

Methodology

*Covered Bonds: DBRS's Rating  
Approach (to Canadian Issues)*

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*Insight beyond the rating.*

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# Covered Bonds: DBRS's Rating Approach (to Canadian Issues)

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# 1. Executive Summary

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The purpose of this report is to impart a comprehensive overview and understanding of DBRS's methodology and analytical approach for rating Covered Bonds issued by Canadian entities, where specific Covered Bond legislation does not exist. This report is consistent with a covered bond methodology previously released by DBRS, but focuses on the particular nuances of Canadian Covered Bonds. Canadian Covered Bonds are issued by financial institutions regulated by the Office of the Superintendent of Financial Institutions (OSFI) (each, an Issuer) as a form of funding diversification. Although these obligations are termed Canadian Covered Bonds, they are generally issued and traded in the United Kingdom.

DBRS's Covered Bond rating approach is composed of three building blocks and is primarily based on rating matrices (see Appendix D). These matrices indicate how the three building blocks are combined to obtain a Covered Bond final rating, and also indicate the migration of the Covered Bond rating as a function of each of the three building blocks, which are:

(1) The senior unsecured debt rating of the Issuer (Issuer Rating or IR).

(2) The assessment of the Legal Framework (LF). DBRS will review the structural and contractual elements used in the issuance of Canadian Covered Bonds to determine the strength of the LF. This analysis involves the evaluation of the level of "de-correlation" which may exist between the Issuer and the related pool of collateral assets originated by the Issuer that back the Covered Bonds (the Cover Pool). This assessment encompasses an in-depth review of the LF that supports a Covered Bond issuance, including a review of the guarantee and security provided by the newly formed bankruptcy remote entity that purchases the Cover Pool from the Issuer (the Guarantor). In addition, it measures the level of additional credit protection for Covered Bond investors provided by the Cover Pool. DBRS classifies the LF into four categories: Very Strong, Strong, Adequate and Modest.

(3) The rating of the Cover Pool. This rating includes the assessment of the quality and management of the Cover Pool and will include both a credit and cash flow analysis. This approach is similar to those routinely used for securitization of residential or commercial mortgages. This ensures consistency in the evaluation of the intrinsic credit risk of the Cover Pool, irrespective of the nature of the overlying debt obligation. An additional complexity in the analysis of Cover Pool credit quality is the dynamic nature of the pool, in that it can constantly be replenished with new assets, similar to many RMBS programs that also allow for such replenishment.

There are, however, two main characteristics of the rating matrices:

(1) Covered Bond ratings can be higher than the ratings of the Issuer and the Cover Pool.

(2) Covered Bond ratings always remain linked to the Issuer Rating in any LF.

As a result, AAA ratings of Covered Bonds are not always maintained, even in Very Strong LFs.

The linkage of the Covered Bond rating to the Issuer Rating is reflected in DBRS's methodology as Covered Bond repayment sources are sequential. What this means is that until an Issuer defaults on Covered Bond payments (Issuer Default), the Issuer remains the sole source of repayment (and its ability to do so is reflected by its Issuer Rating). At the time of an Issuer default or severe financial deterioration of the Issuer, there should be a switch towards looking directly to the Cover Pool as the main source of repayment. This sequence of payments allows DBRS (if appropriate) to rate Covered Bonds above the ratings of the Issuer and the Cover Pool, as both the Issuer and the Cover Pool will need to default for the Covered Bonds to default.



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## 2. Introduction

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### COVERED BONDS: FROM A AAA-RATED ASSET CLASS TO A DIVERSIFYING GLOBAL ONE

Covered Bonds are on-balance-sheet, full-recourse senior unsecured debt obligations of the Issuer with additional recourse to a portfolio of specific assets in the event of Issuer Default. DBRS believes that only in the unlikely case that a financial institution issuing Covered Bonds faces liquidation or serious financial stress would the Covered Bond holders need to look directly to the cash flows from the Cover Pool as recourse. Thus, the rating of the Issuer is a focal point of the analysis, because not only is the Issuer the first source of repayment on the Covered Bonds (as long as the Issuer does not default or become insolvent), it also entails – when the Issuer Rating moves down the rating scale – information about the assets originated by the Issuer and sold to the Guarantor, where the Covered Bond investor will continue to rely on the Cover Pool for payments.

Unlike many European countries, there is no explicit legislation in Canada for Covered Bonds that prescribes asset segregation upon an Issuer's insolvency without having to transfer assets off balance sheet. Hence, the Covered Bonds issued by Canadian financial institutions are considered to be structured Covered Bonds, as they use similar contractual structuring techniques that are used in traditional securitizations. Canadian Covered Bond issuances to date have used a Covered Bond structure based on the segregation and true sale of the Cover Pool assets into a newly formed special purpose vehicle (SPV) which often acts as a guarantor to the Covered Bonds issued by the Issuer.

Since the Covered Bonds are issued by the asset originator (and not the SPV, as in traditional securitization structures), they remain the Issuer's direct obligations. The Issuer is obligated to pay interest and principal on the Covered Bonds. When an Issuer defaults, the newly formed bankruptcy remote SPV (i.e., the Guarantor) that purchased the Cover Pool, becomes obligated to pay interest and principal on the Covered Bonds, and the Cover Pool assets specifically pledged for the benefit of the Covered Bondholders (the Pledged Assets) become available to repay the Covered Bonds. As such, Covered Bond investors have the usual recourse to the Issuer, in addition to recourse to the Cover Pool assets segregated in the SPV upon the Issuer Default, via the Guarantor's secured guarantee. However, as the rating on the Covered Bonds relies to a large extent on the availability, timeliness and sufficiency of the Pledged Assets to repay the Covered Bonds if the Issuer defaults, the rating of Canadian Covered Bonds can be higher than the Issuer Rating even though the Cover Pool origination is linked to the Issuer.

The likelihood that the cash flows from the Cover Pool are sufficient to continue making payments of interest and principal on the outstanding Covered Bonds without disruption following an Issuer Default depends on (a) the credit quality of the Cover Pool, (b) the smoothness of transition of the servicing of the Cover Pool to a new servicer and (c) completion of any legal formalities relating to the sale of the Cover Pool assets to the SPV/Guarantor and the pledge of the Pledged Assets, to ensure the SPV/Guarantor can legally enforce and collect payments from the Cover Pool. Consequently, the second layer of credit enhancement depends on the quality of the assets in the Cover Pool (varying by asset class, loan-to-value (LTV), geographic location and diversification), the range of asset substitution in the Cover Pool, and the available overcollateralization (OC) and asset and liability management (ALM) relating to the Covered Bonds. DBRS expects that in order to provide for recognizable credit enhancement for the Covered Bonds, the Cover Pool has to be rated at least BBB (low) or higher (see the Rating Tables in Appendix D).



Covered Bond holders have a senior unsecured claim against the Issuer and therefore benefit from the same degree of protection as other senior unsecured debt holders of the Issuer, but also enjoy additional structural protections that minimize the probability of default of the Covered Bonds and provide investors with enhanced security. These protections include the following:

- (1) The high quality of the collateral assets (the Cover Pool) backing the Covered Bonds, as well as the benefit of conservative internally defined rules of the Issuer relating to the origination and servicing of the Cover Pool and ALM.
- (2) A guarantee and security given by a newly established bankruptcy remote entity that will purchase the Cover Pool from the Issuer, where the guarantee will be triggered and the Guarantor will be required to pay interest and principal on the Covered Bonds in the event that the Issuer defaults on its payment obligations.
- (3) A reserve fund or other form of liquidity is typically required to be available in the event the Issuer's ratings fall below the required levels.
- (4) Minimum rating requirements are included for swap counterparties, the servicer of the Cover Pool (the Servicer), the cash manager and the account bank (if one is included in the structure), with specific actions required to preserve protection for the Covered Bonds in the event that these ratings are not maintained.
- (5) In some cases, the final maturity date of the Covered Bonds can be extended for one year if the program structure allows for it.

Despite these protections, the credit risk of the Covered Bonds is to a degree always linked to the financial condition of the Issuer. When Covered Bonds are issued through a separate subsidiary (as is the case in some jurisdictions other than in Canada), this link is somewhat reduced, but even in this case, financial and operational links will almost always persist between a Covered Bond issuance and the rest of the Issuer's operations. These links include the criteria adopted by the Issuer to originate Cover Pool assets, the servicing of the Cover Pool and the ALM. As such, DBRS will evaluate the level of segregation between the Cover Pool and the rest of the Issuer's operations and how this segregation may sustain the credit protections afforded to Covered Bond holders. DBRS will also take into consideration any additional structural protections as indicated above (e.g., the requirement to replace the Servicer or have a guarantor guarantee the Servicer's obligations in the event the Servicer defaults or its ratings fall below the required levels, increase in OC in the case of Cover Pool performance deterioration and a secured guarantee from a bankruptcy remote entity).

While the asset coverage test used in the Canadian Covered Bond structure helps to ensure that the Cover Pool is sufficient to cover the outstanding Covered Bonds, the limited partnership or trust structure of the SPV used to achieve segregation of the Cover Pool assets has not been tested yet with respect to the Issuer Default or the Guarantor default. In both situations, there is the need to manage the Cover Pool, in addition to the potential need to sell all or part of it to repay maturing Covered Bonds. The latter may expose Covered Bond investors to the risk that the Cover Pool would have to be sold at a discount with an insufficient amount to repay the Covered Bonds. Contrary to legislation-based Covered Bonds, where legislation provides for an administrator to take control of the Cover Pool, there is generally no pre-established contingency plan designed to take care of servicing and refinancing issues for Canadian Covered Bonds. Consequently, following the Issuer or Guarantor default, there could be more volatility on ratings of these Covered Bonds than legislation-based Covered Bonds. Such rating volatility will depend on what type of specific contingency plan is included in the contractual terms of the Covered Bond issuance, the market conditions and the appetite for the type of Cover Pool assets.

DBRS's view is that it is possible that the absence of legislative provisions could make it more difficult to achieve a high level of de-linkage between the Issuer and its Covered Bonds, which may lead to a more volatile rating on the Covered Bonds.



### *Developments in Canada*

The Canadian Covered Bonds have generally follow the true sale structure of most Covered Bonds issued in the United Kingdom which, in DBRS's view, benefit from a strong legal platform and a fully tested and well-established Trust law. However, a case-by-case analysis will be needed to determine which LF is appropriate for each Canadian Covered Bond issuance.

In a letter dated June 27, 2007, OSFI changed the regulatory rules to allow Canadian financial institutions to issue Covered Bonds up to an aggregate of 4% of their total assets. If at any time after issuance of Covered Bonds for any particular financial institution, the 4% limit is exceeded, the Issuers must immediately notify OSFI. OSFI also requires that the pledging policies of the Issuer be amended prior to the issuance of Covered Bonds.



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## 3. Rating Rationale

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### 3.1 CONCEPTUAL FOUNDATIONS

DBRS's Covered Bond analysis is an integrated approach that combines both qualitative and quantitative elements.

DBRS's qualitative assessment starts with the review of the proposed Covered Bond LF, which indicates the likelihood that payment on the Covered Bonds can be smoothly transferred from a potentially troubled Issuer to reliance directly on the Cover Pool for repayment, and considers factors such as the robustness of the legal provisions with regard to asset segregation, bankruptcy remoteness of the Cover Pool, and potential contingency plans, including replacement of the Servicer. This assessment results in the assignment of one of four LF categories to the Covered Bond issuance: Very Strong, Strong, Adequate and Modest. See Appendix A for a full discussion on the assessment of the Legal Framework.

DBRS considers that the success of a contingency plan also depends on the liquidity available from the Cover Pool at the time when the payments on the Covered Bonds depend directly on the Cover Pool. In this context, DBRS looks at the quality, quantity and enforceability of OC against claims from the Issuer's other creditors, along with its allowance for substitution of eligible assets in the Cover Pool. See Appendix C for further discussion on OC.

### 3.2 THE THREE BUILDING BLOCKS

#### *(1) Issuer Rating (IR)*

The Issuer is the primary initial source of the timely payment of the Covered Bonds. The Issuer Rating is assigned by DBRS's Financial Institutions Group following the analytical process described in relevant methodologies, which have two components: Intrinsic Assessment and Support Assessment. As a result, the Covered Bond rating will incorporate the support element that exists in the Issuer Rating.

#### *(2) Legal Framework (LF)*

(See Appendix A for a full discussion on Legal Frameworks.)

#### *(3) Cover Pool Rating*

The Cover Pool provides additional recourse for Covered Bond investors and is analyzed based on DBRS's Structured Finance Group's approach to similar asset types in asset-backed securitization transactions (e.g., RMBS, CMBS, etc.). The analysis is adjusted when necessary to take into account that the composition of Cover Pool is dynamic.



### 3.3 THE 'CORRELATION'

In most Covered Bond programs, the Issuer is simultaneously the asset originator, the swap counterparty, the Servicer and the liquidity provider. DBRS considers that a default scenario must incorporate a broad scope of financial and non-financial commitments borne by the Issuer.

As the credit rating of the Issuer deteriorates (i.e., a default scenario becomes more likely), reflected by the decrease of the IR, at some point even a AAA-rated Cover Pool in the strongest LF can no longer support the Covered Bond rating at AAA (see Appendix D). That point is normally a BBB (high) Issuer Rating under a Very Strong LF, and occurs at higher rating levels in other LFs. The rationale is twofold:

- (1) DBRS considers that the continued deterioration of the Issuer Rating below certain levels may not be compatible with a AAA rating.
- (2) An Issuer experiencing extreme stress or financial deterioration poses uncertainty with respect to flawless, eventless and timely payments to the Covered Bond holders, even in the case that the Cover Pool cash flows can be used for repayments.

As such, DBRS considers that the ALM within a Covered Bond program should be evaluated from the standpoints of both the Issuer and the Cover Pool. When the Issuer is not in default, part of its global ALM strategy is to ensure that all of its debts (including Covered Bonds) are fully repaid on a timely basis, in particular through adequate hedging programs and liquidity support. This is measured and reflected in the Issuer Rating. In addition, liquidity for Covered Bonds can also be provided through OC in the form of liquid assets or cash. The Issuer Rating and the OC alone, however, are not sufficient to determine the ALM strength of a Covered Bond program. With respect to a Covered Bond program, additional attention needs to be given to the type, nature and content of swap contracts related to the Cover Pool (the assets), as well as the credit strength of the counterparties that provide those swaps. The same is true for the set of swap contracts related to the Covered Bond (the liabilities). The various counterparties that swap the Cover Pool and Covered Bond cash-flows may be numerous (particularly related to the Cover Pool), and the contracts themselves may be very specific and non-standard and cannot be easily replaced when needed. Furthermore, the swap contracts on the Cover Pool and on the Covered Bond may not necessarily provide a full hedging of the risks. Therefore, an understanding of how the un-hedged risks will be mitigated is required; whether it is through the Issuer's global ALM or the OC. Lastly, the existence and quality of the Cover Pool ALM (such as the segregated hedging contracts and the dedicated OC, if any) need to be analyzed. The adjusted value or net present value (NPV) of the Cover Pool and the Covered Bonds will serve as a key indicator of the ALM consistency with the Covered Bond rating. See Appendix B for a more detailed discussion of ALM.

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## 4. Appendices

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### APPENDIX A: RANKING LEGAL FRAMEWORKS

#### *Background and Prerequisites*

As Canadian Covered Bonds do not have specific legislation governing them, the contractual agreements need to be assessed on a case-by-case, transaction-by-transaction basis. To date, Canadian Issuers have used structures to mimic European legislative Covered Bonds in terms of Cover Pool identification and segregation and the de-linkage between the insolvency of the Issuer and the Cover Pool, with ultimate recourse to the Cover Pool upon the Issuer Default and to the Issuer and the Cover Pool upon Covered Bond default.

The Legal Framework of Canadian Covered Bonds is reviewed in order to address three main questions:

- (1) What is the strength of the LF, the quality and enforceability of contractual agreements and security pledged, and the anticipated “contingency plan” in case the Issuer defaults?
- (2) To what extent are the preferential rights of the Covered Bond holders to the Cover Pool legally or contractually anchored in the event of an Issuer’s bankruptcy?
- (3) What is the quality of assets in the Cover Pool compared with assets used for Covered Bonds issued in countries with specific Covered Bond legislation?

To answer the questions above, DBRS uses the following three elements: (1) the core criteria, (2) the market environment and systemic support and (3) the Cover Pool eligibility criteria.

#### **1. “Core Criteria”: Bankruptcy Remoteness, Segregation of the Cover Pool and Contingency Plans**

The following factors impact the degree of de-linkage of Covered Bonds from the Issuer’s credit strength and the ultimate repayment of Covered Bonds.

- (1) **The bankruptcy remoteness** of the Guarantor who is the purchaser of the Cover Pool and is obligated to make payments on the Covered Bonds in case of an Issuer Default, and the avoidance of any cross defaults in relation to the Issuer’s other debts and obligations.
- (2) **The segregation of the Cover Pool** from the Issuer’s bankruptcy estate through the sale of the assets to the Guarantor.

The two elements above constitute the “core criteria” for the de jure de-linkage. However, DBRS realizes that there are differences within each LF regarding how practical aspects would be treated, such as completing the formalities relating to the true sale and the pledge of the Cover Pool, which may only be required under the contractual agreements if there is a decline in the Issuer Rating or an Issuer Default. This will result in a certain degree of linkage between the credit risks of an Issuer and its Covered Bond. Therefore, DBRS needs to review if the de facto de-linkage can be obtained. In particular, DBRS will look at the following:

- The degree of bankruptcy remoteness and segregation of the Cover Pool from an Issuer’s insolvency and the enforceability of the security over the Cover Pool.
- In the case of Issuer Default, the existence of provisions against automatic acceleration of Covered Bonds.
- The derivatives’ status as a part of the segregated Cover Pool. See Appendix B for further discussion on hedging.
- ALM requirements and potential cash flow mismatches. DBRS will review if any cash flow delay arising from the Cover Pool could jeopardize the timely payment of interest and principal on Covered Bonds, particularly due to a stay of proceedings imposed in relation to the Issuer’s insolvency. See Appendix B for further discussion of ALM.
- In the case of Issuer Default, the legal protection for enforceability of OC. See Appendix C for further discussion of OC.



### (3) Contingency plans

Quality, content and applicability of the contingency plan in case of Issuer Default should be reviewed and should include the appointment of a replacement Servicer, a notice to obligors of the Cover Pool assets to make payments directly to the replacement Servicer or the Guarantor instead of the Issuer.

### *2. Market Environment and Systemic Support*

Market environment includes outstanding volume and percentage of jumbo benchmark Covered Bond issues (over EUR1 billion), history and depth of the Covered Bond market, liquidity of the secondary Covered Bond market, number of Issuers, efficiency of market-maker system and transparency of the trading systems. Systemic support means the degree of a regulator's support of Covered Bonds issuance.

### *3. Cover Pool Eligibility Criteria*

Unlike the above criteria, the Cover Pool eligibility criteria do not reveal how much the Covered Bond rating can be "de-linked" from the Issuer Rating. They are, however, important in the assessment of the Cover Pool credit quality, which, combined with the Issuer Rating and the LF, results in the final Covered Bond rating (see Rating Tables in Appendix D). The following eligibility criteria allow DBRS to determine the quality of the Cover Pool and its ability to generate cash flows on a timely basis without any interruption. These criteria are key to assessing the sufficiency of the OC available to cover the credit and other risks of the Cover Pool:

- (1) Nature of the eligible assets
- (2) Geographical scope
- (3) Maximum LTV levels allowed
- (4) Asset valuation methods: Basis for valuation, loan value and valuation verification (e.g., contractual principles for property valuation, appraisal of loan value or prudent market value)
- (5) Treatment of substitution assets
- (6) Basics of the "cover principle" (which means the adjusted value of the Cover Pool must at all times be at least equal to the outstanding Covered Bond principal amount and accrued interest), including the existence of any minimum amount of OC and any specific liquidity requirements

### *4. Assessment of legal framework for Canadian Covered Bonds*

The assessment of the core factors, market environment and Cover Pool eligibility criteria allow DBRS to determine the degree of de-linkage between the Covered Bond rating and the Issuer Rating and classify the LF in one of four categories accordingly: Very Strong, Strong, Adequate and Modest. The higher the de-linkage is between an Issuer Rating and its Covered Bond rating, the higher the ranking of the LF. However, a linkage between the Covered Bond rating and the Issuer Rating always exists even in a Very Strong LF.

(1) **Very Strong LFs** provide a very high level of comfort that payment obligations for outstanding Covered Bonds will be paid without payment disruptions on the Covered Bond. In particular, where the Cover Pool has been sold to the Guarantor, but the Issuer continues to be the Servicer until it defaults or its rating is downgraded, certain actions need to be taken to ensure the obligors of the Cover Pool assets are notified of the sale and are asked to make payments to someone other than the Issuer, and that the Cover Pool is not inadvertently included in any bankruptcy proceedings of the Issuer. In a Very Strong LF, those actions are taken when various triggers in the legal documents occur in order to ensure segregation and protection of the Cover Pool. In addition, DBRS will consider contractual enhancements such as the requirement of a replacement servicer if and when the rating of the Issuer (as initial Servicer) goes below a certain level, or the provision of additional OC by the Issuer in cases where the OC initially provided may not be sufficient to maintain the targeted Covered Bond rating.



(2) **Strong LFs** have most of the same elements as the Very Strong LF criteria above, however, there may be certain elements lacking, certainty as to when actions will be taken is not as clear, or uncertainty as to the effect bankruptcy proceedings in relation to the Issuer may initially have on the Covered Bonds and the Cover Pool (even if the end result will be to segregate the Cover Pool from the Issuer's assets). This results in a somewhat weaker legal structure than the Very Strong LF. In other words, the differences between Very Strong and Strong LFs come from (1) the market environment and systemic support and/or (2) specific features within the core criteria that allow for maximum de-linkage.

(3) **Adequate LFs** still ensure bankruptcy remoteness, but they lack concrete substance with regard to other important criteria, especially the elements of a contingency plan. They may also have some uncertainty regarding the complete asset segregation and bankruptcy remoteness of the Cover Pool in relation to the Issuer. The likelihood of cash flow interruption in relation to payments on the Covered Bonds is closely linked to the Issuer Default so the Covered Bond rating cannot easily be de-linked.

(4) **Modest LFs** are those where Covered Bond investors have recourse to the Cover Pool, however, the structure contains considerable risk of cross defaults and payment acceleration with no or limited reference to contingency plans. In this LF, the recourse to the Cover Pool in post-insolvency of the Issuer is highly uncertain and the cash flow available to the Covered Bonds post-insolvency of the Issuer is considered the same as that being used to pay all unsecured creditors of the Issuer, causing payment interruption in relation to the Covered Bonds. This means minimal or no de-linkage exists and the Covered Bonds are considered to default at the same time as the Issuer, and the security interest in the Cover Pool may not reduce the probability of Covered Bond default.

An Issuer could possibly raise its Covered Bond rating by addressing issues like servicing and quality of the Cover Pool or ALM when these elements are not covered adequately under its LF.

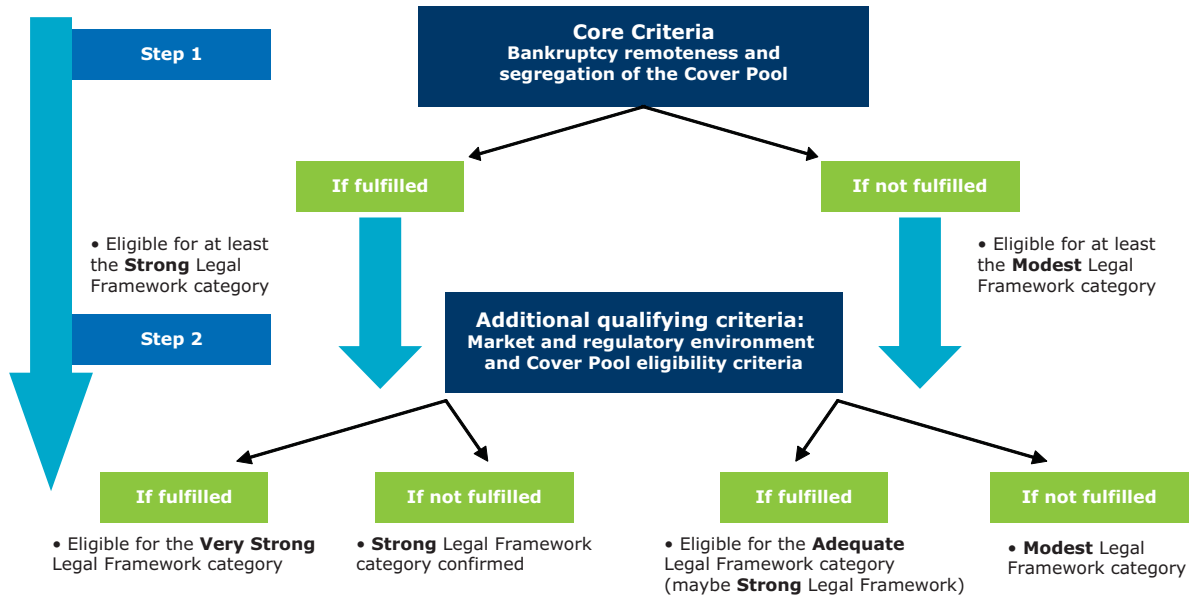
The existence of two sources of cash flows and the sequential nature of the payments made on the Covered Bonds, first from the Issuer and then directly from the Cover Pool, allow DBRS to rate the Covered Bonds above the Issuer Rating and the Cover Pool rating, if appropriate. DBRS believes that under a Very Strong LF, the Covered Bonds of Issuers in distress will end up being "taken care of" by the Cover Pool itself. Nevertheless, DBRS evaluates untested LFs to prevent an acceleration of the Covered Bonds by using plausible stress scenarios that incorporate actions of the management of troubled Issuers, regulators and potential legal challenges by other creditors or liquidators, each of which is bound to result in some element of uncertainty in relation to repayment of the Covered Bonds. Therefore, there is no certainty that the Covered Bonds will always maintain the initial rating. As such, DBRS's rating for the Covered Bonds is generally no longer AAA even under Very Strong LFs with AAA rated Cover Pool when the Issuer Rating is BBB (high) or lower.

When an Issuer is experiencing credit deterioration or getting closer to a default, the uncertainty about the timely payments on the Covered Bonds, even under a Very Strong LF, is growing and reflected by the decreasing incentives of obligors to pay their obligations and the increasing possibility that the Issuer could face high staff turnover and other operational challenges such as servicing. Any of these factors could negatively impact the credit quality of the Cover Pool, albeit not immediately, at an accelerating speed as the situation continues to deteriorate. DBRS believes it is prudent to be conservative with regard to the credit characteristics of Cover Pool, especially at the time Covered Bond investors start to depend on the Cover Pool for Covered Bond payments. These uncertainties, even under a Very Strong LF, are no longer compatible with a AAA Covered Bond rating. Consequently, as the Issuer Rating keeps deteriorating, potentially so does the rating of the Covered Bonds.

The ratings of the Issuer and Cover Pool become more constraining factors under Strong, Adequate and Modest LFs, as the impact of rating deterioration is magnified by the relative weakness of the LFs. In jurisdictions where the transfer of the Cover Pool is subject to more uncertainty, DBRS believes it will lengthen the time needed to transfer the Cover Pool to a replacement servicer or strain the liquidity embedded in the Cover Pool, making the rating of Covered Bonds more sensitive to a deterioration of the Cover Pool or Issuer Rating.

The following figure illustrates DBRS's process of reviewing and ranking LFs.

**Figure 1: Assessing the Legal Framework – DBRS's Ranking Process**



### Definitions

The brief definitions of the LF categories are as follows:

- (1) **Very Strong:** Marginal linkage exists between the Issuer and the Covered Bond, with a high degree of assurance of the timely payment of the principal and the interest, even in the case of Issuer Default.
- (2) **Strong:** Some linkage exists between the Issuer and the Covered Bond, specifically upon an Issuer's insolvency. There are some uncertainties regarding a smooth transition from the Issuer to the Cover Pool as the source of repayment of the Covered Bonds.
- (3) **Adequate:** Significant linkage between the Issuer and the Covered Bond exists, arising from the uncertainty of Cover Pool segregation in the event of the Issuer's insolvency.
- (4) **Modest:** The segregation and bankruptcy remoteness mechanisms are not applicable, enforceable or weak so that the Covered Bond rating is more or less equivalent to the Issuer Rating.



## APPENDIX B: ALM – A CROSS-BLOCKS FEATURE

ALM is a tool applied to each of the three building blocks (Issuer Rating, Legal Framework and Cover Pool). DBRS's assessment of any Covered Bond takes into consideration the soundness of security provided to the Covered Bond holders over the Cover Pool and its related ALM. The Cover Pool credit risk assessment takes into consideration the risk of default on underlying assets and the level of stressed loss the existing OC can support. In addition to covering the credit risk at the targeted Covered Bond rating level, the Cover Pool also needs to produce liquidity in terms of cash flows that are aligned with the Covered Bond maturity in order to provide adequate protections against the interest and currency risks, as well as any timing mismatches or duration gaps.

While the Issuer is not in default, it typically provides the interest rate and currency risks protection as well as the liquidity necessary to ensure timely payments to all of its creditors, including Covered Bond holders. Therefore, the type and quality of hedging contracts used to swap the cash flows of the Cover Pool so that the Covered Bonds can be fully and timely repaid need to be thoroughly analyzed. It is also critical to understand what portion of the risks, if any, remains un-hedged, and how that risk is mitigated.

When the Issuer defaults, the Cover Pool becomes the sole source of repayment for the Covered Bonds and the protection from ALM against the risk of duration mismatches between the Cover Pool and the Covered Bonds is provided through a combination of hedging contracts (which constitute a part of the Covered Bond security) and OC.

DBRS uses the same approach and criteria to analyze the ALM of the Cover Pool and Covered Bonds in the following situations:

- (1) The non-default of the Issuer
- (2) The default of the Issuer where the Cover Pool and the Covered Bond would have to survive Issuer Default, and their respective cashflows and maturities must be matched in the absence of the Issuer.

In both cases, the following analysis is required:

### *(1) Liquidity Risk*

The main liquidity risk is the mismatch between the respective Cover Pool and the Covered Bond cash flows and maturities, as the maturities of the assets (Cover Pool) can be longer or shorter than those of the liabilities (Covered Bonds). DBRS analysis focuses on the sources of liquidity as well as its sufficiency.

In most Covered Bond programs, the liquidity is provided through the Issuer and OC. In this case, what matters are the Issuer Rating as a liquidity provider, the nature of the OC providing liquidity coverage (in the form of cash or liquid assets) and the sufficiency of those liquidity sources given the mismatches.

Some Covered Bond programs are established in a way that the Issuer itself is not involved in any liquidity support as described above. This means a cash reserve is funded at the inception of the Covered Bond program or liquidity lines or facilities are obtained through the Issuer itself as an explicit liquidity provider, a highly-rated third party or both. The Cover Pool itself also provides a source of liquidity when it has to be liquidated to repay part or all of the Covered Bonds.

Depending upon how the liquidity is provided (through a reserve fund, the Issuer or other sources), its adequacy and the involvement of sources (such as a rating change of the liquidity providers) will impact the Cover Pool, and consequently the Covered Bonds could be subject to a downgrade or an upgrade.

In every case, DBRS will analyze whether the liquidity mechanism employed is sufficient to cover duration gaps, particularly in cases where the Covered Bonds mature well ahead of the majority of the assets in the



Cover Pool. Features like extendible repayment dates may help mitigate such mismatch risks to a large degree. In such cases, DBRS needs to assess the market value of the Cover Pool under various scenarios incorporating factors such as economic environment, size of the market for this type of asset and interest rate environment in order to determine the sufficiency of the Cover Pool sales proceeds for timely and full repayment of the Covered Bonds. In case of Issuer Default, DBRS needs to analyse whether the monetization of the Cover Pool through natural asset amortisation as well as its eventual sale would be sufficient and timely enough to repay maturing Covered Bonds or whether a forced liquidation of the Cover Pool may be necessary.

### *(2) The Interest Rate Risk and Currency Risk*

Both legal and financial analysis is required on the following points:

- Legal structure of the hedging agreements that swap the Cover Pool cash flows:
  - Are the swap agreements part of the segregated Cover Pool, and would they survive Issuer Default?
  - How adequate are the legal guidelines for avoiding potential market risks and cash flow mismatches emanating from interest rate or currency differences?
- Type and nature of the documentation governing the swaps, such as ISDA Master Agreements between the Issuer and external swap counterparties, as well as standard market practice in relation to the posting of collateral. Those ISDA Master Agreements can potentially vary and be non-standard, and therefore may not be easily settled, replaced or switched to another counterparty. DBRS will assess the management of counterparty risk in relation to those Master Agreements and situations where those contracts can be cancelled or amended and any consequences for the Issuer to re-assign the hedges to another counterpart. DBRS will review if the Cover Pool swaps governed by the ISDA Master Agreements are plain vanilla swaps or asymmetric and if the swap contracts are structured in a way that early termination cannot be triggered by Issuer Default or the counterparty. In addition, DBRS will verify if the swaps are secured with collateral and if so, how.
- Type and nature of the currency swaps, if any, that exchange the Cover Pool cash flows into the currency of the Covered Bond.
- Residual risk: Stress scenarios are used to assess if additional hedges are put in place through liquid assets or whether this is covered by the Issuer itself.
- Counterparty risk: Counterparty risks arise from both the dedicated Cover Pool swaps and the Covered Bond swaps and are taken into account when determining the Cover Pool rating and the Covered Bond rating.

### *(3) The Use of NPV as an ALM Monitoring Tool*

A key measure DBRS will focus on to assess the ALM risk is the NPV between the Cover Pool and related Covered Bonds. In DBRS's view, an absolute positive NPV must be maintained at all times including a stressed situation where a replacement Servicer is brought in and the Cover Pool is used directly to make payments on the Covered Bonds. On an ongoing basis, DBRS will review the following:

- How will the NPV be calculated and stressed?
- Under which scenarios is it calculated?
- How frequently is the NPV calculated and monitored?
- How are NPV and OC linked?
- What remedies are available if the NPV becomes negative?

### *(4) The ALM Assessment during the Rating Process*

#### **Factors Impacting the Cover Pool Rating**

DBRS's assessment of the Cover Pool addresses three main areas of risk: Credit Risk, Counterparty Risk and Market Risk.

- (1) Credit Risk is assessed in terms of
  - (a) Obligors' defaults
  - (b) Delinquencies
  - (c) Prepayments
  - (d) Loss severity given default



Those elements constitute the basis for measuring the sufficiency of the proposed OC in respect of the desired rating on the Cover Pool. It is possible the available OC may cover only the credit risk without any provision for other risks.

(2) Counterparty Risk related to the Cover Pool swaps

Any swaps with a counterparty rated below **A or R-1 (middle)** will have to either be collateralized to the satisfaction of DBRS, supported by a guarantee from a party acceptable to DBRS, or replaced by counterparties rated at least **A or R-1 (middle)**. If these actions are not taken within a specified time frame (usually 30 days), the mark-to-market value of the swap contracts will be deducted (net of collateral if any) from the NPV of the Cover Pool and respective credit enhancement amount. Provided that one of the above steps is taken, no re-assessment of the credit enhancement is necessary.

(3) Market Risk (i.e., interest rate, currency) is assessed through:

- (a) Available measures such as NPV
- (b) Stressed scenario and/or stressed NPV
- (c) Market value at risk (VaR).

**Factors Impacting the Covered Bond Rating**

If required, the residual liquidity gap (a pre-maturity test) is an assessment of the liquidity available to pay interest and principal of maturing Covered Bonds within the next 12 months. This assessment will:

(1) Size the duration gap between the Cover Pool and the Covered Bonds.

(2) Analyze the sources of liquidity. Any liquidity provider other than the Cover Pool itself (cash and/or liquidity assets) needs to have a rating of at least **A (low) or R-1 (middle)** in order to be commensurate with a AAA-rated Covered Bond.

(3) Perform market value analysis if the Cover Pool needs to be liquidated to repay the Covered Bonds. Any shortfall of the available cashflows is incompatible with the rating of the Covered Bonds.

**Figure 2: Summary of the Main Rating Triggers Generally Commensurate with a AAA Covered Bond**

Role	Rating Trigger (below)	Rationale	Remedies
Swap Counterparty	A or R-1 (middle)	Credit strength and execution quality of the counterparty can be constrained	Collateral posting, third-party guarantee, replacement provider
Liquidity Provider	A (low) or R-1 (middle)	A weakened short-term rating challenges the resilience of the liquidity provider	Alternative liquidity sources, cash deposits
Servicer	A (low) or R-1 (middle)	Operational risk increases noticeably below this rating level	Replacement servicer, performance guarantor
Account Bank	A (low) or R-1 (middle)	The commingling risk increases substantially below this level	Replacement account bank



## Key Elements of the Cover Pool and Covered Bonds ALM Review

### (1) Static or Dynamic Requirements:

#### (a) Static Matching Tests

- Nominal cover matching test: value of the Cover Pool is larger than  $(1 + x \%)$  \* value of the Covered Bonds.
- Revenue matching test: interest received from the Cover Pool is larger than interest paid on the Covered Bonds.

#### (b) Dynamic Matching Tests

- NPV of the Cover Pool is larger than  $(1 + x \%)$  \* NPV of the Covered Bonds.
- Duration gap between the Cover Pool and Covered Bonds.
- NPV stress tested on yield curve shift, historic interest rate volatility and time horizon.
- Mismatch between NPV and OC requirements.
- Consequences of failure of any of the above tests, assuming the Issuer Default.

### (2) ALM Risks of the Cover Pool and Covered Bonds

#### (a) Types and magnitude of mismatch between the Cover Pool and the Covered Bonds, including the following:

- Size of the maturity gap
- The coverage of non-domestic Cover Pool assets (if any) for their respective Covered Bonds.
- Whether the Cover Pool prepayment risk is considered, and the probability it can lead to significant risk of maturity gap.

#### (b) Available options for covering potential liquidity shortfalls

#### (c) Dramatic interest rates changes and the possibility of calling or prepaying the Covered Bonds.

### (3) Swap Contracts Related to the Cover Pool

#### (a) Number and volume of swap contracts

#### (b) Type and content

#### (c) Specific clauses (termination, collateral posting)

#### (d) Credit strength of the swap providers

#### (e) Swap contracts and the Credit Support Annex



## APPENDIX C: OVERCOLLATERALIZATION

In the event of insolvency of the Issuer, the Cover Pool cash flows will become the sole source of repayment of the Covered Bonds. The Cover Pool overcollateralization percentage is calculated as total outstanding Cover Pool divided by total outstanding Covered Bonds.

In other words, OC represents the excess amount of assets (i.e., cash and/or liquid assets) over the Covered Bonds that would help to ensure the timely payment of Covered Bonds in the situation of deteriorating Cover Pool performance. In many cases, OC also provides protection for liquidity and other risks. In order to assess the degree of support provided by OC, DBRS will assess its stability by addressing the following aspects:

- (a) the credit risk in terms of the concentration and correlation embedded in the Cover Pool, and
- (b) the risks that may arise from maturity mismatches between the Cover Pool and Covered Bonds, fixed and floating interest rate mismatches, and different currencies.

Depending on the amount of OC available, DBRS will take into consideration the various aspects of the eligibility criteria and the impact they may have on the Cover Pool, such as the following:

- To what extent the LTV at origination differs from LTV allowed under eligibility criteria
- To what extent an asset can be viewed as partially eligible or entirely non-eligible
- The type of valuation method used by the Issuer
- The likelihood that OC may become insufficient in the future due to the decrease in value of the assets, the decrease in LTV to a specific level, or other restrictions.
- To what extent collateral value tracking can ensure greater dynamic collateral coverage
- The existence of specific contractual rules for the OC determination and the legal enforceability of these provisions.
- To what extent substitute assets can be used as OC

In addition to the ALM and risk management, many Covered Bond Issuers enter into contractual commitments to provide a minimum amount of OC. In DBRS's view, the benefit of these commitments depends upon the robustness of the Issuer's management, its willingness to minimize Issuer's risks with regard to its obligations and the assurance of available OC in the long term.

DBRS will review the following risks that

- (a) OC could be viewed as unjustified excess cover by the regulators or other creditors of the Issuer
- (b) OC could disappear upon an Issuer's insolvency
- (c) OC could not be allocated for the timely payment of Covered Bonds or not replaced upon depletion of the OC
- (d) OC could be inadequate as new Covered Bonds are issued up to the maximum allowed amount.
- (e) OC could be affected by the substitution risk as the Cover Pool of the Issuer has a dynamic nature and the Issuer can potentially replace certain assets in the Cover Pool with other eligible assets of lower credit quality

To address these risks, DBRS will first evaluate if OC is legally binding and its enforceability, in particular upon an Issuer's insolvency. Secondly, in regard to the liquidity risk, DBRS will consider the existence of any liquidity generated from the Cover Pool. DBRS views favourably the liquidity provided through OC in conjunction with any other liquidity mechanism used to meet the Covered Bond payment obligations, particularly in the case of difficult market situations.



## APPENDIX D: COVERED BONDS RATING TABLES

DBRS's integrated approach to rating Covered Bonds incorporates the following three pillars:

- The Issuer's credit quality (Issuer Rating).
- The strength of the Legal Framework (Legal Framework).
- The security given over the Cover Pool assets (Cover Pool).

The application of this approach can be presented through rating tables that combine the Issuer Rating and the Cover Pool rating, with one rating table for each Legal Framework.

The tables below illustrate DBRS's view that there is always a linkage between the Covered Bond rating and the Issuer Rating, even in a Very Strong LF. However, this linkage can significantly decrease depending upon the LF used, as illustrated in the tables. The tables show in particular the Issuer Rating level at which the de-linkage starts to weaken in respect of AAA rated Covered Bonds.

DBRS considers that a linkage between the Covered Bond rating and the Issuer Rating always exists for the following reasons:

- A Covered Bond is an on-balance-sheet borrowing of the Issuer; therefore, a linkage remains between the Issuer and the Covered Bond for reasons ranging from asset origination criteria, business franchise, operational capacities to the financial situation of the Issuer.
- When an Issuer's short-term rating declines to R-1 (low) or below or its long-term rating declines to A (low) or below, the Issuer is generally no longer considered acceptable as a liquidity provider to AAA rated Covered Bonds due to its weakened financial strength. Only when the Issuer can demonstrate that it has put in place a liquidity cushion sufficient to cover for the Cover Pool and Covered Bond mismatches can the AAA Covered Bond rating be maintained.
- All the cash flows from the swaps and assets normally transit through the Issuer and are deposited with the Issuer. As soon as the Issuer's long-term rating goes below A (low) or its short-term rating goes below R-1 (middle), it is generally no longer acceptable for AAA rated Covered Bonds due to commingling risk.
- Concerns of the servicing and requirement for a replacement servicer arise when the servicer's long-term rating falls below A (low) or, more certainly, to BBB range for operational risk. The move to a replacement servicer at that point can be potentially difficult to execute as the weakened financial condition of the Issuer may start to affect the operational aspect of the Covered Bond program. In most cases, a AAA Covered Bond rating will be affected for an Issuer rated BBB (high), even in a Very Strong LF.

The following tables show the outcomes of Covered Bond ratings based on Issuer Rating, Cover Pool and Legal Framework. There may be some exceptional situations where the Covered Bond ratings could be maintained even when the Issuer Rating drops to the levels indicated in the tables. For instance, the Covered Bond rating could be maintained with remedies such as replacement of the servicer or alternative liquidity provider when the rating of an existing servicer or liquidity provider deteriorates. On the other hand, a Covered Bond rating review or downgrade could be feasible while neither the ratings of the Issuer nor the Cover Pool have changed due to an increase in the gap between the Issuer Rating and its Intrinsic Assessment, an early signal of the deterioration of the Issuer's capabilities to adequately ensure the proper function of its core roles as servicer, asset originator, swap counterparty or liquidity provider related to the Covered Bond programme.



## Covered Bond Rating Tables

### Very Strong Legal Framework

Issuer Rating	Cover Pool											
	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB
AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA (high)	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)
AA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AA	AA	AA	AA	AA
AA (low)	AAA	AAA	AAA	AAA	AAA	AAA	AA (high)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)
A (high)	AAA	AAA	AAA	AAA	AAA	AA (high)	AA	A (high)	A (high)	A (high)	A (high)	A (high)
A	AAA	AAA	AAA	AAA	AA (high)	AA	AA (low)	A	A	A	A	A
A (low)	AAA	AAA	AA (high)	AA	AA	AA (low)	A	A (low)	A (low)	A (low)	A (low)	A (low)
BBB (high)	AA (high)	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)
BBB	AA	AA	A (high)	A	A	A (low)	BBB (high)	BBB	BBB	BBB	BBB	BBB
BBB (low)	AA (low)	AA (low)	A	A (low)	A (low)	BBB (high)	BBB	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)
BB (high)	A	A (low)	BBB (high)	BBB	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)
BB	A (low)	BBB (high)	BBB	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB	BB	BB	BB
BB (low)	BBB (high)	BBB (high)	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB	BB (low)	BB (low)	BB (low)	BB (low)
B (high)	BBB (high)	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB	B (high)	B (high)	B (high)	B (high)
B	BBB (high)	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB (low)	B (high)	B	B	B
B (low)	BBB	BBB	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB (low)	B	B (low)	B (low)	B (low)
CCC (high)	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB	B (high)	B	CCC (high)	CCC (high)	CCC (high)
CCC	BBB	BBB (low)	BB (high)	BB (high)	BB (high)	BB (high)	BB	B (high)	B (low)	CCC (high)	CCC	CCC
CCC (low)	BBB	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB (low)	B (high)	B (low)	CCC (high)	CCC (low)	CCC (low)

### Strong Legal Framework

Issuer Rating	Cover Pool											
	AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB
AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
AA (high)	AAA	AAA	AAA	AAA	AAA	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)
AA	AAA	AAA	AAA	AAA	AA (high)	AA	AA	AA	AA	AA	AA	AA
AA (low)	AAA	AAA	AA (high)	AA (high)	AA	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)
A (high)	AAA	AAA	AA (high)	AA	AA	AA (low)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
A	AAA	AA (high)	AA	AA (low)	A (high)	A	A	A	A	A	A	A
A (low)	AA (high)	AA	A (high)	A	A	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
BBB (high)	AA	A (high)	A	A (low)	A (low)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)
BBB	A (high)	A (low)	A (low)	BBB (high)	BBB (high)	BBB	BBB	BBB	BBB	BBB	BBB	BBB
BBB (low)	A	A (low)	BBB (high)	BBB	BBB	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)
BB (high)	BBB (high)	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)
BB	BBB	BBB (low)	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB	BB	BB	BB	BB
BB (low)	BBB	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)
B (high)	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)
B	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB (low)	B (high)	B	B	B	B	B
B (low)	BBB (low)	BB (high)	BB (high)	BB	BB	BB (low)	B (high)	B (low)	B (low)	B (low)	B (low)	B (low)
CCC (high)	BB (high)	BB (high)	BB (high)	BB	BB (low)	BB (low)	B	B (low)	CCC (high)	CCC (high)	CCC (high)	CCC (high)
CCC	BB (high)	BB (high)	BB	BB	BB (low)	B (high)	B	CCC (high)	CCC	CCC	CCC	CCC
CCC (low)	BB (high)	BB (high)	BB	BB (low)	BB (low)	B (high)	B (low)	CCC (high)	CCC	CCC (low)	CCC (low)	CCC (low)



### Adequate Legal Framework

		Cover Pool											
		AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB
Issuer Rating	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
	AA (high)	AAA	AAA	AAA	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)
	AA	AAA	AAA	AA (high)	AA (high)	AA	AA	AA	AA	AA	AA	AA	AA
	AA (low)	AAA	AA (high)	AA	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)
	A (high)	AAA	AA (high)	AA	AA (low)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
	A	AA (high)	AA	A (high)	A	A	A	A	A	A	A	A	A
	A (low)	AA	A (high)	A	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
	BBB (high)	A (high)	A (low)	A (low)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)
	BBB	A (low)	BBB (high)	BBB (high)	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
	BBB (low)	A (low)	BBB (high)	BBB	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)
	BB (high)	BBB	BBB (low)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)
	BB	BBB (low)	BB (high)	BB (high)	BB (high)	BB	BB	BB	BB	BB	BB	BB	BB
	BB (low)	BBB (low)	BB (high)	BB (high)	BB	BB	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)
	B (high)	BB (high)	BB (high)	BB	BB	BB (low)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)
	B	BB (high)	BB (high)	BB	BB (low)	BB (low)	B (high)	B	B	B	B	B	B
	B (low)	BB (high)	BB (high)	BB	BB (low)	B (high)	B (high)	B (low)	B (low)	B (low)	B (low)	B (low)	B (low)
CCC (high)	BB (high)	BB	BB (low)	BB (low)	B (high)	B	B (low)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	
CCC	BB (high)	BB	BB (low)	B (high)	B (high)	B	CCC (high)	CCC	CCC	CCC	CCC	CCC	
CCC (low)	BB (high)	BB	BB (low)	B (high)	B	B (low)	CCC (high)	CCC	CCC (low)	CCC (low)	CCC (low)	CCC (low)	

### Modest Legal Framework

		Cover Pool											
		AAA	AA (high)	AA	AA (low)	A (high)	A	A (low)	BBB (high)	BBB	BBB (low)	BB (high)	BB
Issuer Rating	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
	AA (high)	AAA	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)	AA (high)
	AA	AA (high)	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
	AA (low)	AA	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)	AA (low)
	A (high)	AA (low)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)	A (high)
	A	A	A	A	A	A	A	A	A	A	A	A	A
	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)	A (low)
	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)	BBB (high)
	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
	BBB (low)	BBB	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)	BBB (low)
	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)	BB (high)
	BB	BB (high)	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
	BB (low)	BB	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)	BB (low)
	B (high)	BB	BB (low)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)	B (high)
	B	BB (low)	B (high)	B	B	B	B	B	B	B	B	B	B
	B (low)	BB (low)	B (high)	B	B (low)	B (low)	B (low)	B (low)	B (low)	B (low)	B (low)	B (low)	B (low)
CCC (high)	BB (low)	B (high)	B (low)	B (low)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	CCC (high)	
CCC	B (high)	B	B (low)	CCC (high)	CCC (high)	CCC	CCC	CCC	CCC	CCC	CCC	CCC	
CCC (low)	B (high)	B	B (low)	CCC (high)	CCC (high)	CCC	CCC (low)	CCC (low)	CCC (low)	CCC (low)	CCC (low)	CCC (low)	

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