



Methodology

*Canadian Surveillance Methodology for
CDOs of Large Corporate Credit*

FEBRUARY 2012



Insight beyond the rating.

CONTACT INFORMATION

Jamie Feehely

Managing Director – Canadian Structured Finance
+1 416 597 7312
jfeeheley@dbrs.com

Tullio Fazio

Vice President – Canadian Structured Credit
+1 416 597 7428
tfazio@dbrs.com

DBRS is a full-service credit rating agency established in 1976. Privately owned and operated without affiliation to any financial institution, DBRS is respected for its independent, third-party evaluations of corporate and government issues, spanning North America, Europe and Asia. DBRS's extensive coverage of securitizations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All public DBRS ratings and research are available in hard-copy format and at DBRS.com, our lead delivery tool for organized, Web-based, up-to-the-minute information, and select ratings are available electronically on Bloomberg. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

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 for the latest version of its methodologies.



Canadian Surveillance Methodology for CDOs of Large Corporate Credit

TABLE OF CONTENTS

Introduction	4
Surveillance Review Process	4
Rating Committee	4
Rating Actions	5
Disclosure	5
Asset Analysis Process	5
Market Risk Analysis	6
Appendix 1: Canadian Surveillance Methodology for CDOs of Large Corporate Credit	8
Limitations	8
Application of Canadian Surveillance Rating Methodology	8



Introduction

This publication outlines the revised DBRS methodology for surveillance of Canadian Collateralized Loan Obligations (“CLOs”) and Collateralized Debt Obligations (“CDOs”) backed by debt of large corporations or credit derivatives relating thereto. This methodology supersedes the description of the surveillance methodology described in “Rating Canadian Structured Credit Transactions” published in November 2008.

The approach covered by this publication would apply primarily to static synthetic securitizations rated in Canada and backed by obligations of large corporate issuers. This methodology does not cover securitizations where the underlying assets are primarily other securitizations. It also does not apply to CLOs backed by granular portfolios of loans to small and medium enterprises (“SME”) loans. Actual ratings are determined by a rating committee, and will reflect a combination of both quantitative and qualitative considerations.

Certain proposed portfolios and structures presented to DBRS may contain risk characteristics not contemplated by this framework. These methodologies will be supplemented by appropriate analytical judgments, deterministic overlays, and sensitivity scenarios where such exogenous risks are identified and deemed to fall outside of the scope of this methodology. Any material differences that cause such deviation will be discussed in the transaction-specific commentary accompanying the rating action.

DBRS monitors trends in global credit markets on an ongoing basis and will promptly publish any changes in its surveillance assumptions, along with any rating actions that may result from those changes in assumptions. Any revisions to DBRS modeling assumptions will be explained in a press release or revised methodology.

This approach is applied in conjunction with a number of other DBRS publications, including:

- “Rating Methodology for CLOs and CDOs of Large Corporate Credit” dated February, 2012; and
- “Cash Flow Assumptions for Corporate Credit Securitizations” dated February, 2012.

Chapter 1 – Surveillance Review Process

RATING COMMITTEE

As a normal part of the rating process, DBRS monitors each of the transactions it rates. Surveillance analysts review all existing ratings on at least an annual basis and make rating recommendations based on this review. Each rating recommendation made by analysts in the CDO Surveillance Group is reviewed by a Structured Finance Rating Committee (“SRC”) that consists of senior rating analysts. The surveillance analysts prepare a rating committee presentation that includes the analytical work and rating rationale supporting the final recommendation. All recommended actions are made in accordance with the applicable DBRS methodologies.

RATING ACTIONS

Rating actions taken on a transaction during a rating committee may include a confirmation, whereby the current rating remains in place; an upgrade; or a downgrade. In cases where DBRS does not have sufficient information to make a rating decision at the time of a rating committee, the rating may be placed Under Review with Positive, Developing or Negative Implications. DBRS strives to resolve the Under Review status in accordance with our published policies.



DISCLOSURE

DBRS publishes all rating decisions made by an SRC for each publicly-rated CDO transaction as quickly as possible subsequent to the conclusion of such committee. The disclosures are made in the form of a press release, which is posted to the DBRS website and sent concurrently to major newswires. Rating actions taken on privately-rated transactions will be promptly disclosed to the requestor of the initial rating.

In addition, DBRS publishes a monthly Structured Notes report, providing detailed information on the floating-rate notes market in Canada. This report summarizes the performance of each CDO transaction, including the current enhancement level, the required subordination for the assigned rating, and the number of defaults and cumulative losses affecting the CDO portfolio.

Chapter 2 – Asset Analysis Process

Most Canadian CDO transactions rated by DBRS reference a portfolio of senior unsecured corporate debt obligations. A primary CDO surveillance function is to analyze whether the credit enhancement (or attachment point) available to a CDO transaction is sufficient relative to the risk of losses in the portfolio of corporate reference entities.

Synthetic transactions rated by DBRS may be exposed not only to credit risk, but also to market risk. In these cases DBRS will evaluate both potential risks and will generally rate to the lower of the two outcomes.

Credit Risk Analysis

For synthetic transactions, the primary surveillance action is to analyze whether the credit enhancement available to a CDO transaction is sufficient relative to the risk of losses in the portfolio of corporate reference entities. In monitoring these transactions, DBRS will review the periodic data provided, and will re-run the internal DBRS Monte Carlo model to determine the Stressed Default Rate. (Please refer to “Rating CDOs Backed by Debt of Large Corporations” a description of the asset analysis underlying this model.) This level will be compared to the current attachment point for the relevant tranche. DBRS refers to the value between the required subordination for a given rating and the attachment point as a stability cushion. DBRS applies stress testing and downwards rating migration to the portfolio as necessary given market conditions to evaluate the sufficiency of the stability cushion in protecting the tranche from a rating downgrade.

CDOs of Trust-Preferred Securities

In the past, DBRS rated a number of cash flow CDO transactions with trust-preferred securities (“TruPS”) as the underlying collateral. In its surveillance of CDOs of TruPS, DBRS uses the DBRS Monte Carlo model but applies different modeling assumptions to account for differences between TruPS and traditional corporate obligations. A trust-preferred security is issued by a trust that is created by a company for the purpose of issuing debt to it. The trust issues preferred securities that have characteristics of both subordinated debt and preferred stock. Many smaller bank holding companies in the United States have issued TruPS that were included in CDOs. As a result, updated ratings are not available for all underlying obligations included in CDOs of TruPS rated by DBRS. However, upon availability, DBRS periodically examines transaction Trustee Reports to review the performance of the TruPS and CDO of TruPS. In cases where DBRS does not have access to updated TruPS ratings information, a punitive notching schedule on original ratings is used. In many cases, obligations without an available rating are assigned a rating significantly lower than investment-grade for modeling purposes. DBRS periodically runs cash flow analysis for CDOs of TruPS as part of its surveillance process. For cash flow deals backed by TruPS, DBRS Canadian Structured Credit team uses deal-specific interest rate scenarios on a case-by-case basis.

MARKET RISK ANALYSIS



CDO transactions are generally exposed to the risk of the underlying holdings or reference entities suffering losses (“credit risk”). Certain CDO transactions rated by DBRS are also exposed to market risk because a certain amount of leverage is employed; that is, the collateral held by the swap counterparty is smaller than the potential maximum exposure of the SPV to the counterparty under the swap. In the event that the swap counterparty’s exposure to the SPV on the portfolio of reference entities increases as indicated by changes in the market price of credit protection, the SPV may be required to post additional collateral in respect of such exposure. The requirement to post additional collateral is referred to as a margin call or collateral call.

For each leveraged transaction, one or more collateralization triggers will generally be in place, indicating what needs to occur before additional funding is required. Market risk is quantified by calculating the probability of a collateralization trigger being breached and equating the likelihood with a credit rating. For leveraged CDO transactions, the final rating assigned by DBRS is usually the lower of the implied rating from credit risk and the implied rating from market risk.

There are three main types of collateralization regimes under which margin calls are generally determined: those based on loss only; those based on spread and loss; and those based on true mark-to-market (“MTM”). DBRS has developed separate surveillance approaches for each of these three regimes.

a) Loss-Based Triggers

Under a loss-based trigger regime, the MTM or spreads of the reference portfolio are not directly applicable in determining whether a margin call can be triggered. Only losses from credit events affecting the reference portfolio can cause a margin call to be triggered.

Using the DBRS Monte Carlo model, the level of loss commensurate with the assigned rating is calculated according to credit risk analysis. If the amount of loss calculated at the assigned rating level is greater than the level of loss required to breach the trigger, then the rating is no longer appropriate for the CDO transaction, and a downgrade may occur. The process of evaluating the probability of breaching a loss-based trigger of X% is essentially the same as determining the likelihood of first-dollar loss to a CDO tranche with X% subordination.

b) Spread and Loss-Based Triggers

Under a spread and loss-based (“spread-loss”) trigger regime, a combination of portfolio weighted average spread - an indicator of market risk - and accumulated default losses is used to determine whether a margin call is triggered. A spread-loss trigger matrix presents the triggering spread value for each level of loss and time to maturity. In most cases, linear interpolation is used to determine the spread trigger level if the exact loss level is not shown on the matrix.

To determine the probability of breaching a trigger, the weighted average spread of the portfolio and the cumulative losses to the portfolio are simulated for the life of the transaction. The weighted average spread level is simulated using a mean reversion model and the portfolio loss is simulated using the same approach used by the Monte Carlo model. A breach occurs if at any point in time the simulated spread level is greater than the corresponding trigger level adjusted for simulated losses.

DBRS typically runs its spread-loss model on a weekly basis. The frequency of regular surveillance is greater than for non-levered transactions because CDOs exposed to market risk generally display a higher potential for ratings volatility. Also, due to the sensitivity of the spread-loss model to certain inputs such as initial spread levels, DBRS does not utilize the rating subcategories “high” and “low”. Using only the mid-points of each rating category limits the potential for frequent minor rating changes from modeling volatility. Furthermore, a weekly average spread is used to limit day-to-day spread volatility in the surveillance process.



Rating actions are generally taken based on the following guidelines:

- If the model results indicate that a downgrade is warranted for two consecutive weeks, then the transaction is placed Under Review with Negative Implications.
- After a rating has been placed Under Review with Negative Implications, it maintains its status until one of the following scenarios occurs:
 - If a downgrade is warranted for two consecutive weeks subsequent to the rating being placed Under Review with Negative Implications, then the transaction will be downgraded. Generally, the revised rating will be the most recent rating implied from the spread-loss model.
 - If the then-current rating is sufficient for two consecutive weeks subsequent to being placed Under Review with Negative Implications, then the Under Review status is removed and the rating is confirmed.
- If the model results indicate that an upgrade is warranted for four consecutive weeks, then the transaction will be upgraded. Generally, the revised rating will be the most recent rating implied from the spread-loss model.

The above guidelines aim to allow for a measured approach to limit the volatility from using spread-loss model results that can change day-to-day and week-to-week, depending on volatility in credit markets. They also allow DBRS to establish trends prior to taking rating action. However, such an approach is only valid if the spread level is sufficiently lower than the trigger value so as to virtually eliminate any possibility of short-term volatility putting the rating at risk. If at any point the difference between the spread level and the trigger level decreases to less than 25% of the trigger level, the rating of the CDO transaction will generally be placed Under Review with Negative Implications and DBRS may downgrade the rating.

c) Mark-to-Market Based Triggers

In its surveillance of transactions with MTM-based triggers, DBRS estimates the portfolio spread level required to breach the MTM trigger at different periods of time. These spread levels are used to form a spread-loss trigger matrix, which is then used to quantify the probability of the trigger being breached in the same way as explained above.



Appendix 1: Surveillance Methodology for Canadian Securitizations Backed by Debt of Large Corporations Summary

LIMITATIONS

- Future asset performance may deviate significantly from past performance.
- Actual default frequencies and/or recovery rates may exceed DBRS's stressed performance assumptions and model results are highly dependent on assumed levels of these variables.
- The methodology assumes no significant changes to legal or regulatory framework.

APPLICATION OF CANADIAN SURVEILLANCE RATING METHODOLOGY

Summary of Credit Risk Analysis Process for Canadian Structured Credit Surveillance

Input	Detail	Key Variables/Analysis
Portfolio Information	Any changes in a transaction's portfolio and enhancement must be accounted for prior to running the transaction through the DBRS Monte Carlo model.	<ul style="list-style-type: none"> • For static portfolios, adjustments are not generally necessary (with the exception of lowering credit enhancement for credit events affecting the portfolio) because additional assets will not be added after the closing of the transaction.
Ratings Data	Retrieve rating data from DBRS internal sources or reputable external sources for each transaction's underlying assets (if available).	<ul style="list-style-type: none"> • Use the DBRS rating if available. • If the entity is not rated by DBRS, use the average rating of two specified nationally recognized statistical rating organizations ("NRSROs").
Required Level of Subordination	Using the updated portfolios and ratings, run each transaction through the DBRS Monte Carlo model to determine the required level of subordination.	<ul style="list-style-type: none"> • Probability of default assumptions. • Correlation assumptions. • Recovery assumptions. • Other portfolio inputs (type of asset, industry, region, seniority, etc.).
Output	Detail	Application
Stability Cushion	The stability cushion is the difference between the actual enhancement available in the CDO transaction and the enhancement required to maintain the rating of the transaction.	<ul style="list-style-type: none"> • If the stability cushion for a transaction is more than 50 basis points (bps), then no further action is generally required. • If the stability cushion is greater than zero but less than 50 bps, surveillance analysts will usually inform an SRC of the issue and may recommend action (and the transaction may be more frequently monitored). • If the required enhancement for a given rating exceeds the actual enhancement available (i.e., it has a negative stability cushion), then a downgrade may result.



Summary of Market Risk Analysis Process for Canadian Structured Credit Surveillance

Input	Details	Key Variables/Analysis
Loss-Based Risk Analysis	A margin call is generally required once portfolio losses reach a predetermined level.	<ul style="list-style-type: none"> • Calculate the stability cushion over the breaching loss level on a monthly basis using the Credit Risk Analysis Process described above.
Spread-Loss Based Risk Analysis	A margin call will generally be required for a given level of loss if spreads reach a predetermined level.	<ul style="list-style-type: none"> • Weekly surveillance modeling is performed because of the potential for higher rating volatility. • Due to the sensitivity of the spread-loss model to certain inputs such as initial spread levels, DBRS does not apply the rating subcategories "high" and "low." • The weekly average spread is used to limit day-to-day spread volatility. <p>Rating Action Guidelines</p> <ul style="list-style-type: none"> • If a downgrade is warranted for two consecutive weeks, then the transaction will generally be placed Under Review with Negative Implications. • After a rating has been placed Under Review with Negative Implications, it maintains its status until one of the following scenarios occurs: <ul style="list-style-type: none"> (1) If a downgrade is warranted for two consecutive weeks subsequent to the rating being placed Under Review with Negative Implications, then the transaction may be downgraded. Generally, the revised rating will be the most recent rating implied from the spread-loss model. (2) If the then-current rating is sufficient for two consecutive weeks subsequent to being placed Under Review with Negative Implications, then the Under Review status is generally removed and the rating is confirmed. • If the model results indicate that an upgrade is warranted for four consecutive weeks, then the transaction may be upgraded. Generally, the revised rating will be the most recent rating implied from the spread-loss model.
Mark-to-Market Based Risk Analysis	A margin call will generally be required if the mark-to-market of the CDO tranches drops below a predetermined level.	<ul style="list-style-type: none"> • In its surveillance of transactions with mark-to-market based triggers, DBRS estimates the portfolio spread level required to breach the mark-to-market trigger at different periods of time. • The estimated spread levels are used to form a spread-loss trigger matrix, which is then used to quantify the probability of the trigger being breached in the manner explained in the Spread-Loss Based Risk Analysis above.
Output		Appropriate rating level based on the margin call trigger regime.

Copyright © 2012, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be accurate and reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT <http://www.dbrs.com/about/disclaimer>. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON <http://www.dbrs.com>.



Insight beyond the rating.

www.dbrs.com

DBRS, Inc.
140 Broadway
35th Floor
New York, NY 10005
TEL +1 212 806 3277