

Methodology

*Rating Canadian Trade Receivables
Securitization Transactions*

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Insight beyond the rating.

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Overview

This document describes the methodology used by DBRS when analyzing a Canadian trade receivables securitization transaction, with an explanation of the analytical reasoning behind certain structuring methods and the basis for computing key variables. The emphasis here is on the approach taken and the major considerations involved, keeping in mind that a large number of qualitative factors influence every transaction. The following list summarizes the strengths and challenges of some of the key rating considerations for a Canadian trade receivables transaction.

STRENGTHS

- (1) Fast receivables turnover limits the duration of the exposure by the conduit.
- (2) The vast majority of trade receivables transactions involve investment-grade sellers that are experienced administrators of receivables portfolios.
- (3) Assets of this nature usually experience very low loss rates.

CHALLENGES

- (1) Obligor and/or industry and geographic concentrations exist in most Canadian trade receivables transactions.
- (2) Dilutions and other non-cash adjustments to the receivables balance can be significant and difficult to predict.
- (3) Receivables are generally non-interest bearing and the transaction must be structured to absorb debt servicing costs
- (4) The receivables are unsecured obligations.
- (5) The revolving nature of most trade receivables transactions requires reliance on the seller's business practices and credit and collection policies.
- (6) The conduit and DBRS rely on the servicer to provide accurate, timely and comprehensive reporting. Ongoing independent verification of receivables portfolio performance is difficult to obtain.

Risks such as losses, obligor concentration, dilution and interest costs can be addressed with structural limits, reserves and indemnities established through analysis of historic portfolio performance metrics and by using dynamic reserving methodologies. Reserves are structured to adjust to changes in performance of the related inputs such as losses, dilutions or interest costs.

The unsecured nature of the receivables and the exposure to the seller's credit and collection policies are mitigated by some of the key strengths of Canadian trade receivables transactions: fast turnover, generally investment-grade sellers and low absolute loss rates. Fast turnover means short exposure to poor portfolio performance (e.g., deteriorating asset value in an increasing loss scenario). Combined with portfolio performance metrics that are intended to be triggered early in the portfolio decline, the fast turnover should result in the repayment of outstanding funding prior to the collectible value of the assets supporting the transaction being less than that of the funding used to purchase them.



In addition, seller creditworthiness tests enhance the liquidity profile of the sellers, providing additional sources of funds to finance their trade receivables portfolios should the program wind up as a result of a termination event. These tests also reduce the probability that the program will experience the volatile portfolio performance that could result from a seller's insolvency. To date, the vast majority of all Canadian trade receivables transactions rated by DBRS have been structured to an R-1 (high) level. These programs generally share the following structural characteristics:

- Strong, stable, investment-grade quality sellers.
- Conservative levels of credit enhancement to mitigate multiple risk sources.
- Stringent eligibility criteria.
- Appropriate concentration limits.
- True sale of the receivables and a first-priority perfected security interest, supported by legal opinions.
- Limited cash commingling of collections with other corporate funds.

Transaction Structure

BANKRUPTCY-REMOTE TREATMENT

It is a requirement of DBRS that the transaction from the seller to the conduit achieve bankruptcy-remote, or true sale, treatment with a first-priority perfected security interest, supported by a legal opinion from a reputable law firm. This is important as it separates the receivables that underpin the transaction from the legal entity of the seller to prevent these assets from being captured within the estate should the seller go bankrupt. In Canada, bankruptcy-remote treatment can be accomplished by a direct sale of an interest in the receivables from the seller to the conduit. This structure is often referred to as a one-step transaction. In certain instances, it may be desirable to segregate the receivables from the seller, in which case a two-step structure may be employed to further enhance the bankruptcy-remote structure. In either structure, the transaction must be supported by an appropriate suite of legal opinions. Please refer to DBRS's *Legal Criteria for Canadian Structured Finance* at www.dbrs.com for a more detailed discussion on transaction structural requirements.

REVOLVING PROVISIONS AND STRUCTURE TYPES

Transactions can be structured in two ways: a discrete purchase of a specified group of receivables or a co-ownership interest in a pool of receivables. Where discrete purchases of receivables are made, collections with respect to the purchased receivables are re-invested daily in additional receivables to maintain the total amount of funding at a stable level. Should the seller choose to change the level of funding to match growing or shrinking receivables balances under this structure, the seller would typically provide a notice to the administrator requesting this and would either direct the collections to the conduit to reduce program outstandings or sell additional receivables to the conduit, as appropriate.

In trade receivables transactions with a co-ownership interest structure, the conduit acquires a co-ownership interest in a pool of eligible receivables. The conduit then becomes entitled to a percentage allocation of the collections from the pool of eligible receivables. The allocation is based on the percentage co-ownership interest acquired by the conduit multiplied by the total pool balance. For example, if the co-ownership interest was 50% of a pool at a given point in time, 50% of all collections would be allocated to the conduit for the relevant settlement period. Co-ownership structures must be constructed to ensure that the allocation of losses attributable to ineligible receivables does not result in a consumption of the transaction's credit enhancement and are allocated to the seller's interest only. Allocation of losses with respect to purchased eligible receivables is contemplated in the calculation of adequate credit enhancement for the credit rating given.



For purchases of discrete pools of receivables, the ability to identify receivables and related proceeds is important in maintaining a perfected security interest in the receivables. As a result, receivables are identified according to predetermined specifications on a periodic basis and/or when a termination event occurs. Monthly, the seller may be required to identify certain eligible receivables as being the property of the conduit. One method used is to list all eligible receivables by outstanding amount, from largest to smallest, then identify receivables as purchased by the conduit until the aggregate dollar amount of such receivables equals the amount required by the conduit. For co-ownership interests, no specific identification is carried out other than identifying all the receivables that comprise the pool in which the conduit has a co-ownership interest.

Older structures tend to use the discrete purchase structure exclusively, while newer structures reflect both the discrete purchase and the co-ownership structures. Provided that all other elements in the transactions (including supporting opinions) are satisfactory and qualitatively equal, DBRS does not have a particular preference for one structure versus the other.

One potential weakness of the discrete purchase structure, which provides for automatic reinvestment of collections in new receivables, is that the specific owned receivables are not usually identified on a regular, ongoing basis and the structure tends to rely on a termination event occurring before actual receivables are specifically identified. If the seller were to become insolvent, the tagging of receivables owned by the conduit could potentially attract litigation. One potential legal risk of the co-ownership structure is that the manner in which co-ownership structures allocate cash flows at times favours the conduit over the seller. This represents slightly higher theoretical risk that the sale could be challenged in court, potentially adversely affecting the conduit's priority over the receivables.

RECEIVABLES TYPES

Trade receivables portfolio performance is quite different across industries and even between companies within the same industry. For example, one seller in an industry could sell raw materials, while another in the same industry could sell value-added products. Customers for pure commodities tend to be more volatile and cyclical in their payment patterns, partially reflecting their ability to change providers. A seller's strategic positioning in its marketplace and practices within the industry (and sometimes for a particular geographic region) provide for considerable variation in credit policies. In addition, the very nature of the receivable may vary considerably. Some receivables are for goods, others may be for services, and both types have certain intrinsic value to the obligor. In addition, the payment terms may vary by customer and business line, ranging from very short terms such as ten days from shipment of the product to a deferred receivable with a fixed payment date related to the seasonal nature of an industry. Most receivables must be billed prior to securitization, but some structures provide for a small percentage of receivables to be securitized based on accrual of receivables, depending on the billing cycle. Each of these considerations brings structural and enhancement implications to a transaction.

ELIGIBILITY CRITERIA

The fundamentals of any trade receivables securitization are that the sale and assignment of the receivables are valid, that the obligations of the obligor are enforceable and that the receivables were originated and are serviced in accordance with the credit and collections policies of the seller. In addition, trade receivables transactions tend to only purchase receivables that are current and meet predetermined obligor and other concentration limits. To provide assurance that the securitized portfolio meets the criteria, the seller represents and warrants that they have examined the portfolio and it meets the agreed-to eligibility criteria at the time of purchase by the conduit.



A typical transaction includes the following eligibility criteria, although more may apply depending on the risks that may be specific to a transaction. On each sale of receivables, the seller is required to represent and warrant that the receivables comply with the eligibility criteria.

(1) Restrictions on the Obligor's Place of Business: Receivables relating to obligors situated in other countries than that of the seller are occasionally included, but steps to perfect the conduit's security interest in all jurisdictions that represent more than 2% of the transaction must be taken. Opinions are required in the jurisdiction in which the seller or sellers have their head offices.

(2) The Obligor Is Not an Affiliate of the Seller: For the purposes of a AAA/R-1 (high) rating, bankruptcy remoteness requires an assumption that affiliates of the seller go bankrupt at the same time as the seller. As a consequence, receivables from obligors that are affiliates of the seller are generally not eligible; however, for highly rated sellers only, receivables from obligors that are affiliates of the seller will occasionally be allowed on a limited basis. These receivables would be subject to a seller ratings test that would declare the receivables ineligible if the seller is rated at a certain level (usually in the BBB range).

(3) The Receivable Is Not Delinquent or Defaulted: Since the likelihood of full collection of receivables diminishes as receivables increase in age, programs typically do not permit the purchase of delinquent or defaulted receivables. The definitions of delinquency and defaulted are usually intended to produce measures that reflect the seller's customary payment terms. For example, for certain industrial companies, obligors do not customarily pay for a minimum of 30 days from invoice date as a means of financing their purchases. Companies in the oil and gas or wholesale food industries usually get paid in a matter of weeks and sometimes days. Typically, a receivable is deemed to be delinquent at the stage where the seller recognizes the need to contact the obligor regarding the lack of timely payment. A receivable is usually deemed to be defaulted if payment has not been received one or two payment cycles following the delinquency date.

(4) The Receivable Constitutes an Account and Is Not Evidenced by an Instrument or Chattel Paper: The first requirement is necessary because a receivable can be perfected through registration under the U.S. Uniform Commercial Code (UCC) or, in certain Canadian provinces, the *Personal Property Security Act* (PPSA); for those sellers domiciled in Québec, a universality is created. Other types of receivables require possession. Under certain circumstances, receivables evidenced by an instrument or chattel paper that could be acquired by another party could potentially subordinate the interest of the conduit in those receivables.

(5) The Receivable Represents an Extension of Credit by the Seller in the Ordinary Course of Business to an Obligor Payable in Cash by that Obligor: The obligor must be the party legally required to make payments related to the receivable to reduce risks related to the right of offset that might otherwise be claimed (e.g., if it were created as part of an exchange of commodity inputs).

(6) The Receivable Is Payable in Full; Is Not Subject to Offset Rights; Arises under a Legal, Valid and Binding Contract That Is Fully Assignable by the Seller; and Has Been Earned by the Seller: The existence of a valid contract to pay the full amount must be unquestioned, and the seller makes the representation that the contract is binding upon the obligor. Provisions in the invoice that contractually provide for offsets or a reduction in the amount owed or that prohibit assignment make the receivable ineligible for sale to the conduit. Certain government receivables cannot be assigned without the consent of the government authority and as such are generally not eligible.

(7) The Receivable Is Denominated and Payable in a Specific Currency: Receivables are expected to be in a specific currency and if that is not true, exposure to exchange rate movement exists. Other currencies are acceptable provided that the notes that have been issued to fund such receivables are in the same currency, a cross-currency swap is entered into or a reserve is created to protect against the related foreign exchange rate volatility risks. Small variances in currency can be tolerated, but enhancement levels are adjusted.



(8) The Receivable Does Not Contravene Applicable Laws, Rules or Regulations: This requirement is intended to ensure that the obligor does not have a legal right to refuse to pay the receivable.

(9) The Receivable Has Payment Terms Requiring Payment in a Timely Fashion: This requirement is intended to ensure that the obligor pays the receivable in full within a reasonable period of time. A 30-day time period is commonly used, although longer time periods are acceptable provided that they are consistently enforced, have historically been observed and the seller can accurately report based on these time periods. A longer payment cycle may require additional interest reserves to protect against the higher cost of funding these receivables during the collection cycle. Shorter payment cycles are also used when appropriate for certain sellers and receivables.

(10) The Receivable Satisfies in All Material Aspects All Applicable Requirements of the Seller's Credit and Collection Policy: Operational review and reliance on the seller's historical data presume consistent application of the seller's credit and collection policy. The credit and collection policy should state, among other things, key criteria such as the following:

- (a) Seller's philosophy and approach toward extending credit. Some sellers are in industries where receivables payment dates routinely get extended.
- (b) Credit-underwriting policy for obligors. How are limits established? How often is credit reviewed? What is the policy on sales over the credit limit?
- (c) Steps taken to collect and recover delinquent amounts.
- (d) When and how receivables are written off.
- (e) How rebates, discounts and disputes are managed.
- (f) Risk management guidelines.

(11) The Receivable Is Not the Subject of Any Dispute, Counterclaim, Repurchase Obligation or Set-Off: The terms of the receivable cannot permit the obligor to legally set off its requirement to pay the receivable against a liability of the seller. Similarly, if the seller has an obligation to repurchase the goods related to the receivable if certain events occur, then the obligor's requirement to pay the receivable in full could be compromised if the seller did not perform its obligations.

(12) The Obligor of the Receivable Is Not Defaulted or Delinquent on Receivables That Comprise More Than a Small Percentage of the Aggregate Receivables Owning by that Obligor: DBRS will generally not permit the purchase of receivables of an obligor where that obligor has significant levels of receivables that are already delinquent or defaulted, even if such delinquent or defaulted receivables are not purchased by the conduit. The primary concern is that delinquency may be an indication of more serious problems, such as obligor financial difficulty. In this case, there would be a risk that the obligor could ultimately fail to pay any of its outstanding receivables or only pay its most delinquent receivables. This would disadvantage the conduit, which only acquired the non-delinquent receivables, as most systems allocate payment to the most delinquent receivables first. It is also possible that the delinquent receivables are the subject of a dispute between the obligor and the seller. Both these possibilities increase the likelihood of credit losses or dilutions in such receivables. As a result, notwithstanding the contractual rights of the conduit, these situations are avoided. DBRS does not generally permit conduits to purchase any receivables that relate to an obligor if that obligor has defaulted receivables outstanding that comprise more than 5% to 10% of the aggregate receivables relating to that obligor.

If at any time it is determined that the purchased receivables did not meet the above eligibility criteria at the time they were purchased, the seller would be obligated to either repurchase such receivables at face value or substitute eligible receivables of an equivalent amount in the conduit. As very little credit is given for the seller's ability to repurchase ineligible receivables (even though only investment-grade sellers are typically considered for Canadian trade receivables securitizations), a specific maximum funding level is required in many cases.



INDEMNITIES

Trade receivables transactions require the seller to indemnify the conduit against certain risks. Although level of comfort based on the indemnities falls away if the seller becomes bankrupt, these indemnities provide extra assurance that the seller is responsible for its own actions and/or omissions in the transaction beyond the remedies that would be in place if a termination event occurs. A typical indemnity package would indemnify the conduit from any damages, losses, claims, liabilities and expenses (including legal expenses) arising from any of the following:

- Receivable not meeting the eligibility criteria when transferred to the conduit.
- Receivables transferred to the conduit with respect to any obligor exceeds the concentration limit applicable to that obligor at the time of the transfer.
- Reliance by the conduit on a covenant or representation and warranty made by the seller that was untrue in any material respect when made.
- Failure on the part of the seller to comply with applicable laws with respect to the receivables.
- Adverse claims on the receivables.
- Disputes, discounts, offset or defence of an obligor against payment other than the result of an obligor bankruptcy.
- Claims of product liability, personal injury or property damage to the goods related to any receivable.
- Failure to perform duties as required in the transaction documents.
- Taxes of any kind that may be imposed on the conduit in connection with the acquisition of receivables from the seller.
- All collections on account of purchased receivables to be held by the seller/servicer in trust for the conduit, even if commingled with corporate funds.
- Amounts relating to interest rate or currency volatility not otherwise covered in the structure.

CASH COMMINGLING

The cash management structures available to companies differ by geography. In Canada, most payments are received directly by the servicer and are then deposited into a current account that forms part of the overall cash management system. Very few companies employ lock-box arrangements with banks. This is the reverse of the United States, where most companies have a lock-box arrangement with one or more banks into which obligors send amounts owing. In instances where a servicer is investment grade, DBRS will usually allow commingling of funds between monthly settlement dates. Generally, the transaction structure will require the conduit to be able to control the cash flow upon certain events, such as a downgrade below investment grade of the servicer. If a lock box is used, the conduit would have the right to execute a letter requiring the amounts deposited to be transferred to a lock box controlled by the conduit and not released to the seller. Where current accounts are used, DBRS will require that funds be segregated and transferred directly to the conduit by the servicer within one or two days of receipt from the obligor. The intent of the different structures is to isolate the commingling risk of the servicer within the context of the specifics of each financial system. A more detailed discussion of cash-control mechanics for non-investment-grade servicers follows below.

MAXIMUM FUNDING LEVEL

For lower-rated sellers, typically below A (low), DBRS generally requires that they maintain total eligible receivables balances of 110% or more of purchased receivables. The additional 10% is available to the conduit to replace ineligible receivables purchased by the conduit and supports the seller's required indemnity relating to the sale of only eligible assets. These receivables are intended to be available to substitute for ineligible receivables only and are not to cover credit losses. If indications are that ineligible receivables occasionally or continuously comprise a large fraction of the overall receivables balance, an additional amount in excess of 10% may be warranted.



INSURED RECEIVABLES

Some sellers have portfolios of receivables that are insured against obligor default. Depending on the insurance coverage provided and the credit rating of the insurer, DBRS may give some credit for the insurance as a mitigant for credit losses or their inclusion as an eligible receivable. However, servicing, interest, dilution and eligibility reserves still need to be in place as insurers do not cover these types of losses. Insurance is not equivalent to a credit wrap, and payment is usually contingent on the seller fulfilling numerous covenants and conditions precedent in the policy. The requirements for standard notice periods, the evidence of the creation of the receivable and the risk that contract disputes could lead to the denial of claim have typically been the most significant barriers to reliance on insurance as a full substitute for credit enhancement.

Termination Events

Trade receivables securitization programs typically revolve until termination, usually related to the occurrence of one of the following:

- Maturity of the receivables purchase facility.
- A termination event.

The maturity of a facility results in the orderly liquidation of the receivables portfolio occurring at the agreed-to maturity date of the program. In this instance, the seller usually has decided that the securitized receivables should be funded using alternative means instead of renewing the securitization program, and the program can either amortize with the collection of the outstanding receivables or be repurchased by the seller if both parties agree.

Termination events, however, are indicative of significant problems in the transaction. They are structured to monitor expected performance, can be related to the components of credit enhancement and protect the conduit against negative changes in performance, usually related either to the receivables portfolio or to the seller. The focus when drafting termination events should be on events that materially re-characterize the transaction, thereby significantly changing structural assumptions.

It is expected that trade receivables transactions will terminate when a seller's rating falls below investment grade. Should the transaction not terminate at this point, it must adjust in terms of the level of enhancement, cash commingling and reporting to reflect the increased risk to the conduit due to the deterioration in the financial health of the seller.

To reflect the separate risks related to the seller and the portfolio performance, we have provided two reference lists of termination events. Additional termination events related to the specifics of each transaction are not uncommon.

SELLER-RELATED TERMINATION EVENTS

Typical seller-related termination events (subject to cure periods) would include the following:

- Failure to make payments when due.
- Untrue representation or warranty under the purchase agreement.
- Failure to perform or observe purchase agreement covenants or conditions.
- Failure to maintain required rating levels on the part of the seller. Most transactions have rating triggers established at the investment-grade level.
- Seller insolvency or similar bankruptcy-related event.
- Cross-default to debt or material financing agreement.
- Failure to provide portfolio report, usually on a monthly basis.



In addition, if the seller also acts in the capacity of servicer, the breach of any of these events would allow for the administrator of the conduit to declare a servicer termination event. This would allow the administrator to appoint another entity to act in the capacity of servicer of the receivables portfolio. As well, servicer termination events are often linked to most other termination events. This puts considerably more pressure on the servicer to continue to perform servicing within tight guidelines and not deviate from historic performance standards.

PORTFOLIO-RELATED TERMINATION EVENTS

DBRS requires a number of portfolio-related tests that are intended to monitor the performance and underlying value of the assets in the portfolio. Specific numeric measures are established to reflect significant portfolio changes relative to historic metrics and are intended to capture a deterioration of the transaction structure and an increased potential for loss by the conduit. Toward this end, certain of the portfolio tests will track factors that affect the level and value of the credit enhancement imbedded in the transaction. Typically, transactions would contain the following termination events:

- Portfolio performance tests are not maintained. Depending on the transaction, these will include tests that incorporate the following:
 - Losses or deemed losses.
 - This calculation would incorporate all receivables related to an obligor who has become insolvent plus all receivables entering a specified aging period of delinquency beyond which the likelihood of 100% collection is significantly reduced.
 - Aging.
 - Overall delinquency level that is significantly outside of normal, expected aging profile.
 - Dilution.
 - Non-cash adjustments reflecting changes to the value of the receivable made subsequent to the initial record of sale. These generally relate to discounts, returns, retroactive price adjustments and disputes or other processes that reduce or eliminate amounts owing for reasons other than for collections or losses.
 - Collections.
 - Often measured by day's sales outstanding. This reflects the anticipated time frame to convert the receivables in the portfolio into cash to allow for the repayment in the underlying funding source.
- The value of the Receivables plus the sum of the related credit enhancement reserves falls below the value of the notes issued by the conduit.
- Termination events under the applicable liquidity or credit enhancement agreements occur or notice of non-renewal is received from a provider. This clause causes the portfolio to amortize immediately when the availability of liquidity or credit enhancement to support the issuance of asset-backed commercial paper (ABCP) has been compromised.
- Notice of termination has been provided by either the conduit or the seller and any related cure period has elapsed since such notice was delivered.

The occurrence of one or more termination events results in an amortization of the program prior to the prescribed maturity date. Following such an occurrence, all collections relating to the securitized assets to which the conduit is entitled are diverted through controlled accounts or lock boxes to reduce outstanding funding, and additional purchases of receivables are halted.



SELLER/SERVICER BANKRUPTCY

As Canadian trade receivables securitization programs reviewed by DBRS are typically rated at a level higher than the rating of the seller, the structure used must effectively insulate investors from the credit risk of the seller. The ratings methodology assumes that sellers enter bankruptcy and are unable to originate new receivables or service the existing pool of receivables. To address this possibility, receivables originated by the seller must be sold on a true-sale, bankruptcy-remote basis to the conduit. This sale must incorporate a first-priority perfected security interest in the receivables, supported by legal opinions. The opinions will typically state the following:

- The documents are enforceable.
- The transfer took place on a bankruptcy-remote, true-sale basis.
- The conduit has a first-priority perfected security interest in the receivables.

In almost all trade receivables transactions, the seller is also the servicer of the receivables. However, to address the risk of servicer bankruptcy, structures are used to minimize commingling and arrange for the potential transfer of servicing obligations to a backup servicer. DBRS will usually only contemplate trade receivables transactions that involve a seller that is investment grade or a seller whose obligations are fully guaranteed by an entity that is investment grade. Transactions will usually be structured to provide for a termination event if the seller breaches this rating level. If other events of termination occur, the receivables purchased by the conduit will cease to revolve and an orderly liquidation will commence. This accomplishes three things:

- (1) Provides a minimum level of comfort with respect to the credit strength backing covenants and representations and warranties provided by the seller.
- (2) Commences the orderly liquidation of the receivables in a timely fashion as soon as the financial strength of the seller has been reduced to the point where an investment-grade credit rating is no longer suitable.
- (3) Reduces the commingling risk as collections are normally held “in trust” by the servicer and reinvested on a daily basis in newly created receivables.

Most sellers, provided that they maintain investment-grade ratings, are permitted to hold collections from securitized receivables in current accounts. Under such circumstances, sellers settle with the conduit on a periodic (typically monthly) basis. Where sellers do not have investment-grade ratings, DBRS will assess the transaction on a case-by-case basis.

NON-INVESTMENT-GRADE SELLERS/SERVICERS

When structuring trade receivables securitization transactions, a considerable amount of time is spent analyzing the historic portfolio performance when sizing both the credit enhancement and determining the termination events. When a seller is non-investment grade, there is increased potential for external financial pressures on the seller to affect the portfolio performance. For example, pressure to grant additional credit to support sales efforts, change in obligor payment patterns or the commingling of cash during financial distress could negatively affect the position of the securitization transaction.

Some sellers and receivables pools exhibit certain characteristics that mitigate some of the above risks. For example, the use of a backup servicer with regular access to the invoices and related records and the use of a discrete purchase mechanism, whereby receivables are purchased in batches as opposed to automatically revolving transactions, can both be structural enhancements for programs. The key issues related to the seller centre on its ability to continue to function as an entity and the impact on the value of the related receivables portfolio during any associated period of financial impairment. Although it is possible to use enhanced reporting, more frequent settlements and restrictive cash management practices coupled with more stringent portfolio monitoring levels, DBRS will only consider trade receivables securitization for non-investment-grade sellers where the inherently higher risk factors can be adequately addressed.



To address these issues, the following structural techniques are often seen in Canadian trade receivables transactions involving non-investment-grade sellers:

- Significant increases in the floor level of credit enhancement for each rating notch below investment grade must occur. These increases are accompanied by a termination event if the rating level falls below a predetermined threshold, usually set at BB.
- Control of cash receipts by the conduit. All cash is to be maintained in a lock box or transferred on a daily basis, within two business days of receipt, to accounts in the name of the conduit.
- Indemnities for items that can affect the value of the receivables, such as dilution or foreign exchange, are to be replaced by credit enhancement;

Other structural mitigants that may be incorporated include the designation of a backup servicer and more frequent reporting and settlements. The use of a backup servicer will ensure that a third party is in receipt of the information relating to the portfolio and is monitoring the accuracy of the data provided. The backup servicer also represents the most likely replacement servicer should it become necessary to engage one. More frequent reporting and settlement means that the conduit will have more timely information on the outstanding assets and will be better able to align its outstanding funding with the assets available to repay the notes.

Operational Review

Prior to the close of a transaction, DBRS will usually meet with senior managers of the seller to review their business strategy, industry risks, obligor risks, historic receivables performance, credit and collections policies, information systems and servicing capabilities. Additional time is typically spent discussing treatment of certain large customers, problematic business lines, pockets of risk and other areas of concern for DBRS. The goal of the operational review sessions is to develop an understanding of the seller's tolerance for risk and management of its receivables process, including its information technology capabilities, as well as a strategic overview of its marketplace. The systems review should include information on the seller's data management, records retention and disaster-recovery strategy as well as an overview of the business continuity plan that has been implemented.

To the extent that several divisions within the seller underwrite and collect receivables in a different manner, it may be beneficial to hold meetings with these separate groups, with aging data provided for distinct business lines.

DATA REQUIREMENTS

If more than one seller is involved or multiple divisions are involved, DBRS will require separate data for each seller and/or each material division. Similar information will be required if more than one currency is incorporated into the aggregated pool. Monthly information for the last five years should detail the following:

- Monthly opening and closing receivables balances.
- Sales and collections by multiple currencies, if any.
- Portfolio aging usually in 30-day increments to 121-plus days past due.
- Gross charge-offs and recoveries.
- Dilutions and other non-cash adjustments.
- Details relating to all material obligor concentration levels.



Credit Enhancement

Credit enhancement is expected to cover the risks detailed below:

- Losses based on the greater of the credit loss or obligor concentration reserves.
- Replacement servicer fees.
- Interest expenses.
- Commingling losses.
- Currency exchange rate volatility. If multiple currencies are included in the receivables, it is expected that they will be match-funded or other appropriate hedging mechanic entered into to remove this exposure to the conduit.

Although dilution is not a credit loss and is not necessarily included in the credit enhancement calculation, additional receivables need to be available to replace receivables that were ineligible when sold. These additional receivables are owned by the seller and protect investors in the event that diluting items embedded in the pool reduce the value of purchased receivables and corresponding levels of collections during an amortization period.

Credit enhancement is typically provided to the conduit on a first-loss basis via overcollateralization provided by the seller and may be available on a second-loss basis in the form of a letter of credit from a highly rated financial institution. The aggregate credit enhancement levels reflect the sum of the individual enhancement levels required to cover the risk areas detailed above. Overcollateralization incorporates an additional level of receivables that are sold to the conduit to act as protection against losses in the portfolio that would prevent the conduit from recouping sufficient collections to repay the ABCP issued to purchase the receivables from the seller.

By the seller providing overcollateralization through a contribution of receivables, the conduit owns these reserves with no requirement to enforce against the seller should they be needed to repay the ABCP. Third-party enhancement would usually only be drawn on to support the issued commercial paper after the reserves provided by the seller.

Even though enhancement levels are sized to address each of these risks, DBRS requires that all amounts of the credit enhancement be available to cover any of the imbedded risks in the portfolio. For example, to the extent that interest rate increases did not fully consume the related interest reserve set aside, the remaining amount would be available to absorb credit losses. Thus, even if the credit losses exceeded the R-1 (high) rating expectations, the funded notes could still be fully repaid if sufficient reserves for other risks were available. This provides additional comfort that protection will be adequate in all but the most extreme scenarios.

CREDIT LOSS RESERVE

One of the greatest risks to a trade receivables transaction relates to the credit risk of the obligors of the underlying receivables. Even though a trade receivables program has been structured as a legal true sale, the conduit may experience a loss during amortization if extraordinarily high, sustained levels of obligor default have not been sized adequately in the credit enhancement. Obligor-related risk is twofold: The first risk relates to the level of loss experienced on an individual receivable. An obligor bankruptcy may result in significant loss levels as these receivables are typically unsecured and recovery rates are extremely low. The second risk is that of concentration within the portfolio. Many sellers have a few large customers that represent a sizable percentage of their receivables pool, increasing the potential for loss from a small number of obligors. At the very least, it is necessary to ensure that the bankruptcy of one or a few obligors would not result in losses to the conduit by restricting the levels of concentration based on the ratings of the obligors.



In analyzing risks related to obligor default, DBRS looks at the creditworthiness of the obligors and the nature of their industries. Some trade receivables programs have financially strong investment-grade obligors, while other programs may have obligors that are mostly unrated or non-investment grade. In addition, DBRS analyzes the seller's underwriting criteria and credit and collection policies to review the process used to establish limits, payment terms and collections. Certain sellers maintain a clear separation between credit and sales, whereas others may be more willing to allow sales decisions to influence credit granting. DBRS's stress multiples are subject to increasing if it appears that credit granting is not sufficiently autonomous from the desire to increase sales. The nature and common practices of the industry are also very important in looking at credit risk.

Concentration Limits

Limits on the concentration of any particular obligor are often key drivers in trade receivables transactions. Almost all transactions involve some degree of concentration, and the conduit typically will only purchase receivables that are under allowed concentration limits. Excess concentrations must be funded by the seller or must be covered off on a dollar-for-dollar basis by additional credit enhancement.

The following table provides guidelines for concentration limits based on the desired rating of the structure. The total enhancement is based on the first-loss reserve provided by overcollateralization from the seller plus any second-loss protection at the conduit level.

Obligor Concentration Limits

Obligor Rating	As a Percentage of Total Enhancement	
	AAA/R-1 (high) pool	AA/R-1 (middle) pool
AAA	100%	100%
AA	50%	100%
A	33%	50%
BBB	25%	33%
BB or lower, or unrated	17%	25%

This translates into obligor concentration coverage factors (i.e., the number of obligors at the maximum concentration limit in any given rating category that could default simultaneously with no recoveries) as shown in the table below.

Obligor Concentration Coverage Factors

Obligor Rating	Number of Times (x) Covered by Total Enhancement	
	AAA/R-1 (high) pool	AA/R-1 (middle) pool
AAA	1x	1x
AA	2x	1x
A	3x	2x
BBB	4x	3x
BB or lower, or unrated	6x	4x



It must be noted that these figures are guidelines and are subject to change based on the following:

- These levels assume a diversified pool, dominated by small exposures to a large number of obligors, with a handful of obligors comprising larger percentage of the pool. For pools that exhibit greater levels of concentration, a higher coverage requirement may be required.
- If expected annual losses are substantial relative to enhancement levels, more stringent limits than those above will apply as the general assumption for the ratios listed here is that the pool should not be expected to experience material losses in addition to losses incurred by obligors that represent significant concentration in the pool.

For example, where an unrated obligor's concentration is limited and the obligor has eligible receivables more than this level, the conduit will typically purchase receivables that aggregate to the concentration limit, with the remainder being held by the seller. This means that the conduit's exposure to that obligor would not exceed the concentration limit.

Based on the above, for a AAA/R-1 (high) transaction, reserves due to obligor concentration would be calculated as follows, assuming coverage of unrated obligor concentration was the key factor.

Example of Reserves Calculation

Obligor Rating Level	Unrated
Maximum Concentration	2.5%
Enhancement Coverage	6x
Required Credit Enhancement	$2.5\% \times 6 = 15.0\%$

Credit Loss

DBRS prefers five years of monthly data when analyzing portfolio performance history. A longer data series allows for improved comparison when reviewing proposed portfolio triggers, enhancement levels and overall structure with actual performance. Sellers with inconsistent, volatile data will be expected to adopt a more conservative structure reflecting the portfolio performance.

An estimation of losses is calculated using a proxy for loss. This compares a receivable's aging period, such as defaults or 61 to 90 days past due, with sales for the period in which they were originated. The appropriate aging period reflects the nature of the seller's business and is intended to represent the risk that the related receivable will ultimately default with a potential for loss. Generally, this is captured by taking the maximum period of eligibility and adding the normal payment terms.

The second part of the calculation compares the level of eligible receivables with the sales volumes over the time frame in which they were created. For example, assuming 30-day payment terms, if receivables were eligible up until they were 60 days past due, then three months of sales are imbedded in the eligible pool of receivables. The total level of the three months of sales would be divided by the total of the eligible receivables.

This methodology compares the level of receivables migrating through the aging bucket that has been determined to be the best predictor of future losses with sales and the time frame to collect in the period that those receivables were created. The review of data over a period of years provides indicative levels of the percentage of sales that become defaulted relative to the sales in the month of their origination. The use of an aging bucket, such as 61 to 90 days past due as the proxy for loss, attempts to measure an aging profile in which the majority of future losses will be represented.



Looking at historical data, DBRS would review these amounts and apply the loss rate calculated using the above methodology to calculate the potential amount of losses that would be expected in a wind-down scenario. This would be repeated for each month for which sufficient data was available. A stress factor is then applied to the results in accordance with the table below, based on the desired ratings level, with the highest result in the last 12 months used in the credit loss calculation. This conservative time frame is used to ensure that a full cycle passes to capture any seasonality effect that may have had an impact on the reserve calculation prior to reverting to a subsequent lower credit loss level.

The stress factor ranges account for the qualitative considerations necessary in trade receivables transactions: stability and health of the industry of the seller and the seller's major customers, obligor diversity and the seller's record of collections and stable credit policies determine where in this range stress multiples are established. In addition, the stress factors used for trade receivables transactions are typically less punitive than those used for amortizing assets such as loans. This lower stress level recognizes the short-term nature of most trade receivables and the resulting short time frame that would be available for receivables performance to deteriorate as well as the other eligibility criteria applied to these transactions.

Example

	AAA/R-1 (high)	AA/R-1 (middle)	A/R-1 (low)
Stress Factor	4x to 5x	3x to 4x	2x to 3x

Formula

$$\frac{91 \text{ to } 120 \text{ Days Past Due} + \text{Charge-Offs}}{\text{Sales Four Months Prior}} \times \frac{\text{Sales in Previous Three Months}}{\text{Eligible Receivables (Three Months)}} \times \text{Stress Factor}$$

This calculation would translate into the following reserve requirements:

Inputs

91 to 120 Days Past Due Receivables	\$525,000
Charge-Offs in Period	\$75,000
Sales Four Months Prior	\$150,000,000
Combined Sales Previous Three Months	\$550,000,000
Eligible Receivables	\$200,000,000
Stress Factor	5x

Calculation

$$\frac{\$525,000 + \$75,000}{\$150,000,000} \times \frac{\$550,000,000}{\$200,000,000} \times 5$$

Required enhancement = 5.50%



There are sellers in certain industries that have had extremely low levels of losses or that have levels of losses that would be expected to rise significantly if the seller were to experience financial difficulties. For such situations, DBRS may look for a minimum floor credit loss level that exceeds the level calculated using a proxy for loss as described above. As discussed in the section on Non-Investment-Grade Seller/ Servicers above, should the transaction structure continue into the non-investment-grade rating level, the floor credit enhancement level would be required to increase significantly for each downgrade notch below BBB (low).

Credit Loss Reserve Calculation

When determining the level of credit enhancement required for credit loss reserve, DBRS will take the greater of the amount calculated based on obligor concentration (15.0%) and credit losses (5.5%), including any amounts set as a floor level of enhancement. For the above examples, the credit loss reserve would be 15.0%.

REPLACEMENT SERVICER RESERVES

The amounts to pay for replacement servicing fees need to be added to the credit enhancement required to protect against losses. The amount required for replacement servicing fees would be the market rate for servicing the receivables involved, typically assumed to be 1% of the face value of the receivables. The servicing fee must be funded up front (with cash or receivables). In Canada, receivables are sold on a fully serviced basis, while in the United States, payment is made by the captive finance companies to the seller for the servicing of the portfolio.

INTEREST EXPENSE RESERVE

Trade receivables transactions are typically structured to provide for a discounting of the receivables based on the expected funding cost of the conduit. For an initial purchase, the administrator of the conduit would typically take the face value of the receivables and subtract the overcollateralization reserve to arrive at the amount of receivables being funded, then subtract the interest reserve, based on estimates of funding cost and daily sales outstanding (DSO). Each month thereafter, the administrator would adjust this amount based on variances in portfolio performance and expected funding costs.

In establishing the reserve for interest expenses, it is assumed that the program will terminate, that the funding discount will be insufficient to cover interest expenses during the amortization period because the DSO will have grown significantly and that interest rates will increase significantly.

Stress testing for interest rate risk at the R-1 (high) level requires reserves that are sufficient to account for the anticipated change in cost of funds during the amortization phase. Typical calculations would consider interest rate increases by a factor of 1.5 times (x) over the then-funding rate and for a DSO to increase by 1.25x the most recent history. This would lead to an interest reserve as follows:

Example

ABCP Rate 2.5%
 DSO 40

$$\text{Interest Reserve} \quad 2.5\% \quad \times \quad 1.5 \quad \times \quad \frac{40}{365} \quad \times \quad 1.25 \quad = \quad 0.50\%$$



TOTAL ENHANCEMENT REQUIREMENTS

When the total of credit losses, replacement servicing and interest expenses are added together, DBRS arrives at total credit enhancement requirements. Although the total calculation is derived from each individual component, overall, the total reserve levels must be available to cover all of these risks.

Based on the example reserve calculations, the total enhancement would be as follows:

Credit Loss Reserve	15.00%
Replacement Servicer Reserve	1.00%
Interest Expense Reserve	0.50%
Total Credit Enhancement	16.50%

In recognition of the fact that receivables performance can vary widely from month to month, especially for industries that exhibit seasonality, and migrate over time, the use of a dynamic credit enhancement reserve that adjusts according to the performance of the portfolio is appropriate. This mechanism requires the overcollateralization determined to cover credit losses to grow as losses grow or reduce as the performance of the portfolio improves. The time frame for loss comparison is the most recent 12-month performance, so the credit loss reserve will adjust upward quickly as a portfolio begins to deteriorate, but will not reduce until a full annual cycle has occurred to ensure that the higher level of credit loss was a one-time anomaly rather than a shift in the portfolio performance.

Dilution Reserve

Many sellers experience dilution in their receivables pools. Volume rebates; early-payment discounts; disputes over quality, quantity and/or delivery; and retroactive price adjustments are common sources of dilution. Since dilutions reduce the amount of receivables to which the conduit is entitled, it is essential to provide the conduit with access to additional receivables in the event that dilutions reduce the value of receivables owned by the conduit. For a typical transaction, where receivables revolve, dilutions are dealt with through “deemed collections” provisions. For any receivable that is diminished, retroactively discounted or where amounts due have otherwise been reduced, the amount of the receivable is a “deemed collection” by the seller and payment is required to be remitted to the conduit.

Sizing the dilution reserve is based on the type and volume of dilutions experienced by the seller. Certain types of dilutions, such as volume rebates, can be readily estimated and are usually predictable. As a result, stress multiples for such considerations are modest. Other dilutions, such as those related to price adjustments due to swings in the commodities market, discounts due to late shipment or unsatisfactory quality, are neither predictable nor stable. They may be linked to weakness in the seller’s industry overall, seller-specific factors such as the opening of a new production facility or other events that are not under the control of the seller. As a result, stress multiples for such dilutions are much higher. For a seller with stable and predictable dilution patterns, DBRS would take monthly dilution data and divide by the sales for the latest month that reflects the month in which the diluting sales occurred, stressed at a 2.0x level on a trailing 12-month basis. For sellers with more volatile dilutions, DBRS will use 3.0x the highest dilution percentage. Adding this to the level of predictable dilutions stressed to a modest level will result in the required dilution reserve.



If dilutions have historically been stable, depending on the magnitude of potential dilutions in relation to total enhancement levels, the nature of the receivables and obligors and other risks of the transaction, DBRS may allow an indemnity against dilutions to take the place of a funded dilution reserve for sellers rated A (low) or higher. When combined with the maximum funding calculation described earlier, this ensures that sufficient coverage against non-cash adjustments exists in the transaction and that the conduit will have access to unadjusted receivables during an amortization. If the seller's rating falls below the required level, the indemnity must be replaced by an increase in the credit enhancement by the required dilution reserve amount.

Summary

DBRS's approach to trade receivables securitization is to identify and quantify the risks associated with this asset class. Broadly speaking, they relate to two separate areas: the performance of the pool of assets and the seller's capability as servicer. By focusing on how these risks affect one another, ensuring that appropriate measures exist to monitor the pool performance and employing a dynamic reserve that adjusts with the portfolio performance, DBRS believes that the methodology employed to structure trade receivables transactions will significantly enhance the likelihood of full repayment of funds deployed by the conduits to enter into these transactions.



Appendix: Summary of Terms

ADMINISTRATOR

The sponsor of the conduit, which attends to day-to-day administration of the conduit (on behalf of the indenture trustee in accordance with an administrative agreement between the parties), such as arranging for funding, negotiating new transactions, distributing servicer reports to stakeholders and handling duties such as those related to the enforcement of the governing documentation.

CONDUIT

The special-purposes vehicle or ABCP conduit that acquires the receivables (either directly or via a co-ownership interest in a pool of receivables) and advances funds to the seller in consideration for the receivables. In Canada, conduits are usually trusts.

OBLIGOR

The entity responsible for the payment of a receivable. Obligors that are affiliated are deemed to be a single obligor.

RECEIVABLE

The right to receive payment under a contract between a seller and a obligor with respect to goods and/or services provided by the seller to the obligor.

SELLER

The company selling the receivables to the conduit either directly or through an intermediate vehicle.

SERVICER

The company responsible for underwriting, administering, maintaining and collecting the trade receivables that have been sold to the conduit.

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