



Methodology

*Rating Methodology for CLOs and
CDOs of Large Corporate Credit*

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Insight beyond the rating.

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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.



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Introduction

This publication outlines the updated DBRS methodology for rating Collateralized Loan Obligations (“CLOs”) and Collateralized Debt Obligations (“CDOs”) backed by debt of large corporations. The rating process outlined herein represents an update to the following methodologies: “Rating Global High-Yield Loan Securitizations, Structured Loans and Tranching Credit Derivatives”, “Rating Canadian Structured Credit Transactions”, and “The CDO Toolbox”. Major changes involve the introduction of the DBRS Diversity Model; updates to DBRS Idealized Default Probability Table; updates to corporate recovery rates; and, for static pools, replacing DBRS CDO Toolbox with a closed-form statistical analysis.

This methodology describes the basic framework of DBRS’s analysis of assets for securitizations backed by debt of large corporations. The approach covered by this publication would apply to both cash and synthetic securitizations backed by obligations of large corporate issuers. It would be applicable to securitizations globally. 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 by small and medium enterprises (“SME”) loans. Actual ratings assigned 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.

In addition, DBRS remains committed to ongoing monitoring of the market in conjunction with these methodologies. Assumptions in these methodologies will be updated from time to time, and any updates will be published.

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

- “Cash Flow Assumptions for Corporate Credit Securitizations”;
- “Canadian Surveillance Methodology for CDOs of Large Corporate Credit”;
- “Legal Criteria for European Structured Finance Transactions”;
- “Legal Criteria for Canadian Structured Finance”;
- “Legal Criteria for U.S. Structured Finance Transactions”;
- “Swap Criteria for European Structured Finance Transactions”;
- “Swap Criteria for Canadian Structured Finance Transactions”;
- “Master European Structured Finance Surveillance Methodology”;
- “Mapping Financial Institution Internal Ratings to DBRS Ratings for Structured Credit Transactions”;
- “Unified Interest Rate Model for U.S. and European Structured Credit”;
- “Rating U.S. and European Structured Finance CDO Restructurings”.

APPLICATION OF THIS METHODOLOGY

The following diagram describes the process used to analyze a securitization backed by debt of large corporations or synthetics on such assets:

(1) DBRS uses either a Monte Carlo model or its DBRS Large Pool Model (depending on deal type) to determine a ratings-based lifetime pool default rate (the “Stressed Default Rate”) that can be equated with a certain credit rating, based on factors such as the credit quality, diversification and term to maturity of the underlying obligors. The model will output a level of cumulative default stress appropriate for each rating category.

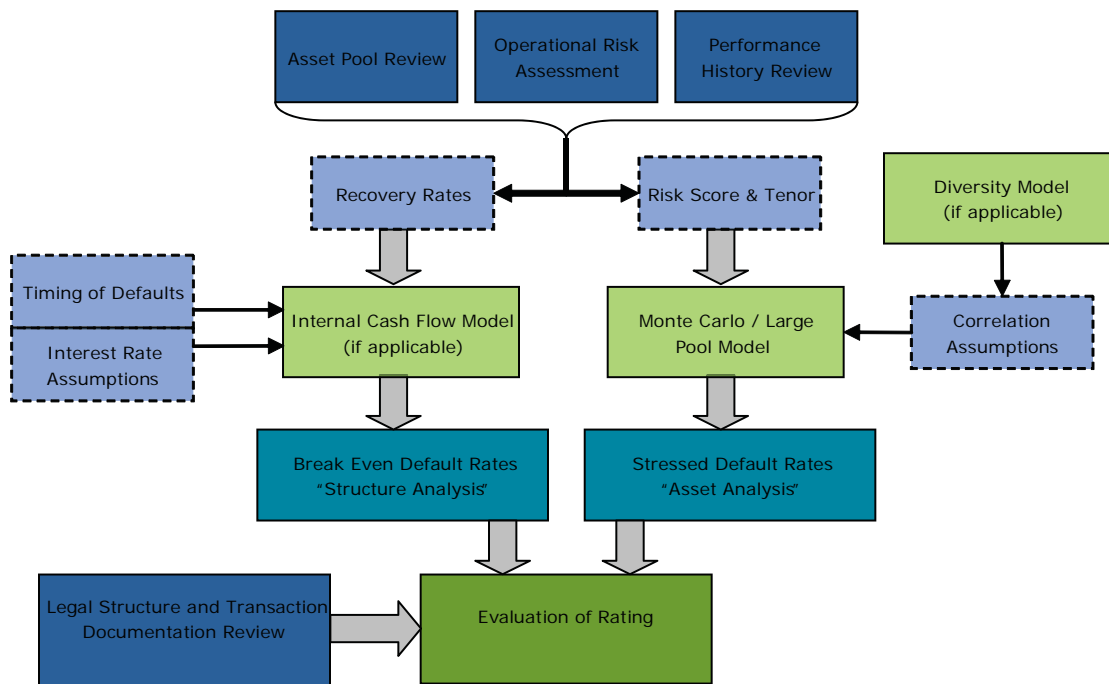
(2) DBRS will perform cash flow analysis in a proprietary internal cash flow model by incorporating assumptions regarding principal amortization, amount of interest generated, timing of defaults and movement in



interest rates as well as other considerations. DBRS assigns ratings based on a comparison of cash flow results to the output from the default probability model. The output of the internal cash flow model will henceforth be referred to as the “Break-Even Default Rate”. Note that this step only applies to cash flow transactions where waterfall mechanisms materially affect credit support and hence the probability of a class of notes receiving full repayment of principal and interest. Purely synthetic transactions would not require a cash flow model.

(3) DBRS reviews legal aspects of the transaction in order to identify legal risks inherent in the transaction and to ensure compliance with DBRS legal criteria.

DBRS Rating Process for Corporate Credit Securitizations



Note: Boxes surrounded by dotted lines represent inputs into the various models.

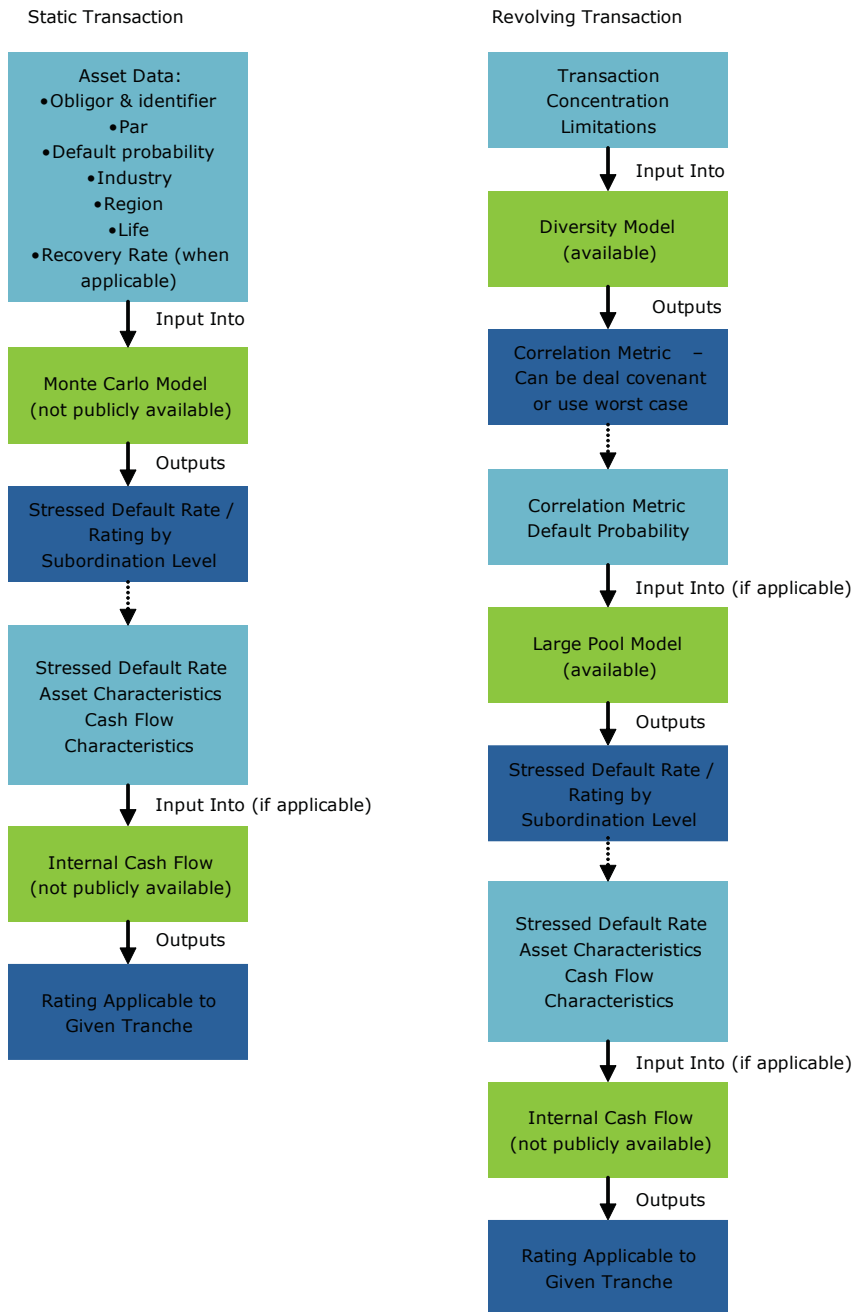
DBRS MODELS USED

DBRS uses a variety of proprietary models in the analysis of CLOs and large corporate CDOs. The four major models driving this process are: (i) the DBRS Diversity Model, (ii) the DBRS Large Pool Model, (iii) the DBRS CDO Monte Carlo model and (iv) the DBRS internal cash flow model. The cash flow model and the DBRS CDO Monte Carlo model are internal models, while the DBRS Diversity Model and the DBRS Large Pool Model can be found on the DBRS website.

The chart below outlines the general points at which each of the models would be used in different transaction types. The operative concept is that Stressed Default Rates derived from asset analysis are compared to Break-Even Default Rates. In general, the CDO Monte Carlo model will be used for static transactions, whereas the Diversity Model and Large Pool Model will be used for revolving transactions. The DBRS internal cash flow model will be used for transactions of either type to the extent that cash flow mechanics in the transaction provide additional support beyond subordination. Please note that the modeling process is described at greater length in “Cash Flow Assumptions for Corporate Credit Securitizations”.



DBRS Models Used for Corporate Credit Securitizations



Chapter 1 – Quantitative Methodology

DBRS’s quantitative methodology for securitizations backed by debt of large corporations is based on the likelihood that investors experience a loss. The quantitative analysis is a key input into the ratings that DBRS assigns to CLO and other corporate CDO tranches. The ratings that DBRS actually assigns, however, are determined by a rating committee and reflect both quantitative and qualitative factors.



DBRS's quantitative analysis for CLOs and corporate CDOs consists of two phases.

Phase I: Asset Analysis

Phase II: Cash Flow Modeling

The first phase, the asset analysis, determines the Stressed Default Rates. For transactions with static portfolios, this analysis is based on the characteristics of the actual assets in the portfolio. For transactions with revolving portfolios, this analysis is generally based on assumptions derived from the transaction covenants defined in the operative documents.

The second phase of the analysis is determining the lifetime pool default rate that a particular tranche within the transaction can withstand before it incurs a loss. This is done using cash flow modeling assumptions on recoveries, default timing, and interest rates. The second phase is covered in a related publication, the request for comment on "Cash Flow Assumptions for Corporate Credit Securitizations".

ASSET POOL ANALYSIS

DBRS conducts asset analysis to determine ratings-based lifetime pool default rates by taking percentiles of a default distribution. These percentiles are calculated using of DBRS's Idealized Default Probability Table found in Table 1 of Appendix A.

Static Transactions

For static transactions, DBRS utilizes a proprietary model based on Monte Carlo simulation, to generate the default distribution of a pool. For each asset in the pool, the following inputs are required:

- Individual asset and a unique identifier associated with its obligor
- Par amount of exposure
- DBRS obligor rating (derived as described in the "Corporate Default Probability" section)
- DBRS Industry Code (see Appendix A – Modeling Assumptions; Table 3)
- DBRS Country Code (see Appendix A – Modeling Assumptions; Table 5)
- If no cash flow modeling is required, the applicable DBRS Recovery Rate (see Appendix A – Modeling Assumptions; Tables 7-12)

Revolving Transactions

In order to estimate rating-based lifetime pool default rates for revolving transactions, assumptions need to be made about the composition of the assets. DBRS employs the probability distribution from the commonly used "large pool approximation" to generate the default distribution analytically. This assumption underlies the DBRS Large Pool Model. The distribution requires two parameters, the expected pool default rate and a single correlation factor. As in static transactions, the expected default rate of the pool is driven by the asset rating and life.

DBRS determines the expected pool default rate using (a) the transaction's maximum DBRS Risk Score covenant or worst-case composition per transaction documents and (b) the tenor of the transaction is typically determined as the length of the reinvestment period plus the weighted average life covenant at the end of the reinvestment period. If a transaction has a mechanism where reinvestment and trading are definitively cut off after a certain point then DBRS may consider a shorter tenor assumption. Once these two numbers are determined, the expected pool default rate is determined as described below. Linear interpolation is used for both the DBRS Risk Score and the tenor.

The single correlation parameter used is the maximum DBRS Diversity Model covenant. If a transaction does not have this defined, DBRS will determine an appropriate correlation parameter based on modeling a pool that maximizes obligor and industry concentration limitations.



DBRS Obligor Rating

If an asset has a DBRS Public Rating, that rating will be used to calculate an asset's default probability.

When an asset has no DBRS Public Rating, DBRS has the ability to infer default probabilities from a DBRS Equivalent Rating. Based on the number of public ratings available from any of the relevant credit rating agencies, DBRS will use the DBRS equivalent of either the middle of three available ratings, the lower of two, or, if only one rating is available, that rating. Ratings on negative watch or equivalent designation by the relevant agency will be notched down.

For assets with no public ratings by any of the four agencies, there are two options for determining a DBRS equivalent rating.

If the Originator/Servicer of the transaction files Basel II Pillar III Disclosure there is the ability to use a mapping from the originator's internal ratings. Please see "Mapping Financial Institution Internal Ratings to DBRS Ratings for Structured Credit Transactions" for more information on this process.

DBRS can provide Corporate Credit Estimates on a single-name basis. Broadly, issuers can send certain information to DBRS for use in the provision of a corporate credit estimate for those assets for which a framework exists within DBRS. The credit estimate provided will solely be for use in DBRS portfolio analysis and will not be made publicly available. Such credit estimates would not be actively monitored and would need to be re-analyzed annually. In cases where a credit estimate is unable to be assigned, one will typically be assumed in the CCC category.

Based on the rating assigned using one of the above methods and the life of the asset, default probabilities are determined based on the DBRS Idealized Default Table.

DBRS Risk Score

DBRS maps alphanumeric ratings to DBRS Risk Scores. DBRS Risk Scores represent the historical idealized 5-year default rates associated with alphanumeric ratings. The weighted average credit risk is defined as the average of non-defaulted assets weighted by notional amount. Please refer to Appendix A, Table 2 for the applicable DBRS Risk Score by rating.

Correlation

DBRS assumes correlation between obligors based on industry and region. Industry classifications are found in Appendix A, Table 3 and Regional Classifications in Appendix A, Table 4. For industries, correlation is measured both intra-and inter-industry, both within and across regions. Please refer to Appendix A, Table 6 for these correlations.

Although it is fairly straightforward to compute the default distribution based on the large pool approximation described above, measuring the DBRS Diversity Model on an actual pool must be done using DBRS's [Correlation Metric]. The simulation engine is identical to CDO Monte Carlo model, and the pool is input in a very similar fashion. The only difference is that the tenor of each asset is defined as the length of the reinvestment period plus the weighted average life covenant at the end of the reinvestment period rather than each asset's actual tenor. After performing the simulation, the variance of the default distribution is measured. The output of the DBRS Diversity Model is the single correlation factor that when used in the large pool approximation generates a default distribution with a variance identical to the variance of the simulated distribution. If larger obligors are added to a pool, this measure will increase. By encapsulating both obligor and industry concentration into a single number the relative diversity across transactions can be easily compared.



Recovery Rate Assumptions

DBRS stresses recovery rates based on the seniority of the underlying security in the corporate capital structure, legal jurisdiction of the obligor and the stress corresponding tranche rating. Recovery rates applicable to debt of large corporations are found in Tables 7-12 in Appendix A. In certain situations involving large concentrations from a given country, DBRS will request recovery data from deal counterparties and may adjust the recovery rates for those countries based on the data obtained.

Structured Finance Assumptions

While this methodology is not applicable for vehicles primarily backed by other securitizations, there may be cases where a bucket for securitizations exists in a deal primarily backed by corporate credit. In these cases the analysis of structured finance assets held in a CLO or large corporate CDO is a look-through based upon the DBRS methodology for the relevant asset class. Because these assets have materially different characteristics from the underlying corporate pool, such assets would be analyzed separately from the corporate portion of the pool and the results of the analysis will be aggregated with the corporate results prior to cash flow modeling. A discussion of non-corporate assets and the analysis thereof will be included in any commentary related to the issuance of the DBRS rating. Please refer to “Rating US & European Structured Finance CDO Restructurings” for further discussion of DBRS methodology for securitizations of other securitizations.

Synthetics

DBRS will apply the methodology outlined in this piece for both funded and unfunded synthetic corporate underlying. To the extent that there are no diversion triggers or excess spread support available in the structure, the cash flow modeling portion of the analysis would not be necessary, but DBRS would closely review the eligible investments and other liquidity mechanisms in the structure to ensure that the vehicle is not subject to material non-credit-related risk. Extensive review would also be made of the relevant synthetic counterparties, their ratings and any collateral posting and replacement mechanisms.

Chapter 2 – Qualitative Analysis

OPERATIONAL RISK PROCESS

DBRS’s operational risk assessment procedures are designed to evaluate the quality of all parties performing key roles in the transaction. These roles include but are not limited to:

- collateral selection
- ongoing collateral management
- administrative services
- custodial services

While DBRS does not assign formal ratings to these parties as a result of this process, it does conduct operational risk reviews and incorporates the results into its rating evaluation of the transaction. These reviews are based on internal DBRS guidelines. In instances where it is determined that any of the key transaction participants are outside of DBRS guidelines, certain mitigating factors may be requested, such as additional credit support, collateral posting, dynamic triggers or the presence of a strong backup collateral manager in order for DBRS to rate the transaction. In the event that DBRS determines that a key transaction participant does not meet relevant standards, it may decline to rate the transaction.



COUNTERPARTY RISKS

Additional risk contributed by counterparties is analyzed for each transaction. Results of the counterparty risk analysis could result in adjustments to model inputs parameters, such as introducing joint default probabilities of default or weak-linkage to a counterparty rating. Please refer to “Legal Criteria for U.S. Structured Finance Transactions”, “Swap Criteria for European Structured Finance Transactions” and “Swap Criteria for Canadian Structured Finance Transactions” for further discussion of counterparty risk analysis.

AUDITING

An auditor is generally required to perform certain agreed-upon procedures at closing and at interim dates during portfolio assembly, if applicable. Typically the auditors also certify compliance with transaction covenants upon completion of portfolio ramp-up. The auditor generally reviews the accounts of the issuer on at least an annual basis, and provides results to the trustee or transaction manager. DBRS does not accept responsibility for the sufficiency of auditing procedures. Responsibility rests with relevant parties to the transaction documents.

QUALITY TESTS AND PORTFOLIO LIMITATIONS

DBRS will review all collateral quality tests and portfolio percentage limitations in the transaction documents. While certain limitations and tests will explicitly drive the quantitative analysis, a general overview of other tests to ensure that the transaction is not subject to outsize concentration risk and that the composition of the asset pool is appropriately circumscribed to the stated nature of the transaction.

DOCUMENTATION AND LEGAL RISKS

In any structured finance transaction, the legal structure chosen and the consequences thereof are integral to the rating. DBRS reviews the legal structure to attempt to ensure that the vehicle is not subject to substantial unquantifiable risks.

DBRS analysis of the legal structure of the CLO or other corporate CDO would typically include a review of various transaction documents, based on the jurisdiction of the issuer, as well as various legal opinions provided by law firms participating in the transaction. Standard legal opinions may include, but are not limited to, general corporate opinions for each party, security interest opinion, enforceability opinions, relevant tax opinions and others. In certain cases DBRS reviews other types of opinions relevant to the transaction, such as a true sale opinion where there is a close relationship between the seller of the assets and the issuer. The legal opinions apply the law of the jurisdiction chosen by the parties as the governing law.

In reviewing documents and opinions, DBRS seeks to identify any features, ambiguities, or inconsistencies that could result in a transaction performing in a manner at odds with our rating analysis. DBRS rating analysis depends on its adequate understanding of the mechanics of the transaction as described in the legal documentation. For portions of the documents open to interpretation, DBRS will generally adopt the more conservative reading of the documentation.

Please refer to “Legal Criteria for European Structured Finance Transactions”; “Legal Criteria for Canadian Structured Finance”; and “Legal Criteria for U.S. Structured Finance Transactions” for additional information on DBRS’s legal review procedures.

Chapter 3 – Transaction Surveillance (ex Canada)



OVERVIEW

DBRS makes use of the same methodology in monitoring its transactions as it does in the new issue process. Full reviews of each transaction are conducted at least annually and take place more frequently in certain jurisdictions or situations. DBRS performs ongoing monitoring of all transactions, as described below. For a description of the cash flow analysis employed, please refer to the request for comment on “Cash Flow Assumptions for Corporate Credit Securitizations”. For a description of our monitoring process related to Canadian securitizations, please refer to the “Surveillance Methodology for Canadian Securitizations Backed by Debt of Large Corporations”.

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.

MONITORING

DBRS monitors a number of factors for purposes of deal surveillance. Defaults or delinquencies of underlying assets are monitored against model-generated levels given the portfolio quality, as well as recovery rates on assets that experienced defaults being compared to those assumed by DBRS for the relevant seniority level and region. Collateral quality tests and concentration levels are observed in relation to those modeled. For revolving deals, DBRS will generally model to the “worst case” scenario, to test results from the trustee reports are compared to target levels and to the extent that these are violated, DBRS may assume the more punitive of the concentration limit and the actual level. Certain buckets are also observed as potential early warning indicators for upcoming defaults and delinquencies (i.e. current pay, low-rated or deep discount buckets). For static transactions, DBRS will have derived Stressed Default Rates from the pool as it was at closing and would continue to monitor the deal in that manner.

The financial condition of counterparties is important to the structure of deals. Disruptions at the Collateral Manager or Servicer level in a transaction can lead to neglect of the portfolio during management turmoil and may result in a failure to maintain adequate levels. Issues with swap counterparties can also affect deal performance. This is most vital in the case of synthetic transactions, where the entire asset structure may be



represented by exposure to a single counterparty, but also can impact transactions with cash collateral to the extent that the structure employs interest rate, basis or currency swaps. DBRS monitors the health of transaction parties in light of potential implications for the structure.

Appendix A: Tables Relating to Quantitative Analysis

Table 1: DBRS Idealized Default Probability Table

Rating	Tenor									
	1	2	3	4	5	6	7	8	9	10
AAA	0.0110%	0.0264%	0.0460%	0.0699%	0.0987%	0.1330%	0.1736%	0.2212%	0.2765%	0.3405%
AA (high)	0.0161%	0.0390%	0.0691%	0.1071%	0.1539%	0.2107%	0.2784%	0.3580%	0.4501%	0.5554%
AA	0.0212%	0.0517%	0.0922%	0.1442%	0.2091%	0.2883%	0.3832%	0.4948%	0.6237%	0.7703%
AA (low)	0.0281%	0.0709%	0.1297%	0.2055%	0.2994%	0.4123%	0.5445%	0.6962%	0.8672%	1.0571%
A (high)	0.0419%	0.1095%	0.2045%	0.3280%	0.4801%	0.6602%	0.8671%	1.0991%	1.3543%	1.6306%
A	0.0487%	0.1287%	0.2419%	0.3893%	0.5704%	0.7841%	1.0283%	1.3005%	1.5978%	1.9173%
A (low)	0.0945%	0.2420%	0.4391%	0.6815%	0.9643%	1.2825%	1.6309%	2.0045%	2.3990%	2.8101%
BBB (high)	0.1860%	0.4685%	0.8333%	1.2659%	1.7521%	2.2792%	2.8359%	3.4126%	4.0013%	4.5956%
BBB	0.2318%	0.5818%	1.0305%	1.5581%	2.1460%	2.7776%	3.4384%	4.1166%	4.8024%	5.4884%
BBB (low)	0.3732%	0.8912%	1.5142%	2.2099%	2.9528%	3.7230%	4.5053%	5.2884%	6.0636%	6.8252%
BB (high)	1.0800%	2.4384%	3.9327%	5.4686%	6.9863%	8.4500%	9.8400%	11.1473%	12.3697%	13.5091%
BB	1.3627%	3.0573%	4.9001%	6.7721%	8.5997%	10.3408%	11.9738%	13.4908%	14.8921%	16.1826%
BB (low)	2.2346%	4.7297%	7.2541%	9.6836%	11.9572%	14.0507%	15.9604%	17.6938%	19.2641%	20.6863%
B (high)	3.6297%	7.4056%	11.0204%	14.3419%	17.3292%	19.9866%	22.3389%	24.4186%	26.2592%	27.8922%
B	4.8503%	9.7471%	14.3160%	18.4179%	22.0296%	25.1805%	27.9201%	30.3028%	32.3799%	34.1974%
B (low)	10.0776%	17.6609%	23.5135%	28.1371%	31.8670%	34.9314%	37.4891%	39.6528%	41.5044%	43.1047%
CCC (high)	18.7898%	30.8505%	38.8426%	44.3357%	48.2625%	51.1831%	53.4376%	55.2363%	56.7119%	57.9502%
CCC	22.2746%	36.1264%	44.9743%	50.8151%	54.8208%	57.6837%	59.8169%	61.4696%	62.7949%	63.8884%
CCC (low)	61.1373%	68.0632%	72.4872%	75.4076%	77.4104%	78.8419%	79.9085%	80.7348%	81.3974%	81.9442%
C	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%

Table 2: DBRS Risk Scores

DBRS Rating	DBRS Risk Score
AAA	0.10%
AA (high)	0.15%
AA	0.21%
AA (low)	0.30%
A (high)	0.48%
A	0.57%
A (low)	0.96%
BBB (high)	1.75%
BBB	2.15%
BBB (low)	2.95%
BB (high)	6.99%
BB	8.60%
BB (low)	11.96%
B (high)	17.33%
B	22.03%
B (low)	31.87%
CCC (high)	48.26%
CCC	54.82%
CCC (low)	77.41%
C	100.00%



Table 3: DBRS Industry Codes

Code	Industry
1	Aerospace & Defence
2	Air transport
3	Automotive
4	Beverage & Tobacco
5	Radio & Television
6	Brokers, Dealers & Investment houses
7	Building & Development
8	Business equipment & services
9	Cable & satellite television
10	Chemicals & plastics
11	Clothing/textiles
12	Conglomerates
13	Containers & glass products
14	Cosmetics/toiletries
15	Drugs
16	Ecological services & equipment
17	Electronics/electrical
18	Equipment leasing
19	Farming/agriculture
20	Financial intermediaries
21	Food/drug retailers
22	Food products
23	Food service
24	Forest products
25	Health care
26	Home furnishings
27	Lodging & casinos
28	Industrial equipment
29	Insurance
30	Leisure goods/activities/movies
31	Nonferrous metals/minerals
32	Oil & gas
33	Publishing
34	Rail industries
35	Retailers (except food & drug)
36	Steel
37	Surface transport
38	Telecommunications
39	Utilities
40	Miscellaneous
41	Sovereign

Table 4: DBRS Region Codes

DBRS Region	DBRS Region Code
North America & Caribbean	1
Europe	2
Australia & New Zealand	3
Central & South America	4
Middle East & North Africa	5
Sub-Saharan Africa	6
Northern Asia	7
Southern Asia	8



Table 5: DBRS Country Codes

Country	DBRS Region	DBRS Country Code	DBRS Recovery Tier
Canada	North America & Caribbean	102	1
Cayman Islands	North America & Caribbean	103	1
Mexico	North America & Caribbean	104	5
United States	North America & Caribbean	101	1
Austria	Europe	201	2
Belgium	Europe	202	3
Finland	Europe	203	3
France	Europe	204	4
Germany	Europe	205	2
Greece	Europe	206	5
Ireland	Europe	207	1
Italy	Europe	208	4
Luxembourg	Europe	209	2
Netherlands	Europe	210	2
Portugal	Europe	211	4
Spain	Europe	212	4
Czech Republic	Europe	213	4
Norway	Europe	214	3
Poland	Europe	215	4
Russia	Europe	216	5
Sweden	Europe	217	2
Switzerland	Europe	218	2
United Kingdom	Europe	219	1
Australia	Australia & New Zealand	301	1
New Zealand	Australia & New Zealand	302	2
Argentina	Central & South America	401	5
Brazil	Central & South America	402	5
Chile	Central & South America	403	5
South Africa	Sub-Saharan Africa	601	2
Japan	Northern Asia	701	2
South Korea	Northern Asia	702	2

Table 6: DBRS Corporate Correlation

	Intra-Industry	Inter-Industry
Same Region	15.00%	6.00%
Different Region	11.00%	2.00%

Table 7: DBRS Corporate Recovery Rates for Tier 1 Countries

Liability Rating Class	Senior Secured	Second Lien and Senior Unsecured	Subordinate
AAA (sf)	48.00%	30.00%	10.00%
AA (sf)	52.00%	32.50%	12.50%
A (sf)	55.50%	33.00%	13.50%
BBB (sf)	61.50%	33.50%	15.00%
BB (sf) & Below	70.00%	36.50%	17.50%



Table 8: DBRS Corporate Recovery Rates for Tier 2 Countries

Liability Rating Class	Senior Secured	Second Lien and Senior Unsecured	Subordinate
AAA (sf)	43.00%	25.00%	5.00%
AA (sf)	47.00%	27.50%	7.50%
A (sf)	50.50%	28.00%	8.75%
BBB (sf)	56.50%	28.50%	10.00%
BB (sf) & Below	65.00%	31.50%	12.50%

Table 9: DBRS Corporate Recovery Rates for Tier 3 Countries

Liability Rating Class	Senior Secured	Second Lien and Senior Unsecured	Subordinate
AAA (sf)	38.00%	20.00%	0.00%
AA (sf)	42.00%	22.50%	2.50%
A (sf)	45.50%	23.00%	3.75%
BBB (sf)	51.50%	23.50%	5.00%
BB (sf) & Below	60.00%	26.50%	7.50%

Table 10: DBRS Corporate Recovery Rates for Tier 4 Countries

Liability Rating Class	Senior Secured	Second Lien and Senior Unsecured	Subordinate
AAA (sf)	33.00%	15.00%	0.00%
AA (sf)	37.00%	17.50%	0.00%
A (sf)	40.50%	18.00%	0.00%
BBB (sf)	46.50%	18.50%	0.00%
BB (sf) & Below	55.00%	21.50%	2.50%

Table 11: DBRS Corporate Recovery Rates for Tier 5 Countries

Liability Rating Class	Senior Secured	Second Lien and Senior Unsecured	Subordinate
AAA (sf)	28.00%	10.00%	0.00%
AA (sf)	32.00%	12.50%	0.00%
A (sf)	35.50%	13.00%	0.00%
BBB (sf)	41.50%	13.50%	0.00%
BB (sf) & Below	50.00%	16.50%	0.00%

Table 12: Corporate Recovery Rate Lag by Country Tier

Country Tier	Lag (years)
1	1
2	1.5
3	1.5
4	2.25
5	3.25



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