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COMMENTARY

# DBRS Expected Loss Ratings

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## Contact Information

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All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, web-based, up-to-the-minute information. 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.

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## Scope and Limitation

DBRS's Expected Loss Ratings Scale defines how DBRS rates untranching debt or equity instruments whose performance depends predominantly on the credit performance of a loan portfolio backing such investments (Pass-Through Instruments). DBRS Expected Loss Ratings (EL Ratings) do not address the timeliness of expected interest and principal payments nor do they address market price volatility of the loan portfolio backing the Pass-Through Instrument, liquidity, foreign exchange, leverage, regulatory risks, or other erosion of Pass-Through Instrument's market value. The ratings do not consider the investors' liabilities. Like other DBRS ratings, every DBRS EL Rating is based on quantitative and qualitative considerations relevant to the Pass-Through Instrument.

## Introduction

DBRS Expected Loss Ratings give an indication of the expected loss of an untranching Pass-Through Instrument that is backed by a loan portfolio. The expected loss is thus defined as the reduction of the present value of the Pass-Through Instrument's anticipated cash flow as a result of adverse credit performance in terms of amount due on the loans backing the Pass-Through Instrument not being paid and/or the delayed payments of amounts due on such loans. In this commentary, DBRS outlines the different situations in which it assigns EL Ratings as opposed to Long-Term Obligation Ratings and Short-Term Debt Ratings, which provide an opinion on an obligation's default risk<sup>1</sup>

For many structured finance asset classes, DBRS determines the nominal expected loss of the securitised portfolio in the course of the process to assign a Long-Term Obligation Rating to the securitisation bonds. In this commentary, DBRS describes how such nominal expected loss is converted into the aforementioned reduction of the present value of the Pass-Through Instrument's anticipated cash flow and how DBRS's Expected Loss Ratings Scale is used to translate such present value expected loss into an EL Rating, while also considering the average life of the Pass-Through Instrument.

## DBRS Expected Loss Rating Scale

DBRS EL Ratings can be public or private. EL Ratings are clearly indicated by the suffix "(el)". As explained in more detail in this commentary, DBRS does not assign EL Ratings to securitisation bonds. As such, EL Ratings do not typically have the "(sf)" suffix. Like other DBRS ratings, DBRS EL Ratings are based on quantitative and qualitative considerations relevant to the Pass-Through Instrument backed by the loan portfolio. Apart from the "AAA (el)" rating category, each other rating category is denoted by the subcategories "high" and "low". The absence of either a "high" or "low" designation indicates the rating is in the middle of the category.

AAA (el)	The pass-through instrument is considered to be of highest credit quality.
AA (el)	The pass-through instrument is considered to be of a superior credit quality.
A (el)	The pass-through instrument is considered to be of a good credit quality.
BBB (el)	The pass-through instrument is considered to be of an adequate credit quality.
BB (el)	The pass-through instrument is considered to be of a speculative credit quality.
B (el)	The pass-through instrument is considered to be of a highly speculative credit quality.
CCC (el)	The pass-through instrument is considered to be of a very highly speculative credit quality.
CC (el)	The pass-through instrument is considered to be of a very highly speculative credit quality with low recovery prospects.
C (el)	The pass-through instrument is considered to be of a very highly speculative credit quality with very low recovery prospects.

As outlined in more detail in this commentary, DBRS assigns EL Ratings based on a Pass-Through Instrument's expected loss and its average life, using the DBRS Idealised Expected Loss Table shown in Appendix B. As noted, while delayed payments can have an impact on the expected loss due to the present value effect, EL Ratings do not address the timeliness of the Pass-Through Instrument's expected interest or principal payments.

1. See <http://www.dbrs.com/research/236754/long-term-obligations-rating-scale.pdf> and <http://www.dbrs.com/research/236749/commercial-paper-and-short-term-debt.pdf>.

## Application of DBRS Expected Loss Ratings

### *Default Ratings versus Expected Loss Ratings for Pass-Through Instruments*

DBRS rates sovereign debt, corporate debt and securitisation bonds under its Long-Term Obligations and/or its Short-Term Debt Rating Scales, which provide an opinion on the risk of default. In relation to the Long-Term Obligations Rating Scale, this is the risk that an issuer fails to satisfy its financial obligations in accordance with the terms under which an obligation has been issued.

To make loan portfolios or investors' participations in loan portfolios more liquid and easier to trade, market participants sometimes revert to issuing bonds that pass through the performance (interest and principal payments on the loans, but also losses) of such portfolios or to issuing equity participations in entities owning loan portfolios (e.g., funds). Like bonds, these equity participations pass through the performance of the loan portfolio to the investor. Typically, the terms and conditions of the Pass-Through Instrument contemplate that non-payment of aggregate interest due on the loans in the portfolio does not constitute a default under the Pass-Through Instrument itself.

When looking at untranching Pass-Through Instruments that are backed by loan portfolios and typically structured as pass-through<sup>2</sup>, the Long-Term Obligations Rating Scale is typically less relevant.

While it would be theoretically possible to assign a Long-Term Obligations Rating to each loan backing the Pass-Through Instrument, market participants are interested in the aggregate credit risk of the Pass-Through Instrument. However, when considering portfolio diversity and correlations, the likelihood of at least one borrower in the portfolio defaulting on their financial obligations (and hence the holder of the Pass-Through Instrument suffering at least a small loss) is typically very high and not very sensitive to the average loan credit risk. As a result, the theoretical Long-Term Obligations Ratings of different untranching Pass-Through Instruments backed by loan portfolios would not differ substantially, reducing the meaningfulness of the rating.

For these reasons, DBRS's rating approach for Pass-Through Instruments covered in this report is based on the expected loss of the portfolio backing such Pass-Through Instruments (EL Ratings). DBRS assigns EL Ratings to the following investments:

- Untranching debt or equity instruments whose performance depends predominantly on the credit performance of a loan granular portfolios of loans (residential mortgage loans, loans to small and medium-sized enterprises, commercial real estate loans, etc.); and
- Untranching guarantees against losses of granular loan portfolios.

DBRS assigns EL Ratings to Pass-Through Instruments if their credit performance is predominantly dependent on the credit performance of the loan portfolio backing them (pass through of the portfolio's credit performance); that is, if the credit risk of the instruments is not materially dependent on other factors. This could be the case if the investment was an obligation of a financial institution, for example.

EL Ratings address the expected loss of a Pass-Through Instrument and indirectly the expected loss of a debt portfolio, including the aggregate amount of payments due on loans not being paid (credit loss) and the aggregate amount of loss due to scheduled interest and/or principal payments due on loans being paid delayed (present value loss). As such, EL Ratings do not address the risk of at least one loss occurring in the portfolio backing the Pass-Through Instrument (i.e., at least one of the loans defaulting and suffering a loss).

It is important to note that if the terms and conditions of the Pass-Through Instrument contemplate that non-payment of aggregate interest due on the loans in the portfolio, constitutes a default under the Pass-Through Instrument itself. DBRS does not assign an EL Rating to the instrument, but reverts to its Long-Term Obligations Rating Scale. Similarly, if the investment involves a derivative transaction (e.g., interest rate swaps), DBRS may not be able to apply the EL Rating framework, as the non-payment of periodic payment obligations to the swap counterparty could constitute an event of default.

2. Pass-through in a sense that the loan portfolio's performance (interest and principal payments, but also ultimate losses) are passed through to instrument holders. Non-payment of expected interest and principal payments typically does not constitute an event of default under the instrumentssuch Pass-Through Instruments.

### **Tranching**

It is generally possible to reduce the expected loss of a bond backed by a loan portfolio. As is common in securitisation, an issuer can create bonds of different seniorities that are backed by the same portfolio, whereas the subordination of lower-ranking bonds provides credit enhancement for senior-ranking bonds (tranching). Other forms of credit enhancement include credit reserve funds and loss guarantees. DBRS does not apply EL Ratings to debt or equity instruments that are backed by loan portfolios and incorporate non-negligible credit enhancement techniques. In these instruments, the performance of the portfolio backing such instrument is not fully passed through. Hence, for such transactions and structures, which typically fall under the definition of securitisation, DBRS applies its Long-Term Obligations Rating Scale, as it does for securitisations.

The same logic that applies to debt or equity investments that are backed by loan portfolios also applies to guarantees provided for loan portfolios: DBRS assigns EL Ratings to guarantees that cover the whole portfolio, but applies its Long-Term Obligations Rating Scale for guarantees under which the guarantor only covers additional losses after a certain loss threshold has been reached (for example, senior credit default swaps).

### **EL Ratings in Securitisations and Covered Bonds**

In summary, DBRS EL Ratings assigned to Pass-Through Instruments indirectly address the expected credit loss of a loan portfolio itself without considering tranching, other non-negligible forms of credit enhancement and return-enhancing measures (leverage).

Based on the above, DBRS does not assign EL Ratings to a number of financial instruments that are generally related to loan portfolios, including securitisation bonds and covered bonds. For covered bonds, the performance does not depend predominantly on the credit performance of the loan portfolio securing the bond.

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## **Determination of the Expected Loss**

Typically, DBRS assigns EL Ratings to Pass-Through Instruments related to loan portfolios that could be securitised in an asset class for which DBRS has a rating methodology. Often, in the rating process for securitisations DBRS determines the nominal expected loss of the securitised portfolio in accordance with the relevant rating methodology. DBRS notes that the nominal expected loss typically also includes expected loss due to operational risk considerations. The expected loss is defined as the loss DBRS expects for a loan portfolio in its base case at the time of the analysis. As such, the portfolio's expected loss and by extension the EL Rating do not consider "rating stresses" in terms of defaults, recoveries or other relevant credit risk factors.

The nominal expected loss for the loan portfolio backing the Pass-Through Instrument is the starting point for the determination of the EL Rating, together with the expected timing of defaults and losses. Default and loss timing is typically also derived by applying the relevant rating methodology for the analysed portfolio. Based on these inputs, DBRS follows a three-step approach to assess the expected loss of the loan portfolio backing the Pass-Through Instrument and that determines to a large extent the EL Rating:

### **Step 1: Present value of loan portfolio's payments in a no-loss scenario**

In a cash flow analysis, DBRS determines the present value of the loan portfolio assuming all loans are paid on time (no-loss scenario). DBRS thus considers the portfolio target yield, which is typically the initial weighted-average interest rate of the loans. In terms of loan principal payments, DBRS analyses the loans' scheduled principal payments as well as an expected portfolio constant prepayment rate (CPR). As a cash outflow, the rating agency considers servicing costs. The discount rate used to determine the present value is the loan portfolio target yield, which is typically the initial weighted-average interest rate of the loans. Considering that the discount rate is equal to the portfolio interest payments used in the cash flow analysis, the loan portfolio's present value in the no-loss scenario is close to par, depending on the level of servicing costs.

### **Step 2: Present value of loan portfolio's payments in the expected loss scenario**

In a cash flow analysis, DBRS determines the present value of the loan portfolio considering loan defaults, recoveries, recovery timing and portfolio nominal losses as determined by the relevant rating methodology (expected-loss scenario). Because part of the portfolio is underperforming in the expected-loss scenario, DBRS typically assumes higher servicing costs than in the no-loss scenario. Compared with the no-loss scenario, DBRS keeps its CPR assumption constant and uses the same discount rate.

### **Step 3: Expected loss and average life**

The reduction of the portfolio present value as a result of adverse credit performance is the difference between the present values that were determined in the no-loss and in the expected-loss scenarios. The relevant average life of the portfolio is the average life determined in the no-loss scenario. The expected loss and average life of the loan portfolio are used to assign the EL Rating to the Pass-Through Instrument, using DBRS's Idealised Expected Loss Table described below.

**Drivers of Expected Loss**

The most prominent driver of a portfolio’s expected loss is DBRS’s assessment of the credit quality of the portfolio, as described in the relevant rating methodology. The reduction of the portfolio present value as a result of adverse credit performance is also sensitive to the timing of defaults and losses as well as to the discount rate. All else being equal, back-loaded defaults and losses or higher discount rates reduce the present value reduction. The effect of a higher discount rate is typically at least partially offset by a higher nominal expected loss, however. DBRS might adjust the expected loss of the loan portfolio considering additional risks arising from the structure and the issuer of the Pass-Through Instrument.

**DBRS Idealised Expected Loss Table**

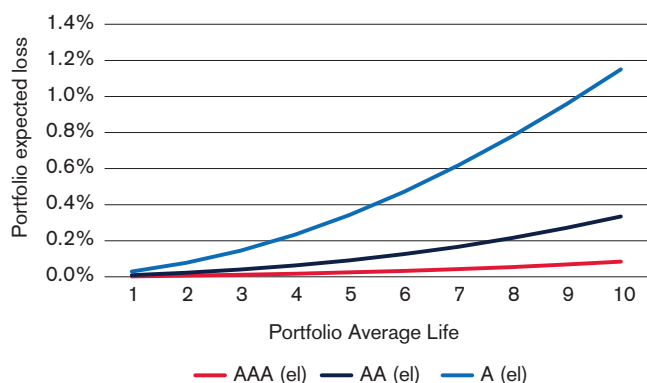
The reduction of the present value of anticipated cash flow from a loan portfolio backing a Pass-Through Instrument amid expected adverse credit performance and the loan portfolio’s average life determine the Pass-Through Instruments EL Rating, based on DBRS’s Idealised Expected Loss Table. This table depicts the maximum expected loss over a certain average life for the respective EL Rating (expected loss benchmark). For example, if the present value reduction were 2.1% and the average life seven years, the EL Rating would be BBB (el).

**DBRS Expected Loss Rating**

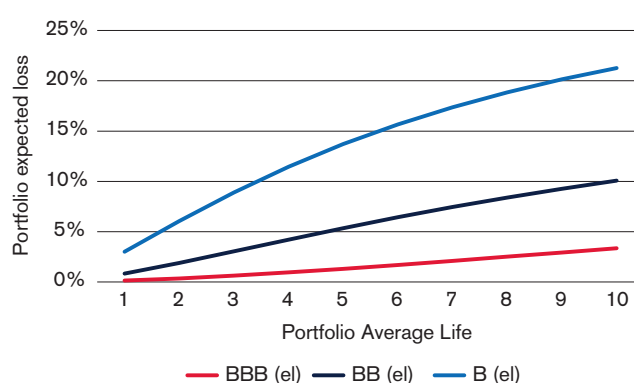
	Average Life in Years									
	1	2	3	4	5	6	7	8	9	10
AAA (el)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
AA (high) (el)	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
AA (el)	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%
AA (low) (el)	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	0.6%
A (high) (el)	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%	0.5%	0.7%	0.8%	1.0%
A (el)	0.0%	0.1%	0.1%	0.2%	0.3%	0.5%	0.6%	0.8%	1.0%	1.2%
A (low) (el)	0.1%	0.1%	0.3%	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%	1.7%
BBB (high) (el)	0.1%	0.3%	0.5%	0.8%	1.1%	1.4%	1.7%	2.1%	2.4%	2.8%
BBB (el)	0.1%	0.4%	0.6%	1.0%	1.3%	1.7%	2.1%	2.5%	2.9%	3.4%
BBB (low) (el)	0.2%	0.5%	0.9%	1.4%	1.8%	2.3%	2.8%	3.2%	3.7%	4.2%
BB (high) (el)	0.7%	1.5%	2.4%	3.4%	4.3%	5.3%	6.1%	6.9%	7.7%	8.4%
BB (el)	0.8%	1.9%	3.0%	4.2%	5.4%	6.4%	7.4%	8.4%	9.3%	10.1%
BB (low) (el)	1.4%	2.9%	4.5%	6.0%	7.4%	8.7%	9.9%	11.0%	12.0%	12.9%
B (high) (el)	2.3%	4.6%	6.9%	8.9%	10.8%	12.4%	13.9%	15.2%	16.3%	17.4%
B (el)	3.0%	6.1%	8.9%	11.5%	13.7%	15.7%	17.4%	18.9%	20.1%	21.3%
B (low) (el)	6.3%	11.0%	14.6%	17.5%	19.8%	21.7%	23.3%	24.7%	25.8%	26.8%
CCC (high) (el)	11.7%	19.2%	24.2%	27.6%	30.0%	31.8%	33.2%	34.4%	35.3%	36.1%
CCC (el)	13.9%	22.5%	28.0%	31.6%	34.1%	35.9%	37.2%	38.2%	39.1%	39.7%
CCC (low) (el)	38.0%	42.3%	45.1%	46.9%	48.2%	49.1%	49.7%	50.2%	50.6%	51.0%
C (el)	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%

DBRS’s Idealised Expected Loss Table was derived using DBRS’s Idealised Default Table as a starting point and incorporating average recovery rates. The nominal recovery rates used for rating levels of A (high) and below were derived from historically observed corporate bond recoveries (on average 45% for bonds rated A (high) or below). To derive the expected loss benchmarks, DBRS discounted such nominal recoveries to the point of default, taking into account a three-year recovery lag.

**Exhibit 1: DBRS Expected Loss Benchmarks**



**Exhibit 2: DBRS Expected Loss Benchmarks**



Considering historical observations, DBRS used higher nominal recovery assumptions for higher rating levels (AA (low) and above). Using higher recovery rate assumptions results in lower expected loss benchmarks, which means that a loan portfolio backing an untranching Pass-Through Instrument needs to be of a higher credit quality to be assigned such ratings. Because the expected loss benchmarks for higher ratings were derived using higher nominal recovery assumptions, untranching Pass-Through Instruments backed by loan portfolios of highly-rated loans do not necessarily get assigned an EL Rating at the same level as the average Long-Term Obligations Rating of the portfolio's assets.

## Appendix A – DBRS Idealised Default Table (cumulative)

DBRS Rating	Average Life in Years									
	1	2	3	4	5	6	7	8	9	10
AAA	0.01%	0.03%	0.05%	0.07%	0.10%	0.13%	0.17%	0.22%	0.28%	0.34%
AA (high)	0.02%	0.04%	0.07%	0.11%	0.15%	0.21%	0.28%	0.36%	0.45%	0.56%
AA	0.02%	0.05%	0.09%	0.14%	0.21%	0.29%	0.38%	0.49%	0.62%	0.77%
AA (low)	0.03%	0.07%	0.13%	0.21%	0.30%	0.41%	0.54%	0.70%	0.87%	1.06%
A (high)	0.04%	0.11%	0.20%	0.33%	0.48%	0.66%	0.87%	1.10%	1.35%	1.63%
A	0.05%	0.13%	0.24%	0.39%	0.57%	0.78%	1.03%	1.30%	1.60%	1.92%
A (low)	0.09%	0.24%	0.44%	0.68%	0.96%	1.28%	1.63%	2.00%	2.40%	2.81%
BBB (high)	0.19%	0.47%	0.83%	1.27%	1.75%	2.28%	2.84%	3.41%	4.00%	4.60%
BBB	0.23%	0.58%	1.03%	1.56%	2.15%	2.78%	3.44%	4.12%	4.80%	5.49%
BBB (low)	0.37%	0.89%	1.51%	2.21%	2.95%	3.72%	4.51%	5.29%	6.06%	6.83%
BB (high)	1.08%	2.44%	3.93%	5.47%	6.99%	8.45%	9.84%	11.15%	12.37%	13.51%
BB	1.36%	3.06%	4.90%	6.77%	8.60%	10.34%	11.97%	13.49%	14.89%	16.18%
BB (low)	2.23%	4.73%	7.25%	9.68%	11.96%	14.05%	15.96%	17.69%	19.26%	20.69%
B (high)	3.63%	7.41%	11.02%	14.34%	17.33%	19.99%	22.34%	24.42%	26.26%	27.89%
B	4.85%	9.75%	14.32%	18.42%	22.03%	25.18%	27.92%	30.30%	32.38%	34.20%
B (low)	10.08%	17.66%	23.51%	28.14%	31.87%	34.93%	37.49%	39.65%	41.50%	43.10%
CCC (high)	18.79%	30.85%	38.84%	44.34%	48.26%	51.18%	53.44%	55.24%	56.71%	57.95%
CCC	22.27%	36.13%	44.97%	50.82%	54.82%	57.68%	59.82%	61.47%	62.79%	63.89%
CCC (low)	61.14%	68.06%	72.49%	75.41%	77.41%	78.84%	79.91%	80.73%	81.40%	81.94%
C	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

## Appendix B – DBRS Idealised Expected Loss Table (cumulative)

DBRS Expected Loss Rating	Average Life in years									
	1	2	3	4	5	6	7	8	9	10
AAA (el)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
AA (high) (el)	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
AA (el)	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%
AA (low) (el)	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	0.6%
A (high) (el)	0.0%	0.1%	0.1%	0.2%	0.3%	0.4%	0.5%	0.7%	0.8%	1.0%
A (el)	0.0%	0.1%	0.1%	0.2%	0.3%	0.5%	0.6%	0.8%	1.0%	1.2%
A (low) (el)	0.1%	0.1%	0.3%	0.4%	0.6%	0.8%	1.0%	1.2%	1.4%	1.7%
BBB (high) (el)	0.1%	0.3%	0.5%	0.8%	1.1%	1.4%	1.7%	2.1%	2.4%	2.8%
BBB (el)	0.1%	0.4%	0.6%	1.0%	1.3%	1.7%	2.1%	2.5%	2.9%	3.4%
BBB (low) (el)	0.2%	0.5%	0.9%	1.4%	1.8%	2.3%	2.8%	3.2%	3.7%	4.2%
BB (high) (el)	0.7%	1.5%	2.4%	3.4%	4.3%	5.3%	6.1%	6.9%	7.7%	8.4%
BB (el)	0.8%	1.9%	3.0%	4.2%	5.4%	6.4%	7.4%	8.4%	9.3%	10.1%
BB (low) (el)	1.4%	2.9%	4.5%	6.0%	7.4%	8.7%	9.9%	11.0%	12.0%	12.9%
B (high) (el)	2.3%	4.6%	6.9%	8.9%	10.8%	12.4%	13.9%	15.2%	16.3%	17.4%
B (el)	3.0%	6.1%	8.9%	11.5%	13.7%	15.7%	17.4%	18.9%	20.1%	21.3%
B (low) (el)	6.3%	11.0%	14.6%	17.5%	19.8%	21.7%	23.3%	24.7%	25.8%	26.8%
CCC (high) (el)	11.7%	19.2%	24.2%	27.6%	30.0%	31.8%	33.2%	34.4%	35.3%	36.1%
CCC (el)	13.9%	22.5%	28.0%	31.6%	34.1%	35.9%	37.2%	38.2%	39.1%	39.7%
CCC (low) (el)	38.0%	42.3%	45.1%	46.9%	48.2%	49.1%	49.7%	50.2%	50.6%	51.0%
C (el)	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%	62.2%





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