level, stressed lifetime default and loss severity rates are assigned to the pools underlying each SF Asset. These default and loss severity rates are unique to each SF Asset. In certain cases, there can be multiple default and loss severity rate vectors for each SF



Asset if the analysis is being performed at a collateral sub-group level rather than on the pool as a whole. Whether or not a particular SF Asset is part of an SF CDO pool is irrelevant in this stage of the analysis. In order to link all of the analysis together at the beginning stages of analysis, DBRS begins by assuming a tentative rating level. For example, if the tentative rating for a tranche of an SF CDO Restructuring is BBB, then each SF Asset within the SF CDO will be modeled at its respective BBB lifetime default and loss severity rate.

Once the lifetime default and loss severity rate for each SF Asset is determined as described above, cash flow analysis is then performed on each of the SF Assets, incorporating prepayment assumptions, timing of loss assumptions, interest rate assumptions, etc., depending on the asset type and generally commensurate with the analysis conducted by the appropriate DBRS analytical team. For RMBS, which comprise the bulk of assets in SF CDOs, 40 different cash flow scenarios are run, including prepayment, timing of loss and interest rate stresses. There are fewer cash flow scenarios under DBRS's corporate CDO methodology, but in order to maintain consistency with RMBS, these scenarios are matched with multiple RMBS scenarios. CMBS assets make use of Corporate CDO timings. The pairing between each RMBS scenario and the respective CDO and CMBS scenarios is shown on the chart on the next page. For other ABS assets, stressed cash flow modeling is analyzed on a case-by-case basis. Please refer to the relevant asset class methodology for the stress curves for each SF Asset type.

RMBS					CDO & CMBS	
	Prepay Rate	Prepay Convention	Loss Timing	Interest Rates	Default Timing	Interest Rates
1	5%	Standard	Front-loaded	Up	CDO Front	Up
2	5%	Standard	Back-loaded	Up	CDO Back	Up
3	10%	Standard	Front-loaded	Up	CDO Front	Up
4	10%	Standard	Back-loaded	Up	CDO Back	Up
5	15%	Standard	Front-loaded	Up	CDO Front	Up
6	15%	Standard	Back-loaded	Up	CDO Back	Up
7	20%	Standard	Front-loaded	Up	CDO Front	Up
8	20%	Standard	Back-loaded	Up	CDO Back	Up
9	25%	Standard	Front-loaded	Up	CDO Front	Up
10	25%	Standard	Back-loaded	Up	CDO Back	Up
11	5%	Maximum	Front-loaded	Up	CDO Front	Up
12	5%	Maximum	Back-loaded	Up	CDO Back	Up
13	10%	Maximum	Front-loaded	Up	CDO Front	Up
14	10%	Maximum	Back-loaded	Up	CDO Back	Up
15	15%	Maximum	Front-loaded	Up	CDO Front	Up
16	15%	Maximum	Back-loaded	Up	CDO Back	Up
17	20%	Maximum	Front-loaded	Up	CDO Front	Up
18	20%	Maximum	Back-loaded	Up	CDO Back	Up
19	25%	Maximum	Front-loaded	Up	CDO Front	Up
20	25%	Maximum	Back-loaded	Up	CDO Back	Up
21	5%	Standard	Front-loaded	Down	CDO Front	Down
22	5%	Standard	Back-loaded	Down	CDO Back	Down
23	10%	Standard	Front-loaded	Down	CDO Front	Down
24	10%	Standard	Back-loaded	Down	CDO Back	Down
25	15%	Standard	Front-loaded	Down	CDO Front	Down
26	15%	Standard	Back-loaded	Down	CDO Back	Down
27	20%	Standard	Front-loaded	Down	CDO Front	Down
28	20%	Standard	Back-loaded	Down	CDO Back	Down
29	25%	Standard	Front-loaded	Down	CDO Front	Down
30	25%	Standard	Back-loaded	Down	CDO Back	Down
31	5%	Maximum	Front-loaded	Down	CDO Front	Down
32	5%	Maximum	Back-loaded	Down	CDO Back	Down
33	10%	Maximum	Front-loaded	Down	CDO Front	Down
34	10%	Maximum	Back-loaded	Down	CDO Back	Down
35	15%	Maximum	Front-loaded	Down	CDO Front	Down
36	15%	Maximum	Back-loaded	Down	CDO Back	Down
37	20%	Maximum	Front-loaded	Down	CDO Front	Down
38	20%	Maximum	Back-loaded	Down	CDO Back	Down
39	25%	Maximum	Front-loaded	Down	CDO Front	Down
40	25%	Maximum	Back-loaded	Down	CDO Back	Down



For more detail, please refer to the underlying SF Asset methodology attributable to the relevant underlying assets. A listing of DBRS methodologies relating to securitizations can be found at the end of this document.

Depending upon the availability of data and availability of an applicable DBRS methodology, DBRS may or may not give credit to other SF Assets on a case-by-case basis.

Once the cash flow analysis is complete, DBRS aggregates the principal and interest cash flows across all of the SF Assets for each cash flow scenario.

DBRS then models the structural features of the SF CDO (expenses, hedges, waterfall, coverage tests, etc.) in the DBRS CDO cash flow model. Each of the 40 different cash flow vectors are then passed through as asset cash flows into the model to project the cash flows paid to the SF CDO Restructuring.

In addition to modeling each SF CDO, DBRS models additional structural features of the SF CDO Restructuring, if applicable, in the DBRS CDO cash flow model. The principal and interest payments made to the relevant SF CDO tranche(s) are passed through as asset cash flows to the SF CDO Restructuring layer, if applicable.

Depending upon the rating level, DBRS will determine whether the SF CDO Restructuring is fully repaid in the requisite number of cash flow scenarios. For ratings of BBB (high) (sf) and below, no more than four cash flow scenarios are generally permitted to fail. For ratings A (low) (sf) and higher, the SF CDO Restructuring is expected to be repaid under all 40 scenarios.

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## Rating Interest Rate Swap Payments for SF CDOs

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Interest rate swaps have commonly been used in SF CDOs to hedge against interest rate movements. Typically, the SF CDO pays a fixed rate payment to the swap counterparty in exchange for a floating rate payment of an index by the counterparty to the SF CDO. If a swap contract was to terminate in a low interest rate environment, the swap counterparty would generally be entitled to a termination payment from the SF CDO, depending upon the fixed rate at which the swap was struck.

When rating interest rate swap payments for SF CDOs, DBRS is assessing the ability of the SF CDO to ultimately make all potential payments, including termination payments, to the counterparty on or prior to the legal final maturity date of the transaction.

In most SF CDO transactions, the swap payments owed to the counterparty are senior in the payment priority to senior note holders, if the SF CDO is the defaulting party. In many cases, given the seniority of swap payments in SF CDO priorities of payment, available collateral cash flow from current and future distribution dates may be sufficient to repay swap payments. However, due to the considerable deterioration in SF CDO performance, some transactions may not be able to ultimately pay swap payment obligations, especially in stressed scenarios.

When rating swap payments, DBRS applies its qualitative and quantitative methodology, as described in previous sections. Rather than analyzing the ability of the SF Asset and SF CDO cash flows to repay an SF CDO Restructuring tranche, DBRS analyzes the ability of the SF Asset and SF CDO cash flows to ultimately repay all potential swap obligations, including termination payments, on or prior to the legal final maturity of the transaction.



To calculate the potential swap termination payments for a typical interest rate derivative, DBRS first derives the net swap cash flow for each period by comparing a) the fixed stream of payments from the SF CDO to the swap counterparty against b) the index payments which the counterparty would be expected to pay to the trust under a variety of interest rate scenarios. Next, DBRS aggregates the net swap cash flow for all future periods to derive the total potential swap termination payments. DBRS uses the unified interest rate model to stress the interest rate curves used to calculate potential swap termination payments. After the occurrence of an actual swap termination event, DBRS models the actual mark-to-market for the swap termination as determined by the swap calculation agent.

In certain underlying documents, there is a penalty rate assessed for any unpaid swap termination payments in each period. Penalty rates are a function of credit risk and interest rate risk, and vary from swap counterparty to swap counterparty. When modeling any potential swap termination when the penalty rate is not stated in the relevant documents, DBRS assumes a spread for the penalty rate to be applied for any unpaid swap termination payment as per Table 1. DBRS may seek guidance from the swap counterparty regarding the reasonableness of the modeled spread for the penalty rate prior to the occurrence of an actual swap termination event, and may adjust the spread for the penalty rate if the assumptions in Table 1 are insufficient. After any actual swap termination, DBRS models the actual penalty rate for the swap as determined by the swap counterparty.

Table 1 (Swap Termination Payment Assumptions):

Target Rating Class	Penalty Spread Assumption
AA	8.00%
A	6.00%
BBB	4.00%
BB & below	2.50%

A rating is only assigned when under such rating scenario the collateral cash flows are sufficient for the SF CDO to ultimately pay any swap obligation, including swap termination payments to the counterparty. DBRS does not consider the ability of the counterparty to make swap payments to the SF CDO for purposes of cash flow modeling.

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## Rating Other Cash Flow Streams for SF CDOs

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Various cash flow streams are common in SF CDOs to pay deterministic costs to collateral managers, initial placement agents and/or to repay initial and ongoing expenses. Such cash flow streams can be evidenced in note form (such as Class X and other senior notes paid primarily from interest proceeds) or in contract form, either embedded in transactions documentation or in a side letter. In most SF CDO transactions, such cash flow streams are senior in payment priority to senior note holders.

When rating cash flow streams for SF CDOs, DBRS is assessing the ability of the SF CDO to make contractual fee or other payments to relevant counterparties on or prior to the legal final maturity date of the transaction.

For this analysis, DBRS applies this methodology, as described in previous sections. Rather than analyzing the ability of the SF Asset and SF CDO cash flows to repay an SF CDO Restructuring in full, DBRS analyzes the ability of these cash flows to repay contractually obligated fee payments to relevant counterparties on or prior to the legal final maturity date of the transaction.



A rating is only assigned when under the tentative rating scenario, there is sufficient coverage of collateral and cash flows to ultimately pay the contractually obligated payments.

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## Related Research

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1. "Legal Criteria for US Structured Finance Transactions"
2. "Legal Criteria for European Structured Finance Transactions"
3. "Unified Interest Rate Model for European Securitizations"
4. "Swap Criteria for European Structured Finance Transactions"
5. "Unified Interest Rate Model for Global Structured Finance CDO Restructurings"
6. "The Effect of Sovereign Risk on Securitizations in the Euro Area"

Sample representative list of related methodologies that might be used to analyze collateral underlying SF CDO Restructurings:

1. "RMBS Insight: U.S. Residential Mortgage-Backed Securities Loss Model and Rating Methodology"
2. "Master European Residential Mortgage-Backed Securities Rating Methodology and Jurisdictional Addenda"
3. "DBRS Structured Finance Servicer Evaluations"
4. "CMBS Rating Methodology"
5. "European CMBS Methodology"
6. "Master European Granular Corporate Securitizations (SME CLOs)"
7. "Rating Global High-Yield Loan Securitizations, Structured Loans and Tranching Credit Derivatives"
8. "Rating European Consumer and Commercial Asset-Backed Securitizations"
9. "Rating U.S. FFELP Student Loan Transactions"
10. "Rating U.S. Private Student Loan Transactions"
11. "Rating U.S. Equipment Lease and Loan Securitizations"
12. "Rating U.S. Credit Card Securitizations"
13. "Rating U.S. Rental Car Securitizations"
14. "Rating U.S. Wholesale Auto Securitizations"
15. "Rating U.S. Auto Lease Securitizations"
16. "Rating U.S. Retail Auto Loan Securitizations"
17. "Rating U.S. RMBS Servicing Advance Transactions"

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