

Methodology

*Rating Canadian Home Equity Lines
of Credit (HELOCs)*

APRIL 2009



Insight beyond the rating.

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Introduction

Lines of credit are an important component of consumer credit in Canada, with approximately \$416 billion outstanding as of the end of 2008. Consumer lines of credit can be classified as secured or unsecured, depending on whether a security is pledged to the lender to obtain the credit. Credit cards are a common example of an unsecured line of credit. For secured lines of credit, commonly accepted collateral includes personal property, investments, bank account holdings, insurance policies and real estate. The most common secured line of credit is a home equity line of credit (HELOC), which provides the lender with a residential property as security and the borrower the flexibility and convenience of a line of credit for purposes such as home improvement or other large household needs at a rate more favourable than an unsecured line of credit.

HELOCs are gradually becoming a significant financing tool for consumer credits in Canada as financial institutions offer customers more borrowing options. Therefore, DBRS has developed a comprehensive approach to rating HELOC transactions. The methodology considers the key characteristics of HELOC receivables and their corresponding risk metrics, together with the various structural features inherent in HELOC securitizations. As structural innovations continue to evolve, along with origination and servicing practices, DBRS will continue to refine and adjust its criteria to better serve the needs of market participants.

While this methodology focuses on HELOC, DBRS uses a similar analytical approach to evaluate all types of secured line of credit transactions, due to the availability of underlying collateral to support the borrower's obligation to repay the loan.

This methodology is part of DBRS's continued effort to provide market participants with insight into the rationale behind DBRS's rating opinions.

Characteristics of a HELOC

A HELOC is a line of credit that is secured by a residential mortgage, effectively a hybrid of a mortgage credit and a consumer credit. To be more precise, it is a line of credit supported by the equity in the underlying property should the borrower default.

TERMS AND PAYMENTS

HELOC products can be categorized according to their terms of maturity: definite or indefinite.

Definite Term

This type of HELOC has a predetermined maturity date (full repayment date) that is preceded by two periods: the draw period followed by the amortization period. During the draw period, borrowers can increase their indebtedness by drawing up to the credit limit or decrease their indebtedness by repaying the principal at any time. The draw period can range from three to ten years, during which the minimum payment requirement is interest only (IO) and no repayment of the principal is required. Once the amortization period begins, the borrower is no longer permitted to make draws on the HELOC and the outstanding amount drawn is required to be amortized and fully repaid at the end of the term.

The structure of a HELOC with a definite term is similar to an IO principal mortgage (IOP mortgage), which, after the IO period expires, requires the borrower to pay down the outstanding principal by the end of the mortgage term. Because of the non-amortizing nature of the mortgage principal during the IO period, borrowers with IO loans largely rely on rising home values (i.e. the equity build-up over the loan principal amount) in this period to assist in the repayment of the loan, likely through a refinancing, when the amortization period begins during which substantially higher periodic payments of interest and principal are required.

Indefinite Term

A HELOC without a predetermined amortization period is payable on demand. Generally, the contractual terms allow the borrowers to draw and repay the amount for an indefinite period (revolving period) as long as the account is in good standing and the outstanding balance is within the credit limit. The revolving and payable-on-demand nature is similar to the features of credit cards.

This type of HELOC usually has a floating interest rate that is charged daily on the outstanding balance, based on the bank prime rate (with or without a premium), and provides borrowers the flexibility of making monthly payments as low as the interest amount and principal repayments without prepayment penalties. A HELOC with an indefinite term also permits frequent draws, up to a predefined credit limit.

Most HELOC products offered in Canada fall into this category. They are underwritten by traditional financial institutions as a substitute for regular amortizing mortgages to prime borrowers with high credit scores. This allows the borrowers to take advantage of the current relatively low interest rates to minimize monthly payments and increase affordability or to extract the equity embedded in the underlying properties. Therefore, HELOCs in Canada generally have higher credit limits, more flexible payment terms and more favourable borrowing rates than many other kinds of consumer credit.



CREDIT LIMIT

The credit limit on a HELOC is set according to the property value and the loan to value (LTV) of the property, which takes into account the lien of the HELOC lender and any other liens with priority on the property. Due to the large value of the real estate property, HELOCs often have larger credit limits than other secured or unsecured lines of credit. Consequently, the potential loss to the HELOC lender could be significant upon the borrower's default if there has been a decline in the value of the secured property. To manage such risk, HELOC lenders periodically reassess borrowers' property values and risk profiles. As home equity mitigates the loss to the HELOC lender, prudent property value assessment is crucial in determining a HELOC credit limit, along with taking into consideration all other liens on the property that rank senior to the lender. In Canada, the maximum HELOC credit limit is 80% LTV (all liens combined) if there is no mortgage insurance on the underlying property, consistent with the requirements of the Bank Act for a conventional (uninsured) mortgage.

An insured HELOC is available with a maximum credit limit of 95% LTV. However, an insured HELOC is not the most economical option as the mortgage insurance premium must be paid on the maximum potential LTV amount, regardless of whether the actual amount drawn is at the limit.

HELOCs IN CANADA AND THE UNITED STATES

As discussed above, HELOC products in Canada offer flexibility to borrowers because the required monthly payments can be as low as IO (payment holidays or negative amortization is allowed in limited circumstances) without any principal repayments as long as the amount drawn is within the authorized limit and the account is in good standing. Borrowers are also permitted to repay any amount drawn at any time without any prepayment penalties. This flexibility allows borrowers to manage their cash flows better, reduces the likelihood of a borrower default and makes HELOCs an appealing alternative to conventional mortgage lending. HELOC products are also more profitable for the lender than regular floating-rate mortgages, where historically discounted interest rates have been offered to prime borrowers.

The LTV limit, the mostly first-lien borrowing, the payment flexibility and the floating interest rates make HELOC products in Canada typically only available to prime borrowers as cash management tools. Because of these characteristics, HELOC products in Canada are more comparable with payment-option adjustable-rate mortgage (option ARM) products in the United States, which were initially intended for and marketed to well-heeled, financially sophisticated homeowners before they morphed into affordability products for near-prime and sub-prime borrowers.

As mortgage interest is tax deductible in the United States, the higher the mortgage amount, the more deductions the borrower can use, leaving the borrower little incentive to accumulate and retain equity in the property. Therefore, until recently, HELOC products in the United States were mostly underwritten either as refinancing substitutes for first-lien mortgages to maximize the borrowed amounts or as second-lien loans (piggybacks) with definite amortizing terms and a combined LTV greater than 80%, in lieu of obtaining mortgage insurance. These second-lien HELOCs usually have higher interest rates than the first-lien mortgages, with a premium that is similar to the mortgage insurance premiums, which, until recently, were not tax deductible.



The DBRS Rating Process

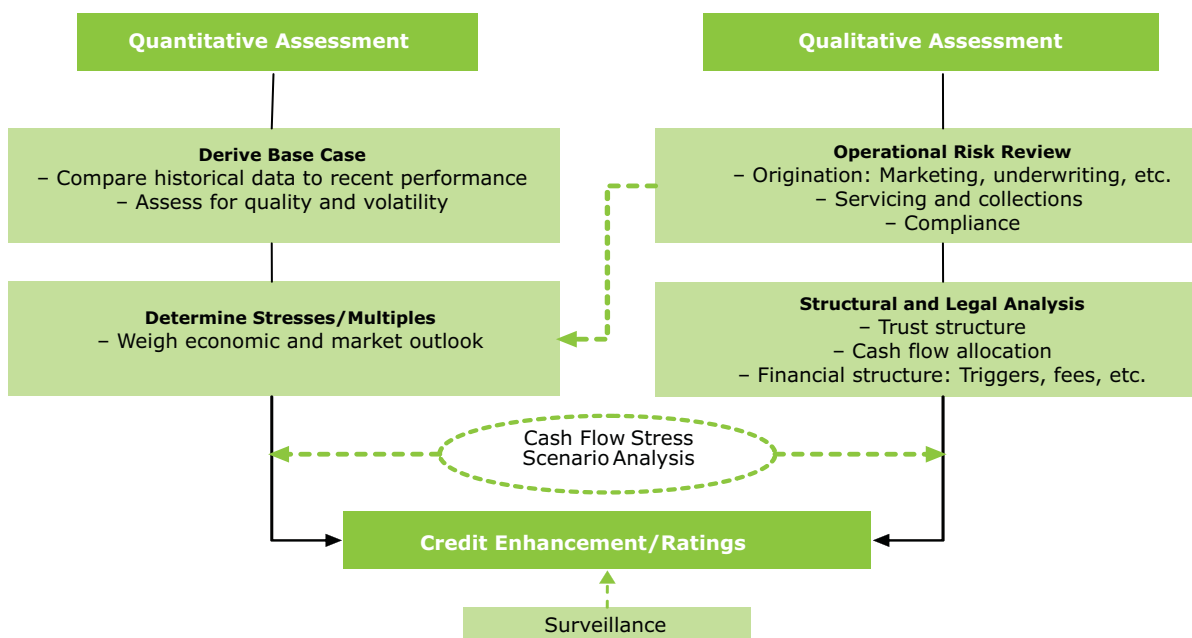
DBRS applies a qualitative and quantitative approach to rating transactions backed by HELOC receivables (see Figure 1). The approach includes a thorough evaluation of the various elements of the transaction, including the following:

- Quality of the seller and underwriting.
- Quality of servicing capabilities.
- Legal requirements and opinions.
- Transaction structure, proposed ratings and credit enhancement.
- Performance of the underlying assets.
- Cash flow analysis.

DBRS tests the viability of each transaction’s proposed capital structure and credit enhancement through the combination of cash flow and vintage performance analyses. Scenarios are tested for each class of debt, with higher rated classes subjected to successively more severe assumptions. Each rating assigned by DBRS represents an opinion regarding the likelihood of full repayment of principal and interest on the notes according to the terms of the notes. For HELOC receivables transactions, these terms typically include the timely payment of interest and complete repayment of principal by the legal final maturity date, which may occur well after an expected payment date. Many investors evaluate their investment decisions in terms of an expected payment date and should be aware that DBRS ratings only address the legal final maturity date.

DBRS often assigns a provisional rating prior to the transaction’s closing date, which signifies its initial opinion regarding the likelihood of repayment given the initial structure proposed. After DBRS reviews the final details of the transaction, such as the pricing of the notes (cost of funds) and the final transaction documentation, DBRS completes its evaluation and the rating is finalized.

Figure 1: DBRS Rating Process for Canadian HELOC Transactions





SELLER/ORIGINATOR

A key aspect of DBRS's analysis is the assessment of the quality of underwriting and account origination done by the seller. To mitigate potential losses, lenders must have good systems in place to evaluate the borrowers. A review of the underwriting philosophy and process provides insight into the operations and the approach that is taken to reduce losses and is a practical way of determining whether portfolio performance is likely to be comparable with other lenders with similar underwriting practices in the marketplace. For example, in most cases, amounts can be drawn at any time up to the credit limit as long as the account is in good standing. Thus, the full amount of the HELOC limit could be drawn before the lender is aware the borrower cannot make any payments or has become delinquent, thereby increasing the potential severity of the loss on the loan. If there are inherent limitations on the lender's technology, personnel or management, it presents a significant concern should portfolio performance deteriorate rapidly.

SERVICER

For HELOC securitization transactions in Canada, the seller is typically also the servicer. DBRS places emphasis on the review of servicers because the efficiency and effectiveness of collection systems have a significant impact on the performance of receivables. The payment flexibility of HELOCs poses additional challenges for servicers as cash flows are difficult to predict. For instance, the amount of collections could potentially change significantly each month, ranging from the minimum payments of IO to substantial principal repayments.

Technology plays a crucial role in servicing and can be a major competitive advantage given the large number of accounts to be serviced. Similar to account origination, many servicers now use behavioural scoring models and other analytics to evaluate delinquent accounts in order to optimize collection efforts. Servicers who can efficiently deploy resources for collections will ultimately reduce the losses.

Servicers also manage the recovery process of the defaulted accounts. Most servicers rely on a combination of internal collections, outside collection agencies and legal channels (including foreclosure) in their collection work. The timeline of the foreclosure process varies depending on the province and is affected by two main factors: the provincial legal requirements (judicial sale or power of sale) and the strength of the housing resale market. The foreclosure of a property requires the servicer to manage different legal approaches in various jurisdictions, and the servicers may have no control over the ultimate timelines. For example, during good or normal economic periods, the timeline can range from a few days to several months, but during economic downturns, it can be stretched to a full year, with properties in some smaller communities experiencing even longer time frames.

DBRS has published an approach to evaluating residential mortgage servicers in Canada that assesses the following areas: company structure and management experience; asset administration, reporting and customer service; loss management; technology and systems; financial condition; staff and training; procedures and controls; and outsourcing and sub-servicing arrangements. Please refer to *Canadian Residential Mortgage Servicer Evaluations: DBRS's Approach* at www.dbrs.com for more details.



LEGAL REQUIREMENTS AND OPINIONS

For HELOC receivables transactions, similar to regular mortgages, DBRS requires legal assurances (by way of legal opinions) that the sale of the receivables from the seller to the special-purpose entity (SPV or the Trust) issuing the notes constitutes a “true sale” and that the subsequent grant by the Trust of a security interest in the receivables to the indenture trustee (on behalf of the noteholders) has been perfected in all applicable jurisdictions. DBRS reviews legal opinions to determine whether the transfer of the receivables to the Trust (the Transfer) constitutes a true sale such that the assets of the Trust would not be consolidated with those of the seller in the event of the seller’s bankruptcy (i.e., it is bankruptcy remote from the claims of the seller’s creditors) and also to ensure that the indenture trustee has a perfected security interest in the purchased assets that secure the Trust’s obligations to the noteholders.

Notice and Perfection

Except for in Québec, Personal Property Security Act (PPSA) legislation in Canada does not cover interests in the real properties that support HELOCs. Instead, a mortgage filing in the local land title registry office is required in order for the Transfer to be considered a legal assignment and enforceable against third parties. This could be impractical with large or revolving receivables pools. For this reason, an irrevocable power of attorney should be granted by the originator/seller in favour of the SPV in securitizations that involve real property. The power of attorney will allow the SPV to effect a transfer of the mortgage in the related registry or land titles office without the co-operation of the originator. If the originator has an investment-grade credit rating, DBRS may temporarily waive this requirement. If the originator has insufficient credit strength, does not have an investment-grade rating or falls below investment grade, DBRS usually requires that mortgages be re-titled in the name of a nominee or third-party custodian in order to protect against the risk of the originator going bankrupt and the mortgages remaining in its name.

In Québec, in the absence of a universality of claims (a legal concept under the Québec Civic Code), perfection of a security interest requires notification to the individual HELOC borrowers, in addition to the mortgage re-registration of title. The notification is usually triggered when the originator is downgraded below investment grade.

Please refer to the commentary *Québec Perfection: Sale of Receivables* at www.dbrs.com for more details.

Registration

Because land has a title registry in all jurisdictions in Canada, all mortgages are registered in the land registry system. Usually these mortgages are registered in the name of the originator and continue to be registered in that name, even when sold to an SPV. In some instances, the originator or seller registers the mortgages in the name of a third-party custodian, an entity that is remote from the originator or seller, upon inception of the mortgage. If that is the case, the mortgages should not be subject to a stay-of-court proceedings upon a bankruptcy of the seller (in which a court would be asked to declare that the mortgage receivables officially belong to the SPV and to release them from the seller’s estate) as legal title to the mortgages is already registered in a name other than that of the seller. Provided that a legal opinion is given that indicates the sale of the interest in the mortgages to the SPV is bankruptcy remote, the creditors of the seller would have no right to claim against the mortgages. In all provinces, although not a requirement for perfection of the receivables or claim, there is an additional step that may be required to allow the SPV to enforce the mortgages. That step is a registration in the land registry office to evidence the transfer of the mortgage to the SPV. This step may be required where the underlying obligor of the mortgage has defaulted on its monthly payments and the owner of the mortgage intends to enforce the security to be repaid, which may not be possible or practical if the mortgage remains in the name of the seller (even if it is servicing on behalf of the Trust).



In the absence of a bankruptcy of the seller, the securitization documentation usually provides for a power of attorney so that the particular mortgage can be re-registered and/or enforced by the SPV. In the event of a bankruptcy of the seller, if the registration in the land registry has not been updated to reflect a transfer to the SPV, the ability of the SPV to enforce a defaulted mortgage (or any mortgage, for that matter) may be subject to a stay-of-court proceedings so no steps can be taken until a court allows it. However, assuming the elements of a true sale are present (as evidenced by the legal opinion mentioned above) and, with respect to Québec, perfection has been achieved, that stay should eventually be lifted by a court to allow re-registration and enforcement of the mortgaged properties by the SPV. If a registration is made at the land registry reflecting the transfer to the SPV prior to a bankruptcy of the seller, enforcement on that property would not be subject to a stay of proceedings in the event of the seller's bankruptcy. Similarly, the collections or regular payments made by an obligor would not be subject to a stay if a true sale has occurred and, in Québec, perfection has been achieved as long as no commingling of the payments with other assets of the seller occurs.

To address the risk when legal title remains in the name of the seller and was not re-registered upon the sale of the mortgages to the SPV, DBRS generally requires the completion of re-registration of title within 30 to 60 days once the seller falls below investment grade. If the seller does not have a credit rating, there must be other measures taken to mitigate the above risks, such as having financial strength tests or a sufficient reserve to cover stay risk.

Registration of the transfer of legal title to the mortgages and notice to the borrowers of the sale, assignment and transfer of the mortgages and the related security could also be required (1) by law; (2) by an order of a court of competent jurisdiction; or (3) by a regulatory authority that has jurisdiction over the seller.

Please refer to *Legal Criteria for Canadian Structured Finance* at www.dbrs.com for more details.

Foreclosure and Recourse

Similar to regular mortgages, HELOC receivables that remain delinquent for more than 90 days are considered to be in default. At this point, the servicer could recover outstanding debt by starting legal proceedings of foreclosure through either power of sale or judicial sale. Power of sale allows a lender to sell the property without the involvement of the court. The lender has the right to sell the property according to the mortgage document and/or provincial legislation that authorizes power of sale in that province. This is the lender's primary recovery method for mortgages in Newfoundland, New Brunswick, Prince Edward Island and Ontario and is usually faster and less costly than a judicial sale. A judicial sale is a sale conducted under the supervision and authority of the court, where the court is extensively involved and a lender must apply to the court to get the court's permission to sell the property. This is the primary debt recovery approach for mortgages in British Columbia, Alberta, Saskatchewan, Manitoba and Québec. The actual judicial sale procedures vary by province. In Nova Scotia, the primary recovery process for mortgages is a mix of the two practices but is considered judicial as the court is involved.

Except for in Alberta, where legislation dictates that a borrower is not personally liable for any deficiency amount on a secured loan (it is a non-recourse loan), HELOC lenders in all other jurisdictions in Canada can pursue creditor-friendly options (such as wage garnishment) for any loan deficiency remaining after the mortgage is enforced, thanks to the personal covenants provided by the borrowers at the HELOC origination. In provinces that have power-of-sale legislation, a lender seeking a deficiency judgment must start an action against the borrower after the property has been sold. In provinces that use the judicial sale procedures, the deficiency judgment is part of the foreclosure proceedings against the borrower. Loss mitigation techniques, such as short sales or non-recourse loans with higher rates, are rarely used in Canada.



TRANSACTION STRUCTURE

Trust Structure (Master Trust)

Most HELOC securitizations in Canada use a master trust structure, which provides the flexibility of issuing multiple series of notes all secured by the same collateral pool or the ability to purchase discrete collateral pools (silos) associated with separate series of notes. This is achieved by the conveyance of a pool of eligible HELOC accounts to a custodian to be held as assets backing any subsequent sale of co-ownership interests in the conveyed pool (a co-ownership) or by the sale and transfer of a discrete pool of HELOC loans to the Trust (a discrete purchase). The co-ownership structure, similar to that used in credit card securitizations, is generally used for HELOC products with indefinite terms as it suits the revolving nature of the underlying accounts. A discrete purchase, on the other hand, is mostly used for HELOC products with definite terms as they are similar to regular mortgages, with definite maturity dates. Consequently, investors can be exposed to the seller's entire managed receivables portfolio or only to discrete asset pools, depending on the trust structure.

In Canada, master trust structures typically issue senior and subordinated classes of notes simultaneously (vertical classes) in order to achieve desired levels of credit enhancement. The credit support for vertical classes needs to be reassessed and can be adjusted for each new issuance, regardless of whether it is a co-ownership or a discrete purchase structure. The maturity date of subordinated notes in vertical classes is the same as the senior notes.

Eligibility Criteria

The documentation for each transaction defines the eligibility criteria for the types of accounts and assets that are permitted to be used as collateral for the notes. The requirements can be extensive and may vary by transaction, but they typically include the following for transactions in a co-ownership structure:

- (1) The account is secured by real estate.
- (2) The account is in existence and maintained by the seller.
- (3) The account is denominated and payable in Canadian dollars.
- (4) The obligor is not subject to any voluntary or involuntary bankruptcy or insolvency proceeding to the best of the seller's knowledge.
- (5) The obligor has a billing address located in Canada.
- (6) The seller has good and marketable title of the receivable, free and clear of all liens in favour of persons claiming through or under the seller.
- (7) The receivable will at all times be the legal, valid and binding payment obligation of the obligor.
- (8) The receivable (or mortgage) is not subject to any right of rescission, set-off (other than equitable rights of set-off), counterclaim or other defence available to the obligor, other than defences arising out of laws affecting the enforcement of creditors' rights generally.
- (9) The underlying mortgage contains all standard terms and conditions generally contained in mortgages originated by the seller to secure HELOC accounts and contains no restriction on assignability on the part of the seller.



(10) The underlying mortgage constitutes a valid charge, mortgage or hypothec in favour of the seller, as mortgagee, against such property, subject, in either case, only to liens that do not in the aggregate materially impair the marketability of the property mortgaged nor the value of the security constituted by the mortgage.

(11) The underlying property is a freehold interest in real property located within any province or territory of Canada (a) whose mortgage registration is not governed by the federal laws of Canada and (b) that is zoned residential.

(12) The seller is named as mortgagee or hypothecary creditor under policies of fire and all perils insurance for not less than the full replacement value of the buildings situated on the property mortgaged.

(13) The mortgage has not been extended or otherwise modified, except in the ordinary course of business of the originator.

(14) The mortgage has an LTV limit.

For discrete purchases, the criteria could be less stringent based on the needs of the seller and/or investors, generally resulting in higher credit enhancement.

Typically, the seller will provide a representation and warranty to repurchase ineligible assets. A seller without strong financial wherewithal could face difficulty meeting such a repurchase obligation if there is a large amount of ineligible assets due to a lax or compromised underwriting standard.

Servicer Termination Events

Standard servicer termination events incorporate the following:

- Failure to make payments when due.
- Failure to perform or observe covenants.
- Untrue representation and warranty.
- Bankruptcy or insolvency.

These triggers are designed to provide investors with the option of replacing the initial servicer should it fail to meet its servicing requirements and the issues are not cured within any applicable grace period. Performance related triggers are not included as servicer termination events because they have already been included as early amortization triggers and it is unlikely that a replacement servicer could implement new servicing procedures that would outperform those already in place within the seller's operation.

A requirement of maintaining at least an investment-grade rating or acceptable evaluation by DBRS is also common for the servicer in Canadian HELOC transactions. Depending on the terms of the transaction, failure to maintain at least one of these requirements could trigger a servicer termination event.

Amortization Period

The notes can be repaid through gradual amortization during the ordinary course or with one bullet payment on the expected maturity date. For the latter, a soft bullet structure will allow an amortization period to begin if the notes are not fully repaid on the expected maturity date. At this point, collections are used to pay down the notes monthly until the earlier of the full repayment of the notes or the legal final maturity date. The soft bullet mechanism may also affect other series of notes with respect to cash flow allocations if a co-ownership structure is in place.



Early Amortization Period

Some transactions include covenants in the structures, referred to as early amortization triggers, to protect investors. Breaches of these triggers (if not cured within any applicable grace period) would result in the onset of the amortization period earlier than scheduled or expected. These triggers include, but are not limited to, the following:

- Insolvency of the seller.
- Failure of the seller to perform or observe covenants, breaches of representations and warranties or other default of the seller.
- Failure to pay timely interest or principal on any series of notes when due.
- The occurrence of a servicer termination event.
- Breach of a performance or minimum required amount trigger.

Swaps

A potential interest rate mismatch exists if the notes have a fixed coupon rate and the receivables generate a floating yield. As such, the Trust may enter into a swap agreement to mitigate the potential risk. Depending on the details of the agreements, a fixed-floating interest rate swap may be considered (1) effective; (2) beneficial, but not sufficiently effective; or (3) immaterial for the consideration of appropriate credit protection for the notes. If sufficient excess spread is generated from the receivables, a swap may not be required to mitigate the fixed-floating rate mismatch exposure as potential spread compression is incorporated into DBRS's stress scenario analysis. This determination is made on a case-by-case basis.

Some transactions may use other forms of swap agreements, such as cross-currency interest rate swaps, which are required if the receivables and the notes are denominated in different currencies. Some transactions may have swaps in place to mitigate potential negative carry during accumulation periods. In addition, the seller, which could be the swap counterparty, might arrange a fixed-floating swap if it believes it will be beneficial under the current interest rate environment.

Swap counterparties, either the seller or a third-party provider, must meet and maintain a minimum credit rating threshold or the swaps will not be considered for credit enhancement determination.

Commingling

The commingling of funds occurs when the seller, acting as servicer, blends receivables collections for a particular securitization transaction with its general funds that are not related to the securitization. Commingling allows remittance to investors to be carried out on a monthly, or even less frequent, basis rather than daily. DBRS usually permits the commingling of funds by the seller/servicer until the next settlement date of the transaction as long as the seller maintains an investment-grade rating, consistent with the criteria for residential mortgage transactions.

Should the seller be removed as servicer or the seller's rating fall below the required minimum rating threshold, the allowable commingling period would be reduced to two business days or less or a third-party servicer would be required to handle the collections without any possibility of commingling with the seller's other funds. The potential large cash collections from HELOC receivables make short commingling periods essential when the seller's financial condition weakens in order to protect the investors.



Co-Ownership Interest (Non-Discrete Purchase)

As most HELOC products in Canada are underwritten with indefinite terms and allow the borrowers to make frequent draws and repayments like credit cards, the co-ownership structure is used for related securitization transactions. The seller is typically also the servicer in a co-ownership structure.

DBRS believes this to be a positive connection, as the seller/servicer's interest is largely aligned with the investors' interests. For example, the seller maintains investments in the receivables through the seller's co-ownership interest and the receivables that are not conveyed to the Trust but remain on the seller's balance sheet. The seller/servicer also expends considerable resources to actively manage the accounts (and the corresponding receivables) in order to promote consistent and robust levels of profitability as excess spread is returned to the seller/servicer after the obligations for the investors are met. Such interest alignment may be weakened in a discrete purchase structure if the seller is not the servicer and excess spread, instead of being released back to the seller, is securitized and sold to investors.

Seller's Interest

Separate co-ownership interests are established for each series of notes issued by the Trust, with the seller retaining a co-ownership interest (Seller's Interest) in the balance of receivables that are not offered to the investors. Thus, there are at least two co-ownership interests in a master trust structure: the Seller's Interest and the Trust's interest. The latter is represented by the outstanding notes issued by the Trust. There could be more than one co-owner in addition to the Trust. The Seller's Interest is the difference between the balance of the receivables in the conveyed pool and the Trust's interest plus any other co-owner's interests.

There is a required minimum Seller's Interest based on the notes outstanding. The minimum Seller's Interest exists to mitigate potential fluctuations in the balance of the receivables supporting the notes. These fluctuations are due to repayments and/or draws by the borrowers. Except for the minimum Seller's Interest described above, whose related cash flows are allocated to the Trust first, the Seller's Interest in excess of the minimum required amount ranks *pari passu* with the Trust's interest in terms of monthly cash flow allocations, thereby aligning the interests of the seller and the Trust.

When the Seller's Interest falls below the minimum required level, the seller must provide the Trust with additional receivables to restore the required Seller's Interest amount. If the minimum level is not restored or maintained, an early amortization event will be triggered and the notes will begin amortizing. Although the required minimum Seller's Interest is generally not considered part of credit enhancement, the related cash flows are available to the Trust for credit support.

Addition and Removal of Accounts

A co-ownership structure typically permits the addition and/or removal of certain accounts to and from the pool of receivables conveyed to the Trust, subject to certain criteria. Additional accounts might be added in order to meet the minimum Seller's Interest requirement or to provide for additional issuance of notes. The addition of accounts to the Trust's portfolio is usually subject to a cap or limit and may have other conditions that must be satisfied. The caps or limits are generally measured over three-month and 12-month periods in terms of both the number of accounts and the dollar value of the receivables added, unless the rating agency confirms that such increase will not adversely affect the rating(s) of the outstanding notes. Similarly, account removals are permitted as long as an early amortization event does not occur as a result of the account removal. The addition or removal of accounts is generally subject to the rating agency confirming that this action will not adversely affect the rating(s) of the outstanding notes. This requirement is in place to protect against adverse selection, which might materially alter the credit quality or composition of the Trust's portfolio of assets.



Revolving Period

To maintain a bullet payment at note maturity without gradual amortization over time, the co-ownership structure uses a revolving period, during which interest is paid to investors while principal payments received on the collateral are used to purchase new receivables instead of paying down the notes. This ongoing purchase mechanism serves to reduce prepayment of principal to investors and enables the use of long-term financing for revolving receivables. The revolving period has a definite term and may be prematurely discontinued by an early amortization event. Similar to credit card transactions, the principal collections that may otherwise be allocated to a series in the revolving period may be re-allocated to other series of notes that are in an accumulation period.

Controlled Accumulation and Controlled Amortization Periods

To facilitate predictable principal repayments to investors, a co-ownership structure generally has a controlled accumulation and/or controlled amortization period after the revolving period ends. During these periods, principal collections from the receivables are either distributed to the investors in agreed-upon amounts (controlled amortization period) or are accumulated in a trust account until the expected maturity date (controlled accumulation period) and used to repay the notes with a hard bullet payment. The length of these periods will depend on the principal payment rate of the receivables. Subject to the provisions of transaction documents, the length of the accumulation period can be reduced if it is determined that sufficient principal collections can be collected in less time than initially expected for a hard bullet payment on the maturity date.

Priority of Payments (Waterfalls)

Collections from the receivables are identified as either principal or finance charges. The finance charge component is used to cover the expenses of the Trust, interest on the notes and written-off receivables. The principal component is reinvested in new receivables, paid to the investors or accumulated for a bullet payment, depending on the status of the transactions.

Finance charges, principal collections and receivables write-offs are allocated pro rata between the Seller's Interest and the Trust's interest. The pro rata share of the Trust's interest is determined by the aggregate amount of notes outstanding divided by the balance of the receivables conveyed to the Trust. Subsequently, the Trust's share of collections is divided among each series of notes issued by the Trust. In general, finance charges and principal collections can be shared and re-allocated among each series of notes. For example, excess finance charges not needed by one series may be re-allocated to another series for any shortfalls in interest on the notes, excess write-offs or restoration of any previous writedowns of note principal.



CREDIT ENHANCEMENT AND EVALUATION

The following are common forms of credit enhancement for HELOC securitization transactions.

Excess Spread

Excess spread is the difference between the asset yield and the sum of funding costs, credit losses, servicing expenses (if applicable) and other fees. In HELOC transactions, excess spread can be a key component of credit enhancement as it is an additional cushion to withstand delinquencies and cash flow shortfalls and is the first line of defense for credit losses. Excess spread can be viewed as internal support or liquid support for a securitization transaction. When excess spread occurs at the bottom of the waterfall, it can either be retained in a cash account or be released back to the seller, depending on the transaction structure and/or asset performance. Excess spread can be shared and re-allocated among each series in a co-ownership structure or be only available to a specific series of notes in a discrete purchase.

Cash

Like other asset-backed securitizations, HELOC transactions can include a cash collateral account (CCA). This account may be funded at closing or structured to build up if excess spread levels fall below certain thresholds. There could be different cash accounts specifically designated for different classes of the same series of notes. The required or minimum CCA balance is generally tied to the initial note balance of the series. The use of a CCA in transactions as credit enhancement can vary and may not be included in some transactions. A CCA is usually series-specific and can also potentially be class-specific within a series. If there are draws on the CCA, these amounts can usually be restored from excess spread in the following periods.

Subordination

Many HELOC securitizations in Canada to date have a senior-subordinated note structure (subordination). Subordinated notes are generally not repaid until senior notes are repaid in full. Therefore, subordinated notes provide credit support for the senior notes by absorbing losses up to the subordinated principal amount and allowing the senior notes to have preferential access to the cash flows. In return, the subordinated notes carry a higher coupon rate.

Letter of Credit

Another form of credit enhancement involves the use of a letter of credit from a financial institution that meets DBRS's standard. DBRS's current minimum ratings threshold for an eligible provider with respect to letters of credit is AA (low) and R-1 (middle).

Overcollateralization

Overcollateralization occurs when the amount of receivables the Trust is entitled to is greater than the outstanding balance of the notes. Overcollateralization is different and separate from the minimum Seller's Interest, which is generally not considered to be part of credit enhancement. Upon full repayment of the notes, the overcollateralized assets are transferred back to the seller and become part of the Seller's Interest.

DBRS typically tests the viability of each transaction's proposed capital structure and credit enhancement levels at each proposed rating level through a combination of loan-level analysis, vintage analysis and/or cash flow analysis. Specifically, cash flow modeling techniques evaluate the performance of the collateral and stability of the structure, including gross yield, payment rate, net loss rate, proposed capital structure, priority of payments, trust expenses, cost of funds, interest rate risk and basis risk. Scenarios are tested for each class of debt, with each higher priority class subjected to successively more severe assumptions.



Residential Mortgage-Backed Securities Model and Excess Spread

When HELOC products are structured as mortgage loans, with defined terms for maturity, the discrete purchase structure is typically used for securitization as there are no homogeneous characteristics across loans. As these loans have periods with minimum IO payments and subsequent amortization periods, DBRS believes that they perform closely to IOP mortgages. As such, DBRS will conduct a quantitative evaluation of these HELOC transactions based on loan-level data, using the Canadian residential mortgage-backed securities (RMBS) model, before performing cash flow analysis. For further information on the RMBS model and the related analytics, please refer to the *Canadian RMBS Methodology* found on www.dbrs.com.

If the transaction allows for gradual amortization without any trigger, cash flows are modeled to evaluate the potential excess spread over the life of the transaction. Key factors in the cash flow analysis are described in *Rating U.S. Residential Mortgage-Backed Securities Transactions* on www.dbrs.com and modifications are made for Canadian transactions.

HISTORICAL PERFORMANCE

When a HELOC loan is structured as a revolving credit line, DBRS's quantitative review of securitization transactions begins with a thorough analysis of the historical performance of the underlying assets. DBRS requests extensive data from the originator regarding the variables that affect the portfolio's performance most: monthly payment rates and loss rates. The historical averages of the variables are analyzed along with recent performance to determine any trends that may affect the transaction. The analysis of these performance metrics provides DBRS with a base case assumption that is then evaluated under multiples stress analysis commensurate with the rating categories. These performance metrics are described further below.

Annualized Net Loss Rate

The annualized net loss rate is calculated as the amount written off in a month as a percentage of the amount of receivables outstanding and this calculation is then annualized. The ultimate write-off amount is determined by two variables: default and recovery. The unrecoverable deficiency, which is the difference between the net sales proceeds from the underlying property and the amount required to fully repay the outstanding loan, will be written off as a loss. In addition, HELOC receivables related to borrowers that file for bankruptcy are immediately written off as losses (net of estimated recovery). Volatility, reviews of highest or average metrics and general trends are considered in order to develop an approximation of the performance over time.

Principal Payment Rate

The principal payment rate is equal to the total monthly principal collections received divided by the total receivables balance. Sellers may report payment rates on a total basis (finance charges and principal) and/or on a principal-collected basis. If only total payment rates are reported, DBRS will estimate finance charge components to determine an appropriate base case principal payment rate.

Principal payment rates affect credit enhancement as higher payment rates indicate a faster liquidation of the receivables pool and more funds will be available to repay the investors during the (controlled) accumulation or amortization periods.

During the revolving period of many HELOCs in Canada, monthly principal repayments are generally not required. This results in a lower payment rate than other consumer credits with amortization schedules or with higher minimum payment requirements. The payment rates are affected by several variables, including the credit quality of the obligors, contract terms, general economic conditions, consumer spending and borrowing patterns and the availability of other financing or credit options. HELOC payment rates may fluctuate significantly month to month as there are no penalties or limits on prepayments of amounts drawn. Under a stress scenario, it is assumed that the payment rate will drop precipitously.



CASH FLOW ANALYSIS

DBRS's cash flow analysis incorporates the structural elements of the transaction, including any triggers or covenants that may affect cash flow. For all rating levels, DBRS assumes that a transaction will enter early amortization as early as the sixth month after closing as a result of a breach of a performance trigger due to a decline in the performance of the collateral. In order to determine appropriate credit enhancement, cash flows are assumed to be diverted to repay the outstanding notes rather than being re-invested in additional receivables during the amortization period. The notes must be able to withstand a combination of stresses appropriate for the rating category without any loss of principal or interest.

Having evaluated the historical performance metrics as noted above, DBRS is able to develop a base case for principal payment rates and net loss rates and evaluate the base case under various stress scenarios, based on the desired rating of each class, to determine the ultimate commensurate credit enhancement level (as summarized in Table 1 below).

Table 1: Stress Multiples by Rating Category

	AAA	AA	A	BBB	BB
Principal payment rate (reduction of base case)	35% to 50%	35% to 45%	30% to 40%	25% to 35%	10% to 20%
Annualized net loss rate (multiple of base case)	5x to 10x	4x to 8x	4x to 6x	3x to 4x	1.5x to 2x

The actual multiple used in the analysis will depend on several factors, such as the volatility and trends of the performance history and the credit quality of the borrowers (super-prime, prime or sub-prime). At each rating category, DBRS performs various scenarios to determine the ultimate commensurate credit enhancement level. This is particularly useful for base case variables that may be considered too high or too low or for issuing entities that have significant franchise value.

Time frames to stress variables are compressed in the DBRS scenarios. The analysis begins with base case assumptions in a "normal" period for the first five months, followed by a simultaneous deterioration of losses and payment rates commensurate with the rating category, beginning in the sixth month. The deterioration is assumed to be linear for the next 12 months so that at the end of the 18th month, the respective variables are conservatively stressed and positioned.

Other Considerations

Gross Yield, Cost of Funds and Hedging

The portfolio's gross yield is generated from finance charges, which include all interest charges, service charges and any applicable fees. The interest charged on HELOCs is usually based on the lender's prime rate and is calculated daily on the outstanding balance, without the interest grace periods common for other lines of credit such as credit cards. From a risk-pricing perspective, HELOC lending represents a relatively low risk to the lenders due to the security on the borrower's real property. Consequently, HELOC products usually charge interest rates favourable to the borrowers.

On the other hand, note coupons for HELOC transactions can be either fixed or floating rate. Therefore, there are two potential sources of interest rate risks:

- (1) Mismatch of interest rates between the floating rates charged on the receivables and the fixed-rate note coupons.
- (2) Basis risks from the differences between the indices on which receivables are priced (lenders' prime rate) and the indices on which the floating-rate note coupons are based (banker's acceptances (BAs) or Canadian Deposit Offering Rate (CDOR)).



In addition, there are potential time lags between the interest rate adjustments on the HELOC accounts and the floating-rate note coupon rates.

A common structural solution to appropriately mitigate the fixed-floating rate mismatch is to use external fixed-floating interest rate hedges for the mismatch between the floating-rate assets and the fixed-rate liabilities.

The use of hedges introduces counterparty risk and basis risk as discussed above. DBRS ensures that the hedge counterparty meets a minimum rating threshold, according to DBRS's policy. Basis risk (arising from the difference between the reference rates on the assets, the hedges and/or the coupon rates) can be mitigated through either cost-of-funds interest rate swaps or through the use of additional enhancement by stressing the historical relationship of the indices over long time frames. Another risk introduced by the use of hedges is due to the fact the HELOC borrowers can draw and repay the borrowed amount at any time, creating a fluctuating pool amount (swap notional). DBRS will ensure that the hedge is structured to mitigate this additional risk.

Excess Spread

Excess spread arises when the interest rate earned on the HELOC loans is greater than the sum of expenses and funding costs. In reality, excess spread could be compressed without any deterioration in portfolio performance. For example, the asset yield could be declining as it is based on floating rate while the coupon rates on the notes remain fixed, causing excess spread to decrease if there is no proper hedge in place. Therefore, a mechanism must be employed to ensure that at the minimum, excess spread could not be negative for the duration of the transaction. In most HELOC transactions in Canada, hedging arrangements are used to create a positive excess spread for additional enhancement support (spread lock).

The amount of excess spread available is an important determinant of overall enhancement levels and the forms of enhancement used. This is due to the fact that stressed credit losses will effectively deplete most or all available excess spread, thereby preventing the return of any excess cash to the seller. Excess spread can also replenish the cash account if it has been depleted to cover interest expenses or losses.

Full credit for excess spread is usually not given in the overall enhancement structure as, once released back to the seller, excess spread cannot be accumulated in subsequent months to cover rising interest costs or credit losses when very little or no excess spread is available for accumulation.

Draw Rates

Provided that HELOC accounts do not become delinquent, borrowers are permitted to draw funds up to the maximum credit limit. Given the generally lengthy process of foreclosing on underlying properties that secure HELOCs, it is unlikely to see a rapid increase in losses such that the lenders stop any further draws. It is instead more likely to notice a gradual deterioration in performance as obligors experience financial difficulty such as increasing delinquency and/or declining payment rates. As borrowers are allowed to draw upon their HELOCs up to the maximum LTV permitted under the contractual terms while continuing to make the minimum required payments to keep the accounts current, the lender may not be able to prevent any further draws or decrease the credit limit without changing the terms of the HELOC. Therefore, the lender could potentially be exposed to the maximum credit limit if borrowers encounter financial stress. Accordingly, DBRS modeling assumes a punitive credit amount drawn for every account.



Servicing Fees

Servicing fees are calculated based on the outstanding balance of the total receivables and are further allocated pro rata between the Seller's Interest and the Trust's interest in a co-ownership structure. HELOC receivables can be serviced by the seller or an unrelated third party. The receivables are usually sold on a fully serviced basis if the seller is the servicer, meaning the seller does not receive explicit servicing fees in the payment waterfalls. Instead, the seller/servicer receives excess spread after all expenses and costs are paid.

When replacement servicers are required, they are entitled to servicing fees proportionate to those of the processor servicer. During stress testing, DBRS assumes a maximum 2% of the pool balance per year is paid out of the collections when a replacement servicer is in place. Depending on the credit quality of borrowers, different servicing fee arrangements could be required. For example, non-prime borrowers usually require higher servicing efforts and therefore higher servicing fees.

Vintage Analysis

Based on static pool analysis, DBRS is able to evaluate the consistency of the seller's origination over time through the normalized performance of seasoned accounts. Specifically, static default rates, cure rates and recovery rates over a period of three or five years (the typical HELOC transaction tenor in Canada) help with a more precise determination of credit enhancement.

Similar to the cash flow analysis, DBRS's evaluation of the vintage data contributes to a base case assumption for default rates, cure rates and recovery rates. DBRS evaluates the base case under various stress scenarios, based on the desired rating of each class, in conjunction with the cash flow analysis of historical performance, to determine the ultimate commensurate credit enhancement level.

Surveillance

After a transaction closes, DBRS monitors the performance to ensure that DBRS ratings continue to reflect the relevant information received by DBRS relating to that particular transaction. The maintenance of each rating is predicated on the timely receipt of monthly performance information and data from the servicer. The performance information and data for each outstanding transaction is reviewed by DBRS analysts to identify variations between actual and expected performance levels (the latter as assumed by DBRS) for each transaction. DBRS also monitors changes in macroeconomic conditions and the associated effects on the consumer, industry dynamics and other exogenous events that may affect the credit quality of outstanding transactions. DBRS provides monthly surveillance information for all public ratings on our website, www.dbrs.com.

Conclusion

A HELOC combines the secured nature of residential properties with the flexibility and convenience of a line of credit. It appeals to borrowers as a mortgage alternative due to its flexibility of drawing and payment for better cash flow management. HELOC products in Canada are generally underwritten without predetermined amortization schedules, payable on demand and only available to prime borrowers, making them vastly different from similarly named products available until recently in the United States.

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