

# Reports



## Introduction

**R**eports address specific issues of relevance to the financial system (whether institutions, markets, or clearing and settlement systems) in greater depth.

Financial markets have evolved enormously over the past decade, in terms of their size and the range of financial instruments available. This has provided Canadian corporations and households with much greater flexibility in terms of their preferred financial structure, including an appropriate balance between financial risk and return. Yet, new financial instruments may also raise concerns. For example, because they are new, they can interact with the rest of the financial system in unexpected ways, particularly during periods of financial stress.

Each of the reports in this issue addresses a rapidly evolving segment of financial markets that is of particular importance to corporations. The first report, *Recent Developments in Markets for Credit-Risk Transfer*, discusses the growing use of instruments designed to facilitate the transfer of credit risk. Although the total value of this global market is still relatively small, it has attracted considerable attention, partly because of a perceived lack of public information about who is ultimately bearing the risk related to different financial events.

The second report, *Developments and Issues in the Canadian Market for Asset-Backed Commercial Paper*, examines the expanding role played by the process of securitization in the market for commercial paper. This market, which exceeds \$60 billion, essentially packages large quantities of small, homogeneous financial assets into new securities. It has become an attractive source of funding for corporations, but at the same time, it can create an added level of complexity in financial relationships.



# Recent Developments in Markets for Credit-Risk Transfer

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**I**nstruments that transfer credit risk from one counterparty to another have existed for a long time.<sup>1</sup> For example, the use of letters of credit and financial guarantees goes back centuries. In recent years, however, the range of such instruments and their use have widened considerably. The modern era of credit-risk transfer (CRT) started in the United States in the 1970s with the packaging of residential mortgages into marketable securities (i.e., securitization) and was followed by the development of secondary markets for bank loans in the 1980s. International markets for credit derivatives, which transfer risk without transferring ownership of the underlying assets, were developed in the 1990s and have grown rapidly. Hence, credit risk is now viewed as being tradable, even when the lender is blocked from selling the underlying assets from its balance sheet.

CRT instruments facilitate the optimal allocation of credit risk in the economy and permit specialization by “unbundling” lending from exposure to credit risk. Financial institutions can also use these instruments to optimize the use of their economic and regulatory capital.

This article begins with a brief description of the various types of CRT instruments and the markets that they trade in, followed by an overview of activity in the Canadian CRT market. The

risks inherent in the instruments themselves are then examined.

## Instruments and Markets

The CRT landscape has evolved so that there are now numerous alternative mechanisms for managing credit risk, funding costs, capital allocation, and balance sheet disclosure. The specific instrument employed depends largely on the objective of the transfer and the nature of the credit risks being transferred. Table 1 summarizes the available CRT instruments. Interviews with market participants suggest that those who want to transfer risk usually prefer to simply sell the asset. By taking the asset right off the balance sheet, financial ratios are improved, and funds are freed up for other uses, including paying down debt. But selling is not always possible or cost-effective. For example, a loan may not be transferable, either for legal or customer-relations reasons; the cost of selling may be prohibitive (because of liquidity or transactions costs); or the borrower may be able to block the sale. Such factors have boosted the development of markets for credit derivatives, which transfer risk synthetically. The paperwork and legal work required to sell the loan as a separate item may also outweigh the benefits. This is often the case for credit card receivables and personal lines of credit. As a result, securitization markets, such as those for asset-backed securities (ABSs) and collateralized debt obligations (CDOs), have emerged.

## Credit Derivatives

Credit derivatives are contracts that transfer credit risk and return without transferring ownership of the underlying asset.

1. Credit risk relates to the possibility that a counterparty to a financial contract fails to meet its commitments, because of bankruptcy or other reasons. It also reflects the possibility of financial losses that can result when a counterparty’s credit rating is downgraded.

\* This article reflects work done by the author as part of a working group organized by the Bank for International Settlements (BIS 2003a), as well as work currently in progress with François-Louis Michaud (Banque de France) and Janet Mitchell (Banque Nationale de Belgique).

### Credit Default Swaps

Credit default swaps (CDSs) represent about three-quarters of the global market for credit derivatives, by notional amount outstanding.<sup>2</sup> These instruments basically provide “insurance” against various “credit events.”<sup>3</sup> That is, the protection buyer pays the protection seller periodic premiums, in return for a payment if a credit event occurs.

Credit events include bankruptcy, payment failures, and distressed restructuring,<sup>4</sup> as well as repudiation or moratorium in the case of the obligations of sovereign governments. “Damages” can take the form of a single cash payment that is typically equal to the difference between the par value of the “reference asset” and its market value at the time of the credit event. However, CDSs usually settle “physically,” with the protection buyer delivering the reference asset to the protection seller for its par value.

While most CDS contracts are based on one single reference asset or entity, basket swaps are based on portfolios of reference assets.

### Other Types of Credit Derivatives

The other quarter of the credit derivatives market is composed of total-rate-of-return swaps (TRORSs), credit spread options (CSOs), and credit-linked notes (CLNs). TRORSs are contracts that effectively transfer the total economic performance of an underlying asset to the counterparty. A TRORS is really not much more than a synthetic financing transaction or lease, so its status as an instrument for transferring credit risk is somewhat debatable. A CSO is truly a CRT instrument, since it isolates and transfers

2. Some definitions of credit derivatives include synthetic securitization and asset-swap activity. In this article, synthetic securitization is treated as a subset of securitization, and asset swaps are excluded on the grounds that they have an element of ownership transfer.
3. Although credit guarantees and acceptances are quite similar to credit default swaps (CDSs), they are not included in this article’s definition of CRT instruments, owing to subtle contractual features that undermine their usefulness for the transfer of credit risk.
4. The term “distressed restructuring” refers to adjustment in the terms of the reference asset in a CDS contract in a way that is unfavourable to the holders. Such adjustments include reductions in the principal amount or interest payable, as well as postponement of payment.

**Table 1**  
**Options Available for Credit-Risk Transfer**

Typical CRT <sup>a</sup>	Underlying assets	
ABS & ABCP	Loans to households	Residential mortgages
		Credit card receivables
		Auto loans and leases
	Transferable debt (loans and bonds)	Commercial mortgages
		Trade receivables
		Equipment leases
Outright sale Conventional CDOs		Corporate debt
		Emerging-market debt
Synthetic CDOs, CLNs, CDSs, and CSOs	Non-transferable and transferable debt	Corporate loans
		Emerging-market loans

**a. Abbreviations**

- ABS: asset-backed security
- ABCP: asset-backed commercial paper
- CDO: collateralized debt obligation
- CLN: credit-linked note
- CDS: credit default swap
- CSO: credit spread option

declines in the price of the underlying asset that are independent of shifts in the general yield curve. In effect, a CSO is a CDS that specifies the widening of the yield spread as a credit event.<sup>5</sup>

CLNs are securities that effectively embed CDSs within a traditional fixed-income structure. They typically pay periodic interest and, at maturity, the principal minus a payment on the embedded CDS if a credit event has occurred. CLNs appeal to investors and protection sellers who are prohibited from trading directly in derivatives contracts.<sup>6</sup>

## Securitization

Asset-backed securities (ABSs) bundle together numerous assets into a “special-purpose vehicle” (SPV) which, in turn, issues marketable securities. Various structural features and third-party enhancements are used in ABSs to transform a bundle of obligations that are not necessarily high grade (sometimes these even include “junk” bonds) into high-grade (e.g., AAA-rated) “senior securities.”

Conventional collateralized debt obligations (CDOs) are very similar to ABSs, the main distinctions being the types of assets securitized and the number of subordinated “tranches.” ABSs typically bundle fairly homogeneous consumer loans, such as credit cards, automobile loans, and mortgages, whereas CDOs are usually backed by more diversified corporate and emerging-market debt.

ABS structures typically issue, at most, a couple of tranches. For example, they will often sell a AAA-rated senior note to investors and a low-rated (e.g., BBB) junior security back to the originator. CDO structures, on the other hand, issue numerous tranches; selling AAA-rated senior notes, A-rated “mezzanine” notes, and one or two BBB- to BB-rated “subordinated” notes to investors, as well as an unrated “equity” tranche to investors and back to the originator. The lower-rated tranches serve as credit enhancements to the more senior securities, since they receive

only the cash flow that remains after the claims of the structure’s more senior tranches have been satisfied.

In addition to (or instead of) using subordination, credit risk can be reduced by transferring into the SPV assets with a greater aggregate value than the value of the securities issued (overcollateralization). Third-party enhancements are also frequently used. These include letters of credit and surety bonds from highly rated financial institutions.

In conventional securitizations, the assets are transferred (risk and ownership) into the SPV, whereas synthetic securitizations use one or more CDSs to effect the risk transfer. In this last case, proceeds from the note issuance are used to buy high-quality (usually AAA-rated government) securities. Interest and principal payments on these securities, along with the CDS premiums paid by the originator of the asset, provide the funds for paying interest and principal on the notes and for making CDS payments to the originator if default events occur.

The advantage of the synthetic structure is that it can be used in situations where the underlying assets are not transferable, and it is especially useful for hedging credit lines and other undrawn lending commitments.

## Canadian CRT Market Activity

Canadian involvement in CRT markets has followed two paths: development of a domestic market and trade in foreign markets. Domestically, an active market for asset-backed securities has developed, but there is little secondary trade in credit derivatives and loans. Foreign interest in Canadian CRT markets is virtually non-existent,<sup>7</sup> but some Canadian banks are significant participants in the full spectrum of CRT activity in foreign markets. While foreign insurance companies are becoming big players in U.S. and European CRT markets, Canadian insurers are not involved to any great degree in either Canadian or foreign CRT markets.

The bulk of the domestic Canadian CRT activity takes the form of ABSs, particularly asset-backed

5. Bonds are priced in terms of a yield spread over benchmark instruments of similar maturities, such as government bonds and interest rate swaps. This compensates the investor for the bond’s credit and liquidity risk relative to that of the benchmark instrument. (See Miville and Bernier 1999.)

6. See Kiff and Morrow (2000) for more detail on TRORs, CSOs, and CLNs.

7. Some argue that the 10 per cent withholding tax on interest paid by Canadians to U.S. residents may be partly responsible for the lack of foreign interest in Canadian securitization markets.

commercial paper (ABCP).<sup>8</sup> The domestic market for other types of CRT instruments is fairly small. Most Canadian banks run trading operations out of their Toronto or Montréal offices that are purely intermediary. On the other hand, some are quite active in U.S. and U.K. markets for credit derivatives and securitizations. Several banks, in particular, are very active in European markets for synthetic CDOs, although details on such activity are extremely hard to track.

## Financial System Issues Raised by CRT Markets

Although numerous benefits can be associated with CRT instruments, a recent report by the Bank for International Settlements (BIS 2003a) and some market observers have identified areas of potential concern.

### Lack of Transparency and Disclosure

The BIS report identified lack of disclosure at the entity level and the deal level as an area of concern that may require a policy response from the authorities. Information regarding risk-transfer activity by individual banks can be difficult, if not impossible, to find in financial statements, even among institutions known to be extensively involved in CRT markets.

It should be pointed out, however, that some Canadian banks have dramatically improved their disclosure practices for CRT since the BIS report was finalized. For example, two banks provided fairly extensive information on their CDS activity in their 2002 annual reports; one even disclosed the extent of its ABS liquidity and credit-enhancement exposure.<sup>9</sup> Further moves in this direction would be helpful.

At the transaction level, transparency regarding not only the composition of the securitized-asset pools, but also the identification of third-party enhancers would be helpful. Although credit rating agencies have extensive access to this information for rating-assignment purposes, it is often difficult for private investors to

do their own analysis. Particularly in the case of ABSs, investors should at least be aware of who is providing third-party enhancements.<sup>10</sup>

The disclosure of and the accounting for such activity should, however, be helped by the U.S. Financial Accounting Standards Board's (FASB) *Interpretation No. 46*, issued in January 2003. In April 2003, the Canadian Accounting Standards Board (AcSB) of the Canadian Institute of Chartered Accountants (CICA) announced that it is planning to approve a similar guideline. Not only will this raise the risk-transfer standards for removing securitized assets from originator balance sheets, but it may require commercial banks to bring onto their balance sheets some of the assets in the ABCP programs that they sponsor.<sup>11</sup>

Information on aggregate CRT activity is also lacking. In particular, the BIS report noted the extreme divergence in estimates regarding the size of the markets, and concerns have been raised as to where the credit risk is being transferred.<sup>12</sup>

Fitch Ratings (2003) has also raised some interesting questions regarding whether market participants' management information systems have kept up with their expanding activity in these markets.

### Complexity and Reliance on Rating Agencies

The BIS report notes the critical role of the credit rating agencies in various CRT markets, particularly in securitization markets. To properly evaluate such structures, rating agencies have had to significantly expand the scope of their assessments. For example, they evaluate ABS and

8. See the article by Toovey and Kiff in this *Review* (p. 43) for more detail on the Canadian ABCP market.

9. See Toovey and Kiff (p. 43) for more detail on ABS liquidity and credit enhancements.

10. See Toovey and Kiff (p. 43) for more on this point.

11. See Mountain (2003) and Parfeniuk and Azarchs (2003) for some early speculation as to the ultimate impact of FASB (2003).

12. See Fitch (2003) for the preliminary results of a survey of protection-selling activity. The U.K. Financial Services Authority has also expressed concerns about transfers into unregulated companies and insurance companies (FSA 2002). However, although the British Bankers' Association has estimated that insurers comprise 33 per cent of all protection-sale business in credit derivatives markets (BBA 2002) (versus 6 per cent on the protection-purchase side), more than 60 per cent of this was with monoline insurers. Monolines specialize in financial guarantees.

CDO structural enhancements, as well as assessing management systems, controls, and abilities. This is well beyond their traditional purview.

Disclosure shortfalls make this issue even more problematic, since it is almost impossible for individual market participants to do their own ABS/CDO risk analysis.

Other rating-related issues that have been raised by market participants with regard to ABS/CDO markets are “notching” and “rating shopping.”

- **Notching** is the practice whereby a rating agency that is assessing the securitized assets in an ABS/CDO automatically reduces the ratings given to the underlying assets by any other agency. This is relevant only for securitized assets that the first agency does not rate itself, but the practice is seen by some as anti-competitive and designed to force CDO managers to pay for new ratings on such underlying assets from the ABS/CDO rater.
- **Rating shopping** is the practice of “cherry picking” credit ratings for different CDO tranches. For example, if one rating agency is known to be harsher on senior tranches and a second to be harsher on mezzanine tranches, the originator generates the highest ratings for the whole structure by having the first agency rate the mezzanine tranche and the second rate the senior tranche.<sup>13</sup>

### Concentrated Intermediation

The BIS report points out that the extremely concentrated intermediation found in most CRT markets undermines the potential tradability of the instruments. High levels of concentration are particularly evident in the CDS market; for example, the U.S. Office of the Comptroller of the Currency has recently reported that three banks accounted for 92 per cent of outstanding credit derivative positions at U.S. banks (OCC 2002).

The shrinking pool of financial institutions rated at or above AA (low) could make things worse in this regard. The AA (low) threshold is particularly important with regard to counterparty risk on CRT transactions and third-party

enhancements. For example, a key requirement for some ABSs to maintain top-tier credit ratings is that any third-party enhancers have minimum ratings of R-1 (middle) or AA (low) from the Dominion Bond Rating Service (DBRS). Most major Canadian banks are rated R-1 (high) and AA (low), but several have been earmarked as more likely to be downgraded than upgraded in the near future.<sup>14</sup>

Also, most synthetic CDOs require a guarantee, typically from a small pool of AAA-rated monoline insurance companies, to achieve a AAA rating on the most senior tranche.

### The Impact of CRT Activity on Cash Markets

Some market observers have discussed the potential for the trading of CRT instruments to influence the prices and yields of the underlying obligations of the reference entity. For example, the prehedging of impending loan-syndication positions in CDS markets (front running) has been said to lead to widening spreads for the obligations of the underlying entities.<sup>15</sup> Also, “arbitrage” CDOs, which are built to exploit “average” differentials between the yields on CDO tranches and the underlying securitized assets,<sup>16</sup> require that the manager purchase the underlying assets in the open market prior to launching the CDO. This activity has been held responsible for idiosyncratic price increases in the underlying assets.

Some market participants also claim that hedge funds have used CDSs aggressively, buying protection in order to widen spreads in the CDS market and thus create an impression that the

13. See Perraudin and Peretyatkin (2002) for an analysis of rating shopping.

14. Three of the big-five banks that are rated AA (low) have been assigned a negative “trend” indication by the DBRS. The DBRS trend indicates the direction in which the credit rating is heading.

15. See Armstrong (2003) for a detailed discussion of loan syndication. Arguably, syndication is a form of CRT. It is a form of risk transfer that occurs prior to origination, however, whereas this article focuses on transfers that occur after origination.

16. In “balance sheet” CDOs, the institution that originated the assets is initiating the transaction to improve financial ratios or reduce regulatory capital requirements. Arbitrage CDOs are usually initiated by investment banks, dealers, and money managers who are motivated by the potential profits from yield spreads and from actively trading the securitized assets.

reference entity is in trouble.<sup>17</sup> Empirical evidence supports the contention that such spread widening precedes the widening of spreads in cash markets,<sup>18</sup> but no study has yet suggested a causal link. In fact, the more likely reason for CDS spreads to lead cash-market spreads is that it is easier and more cost-effective to sell credit risk in CDS markets.<sup>19</sup>

### Reduced Incentives to Behave Constructively During Restructuring

Unhedged lenders are usually inclined to participate constructively in distressed restructurings in order to minimize their potential losses. A lender who has purchased protection that covers restructuring events may not be so inclined. On the other hand, a lender that has bought protection that does not cover restructuring may even have an incentive to push the obligor into bankruptcy.

### Basis and Pricing Risk

From the perspective of financial stability, the BIS report raised concerns regarding mismatches between CDSs and the instruments they are supposed to be hedging (i.e., basis risk). These mismatches usually revolve around the definition of credit events, particularly events pertaining to restructuring and settlement mechanics.<sup>20</sup>

The BIS report also voiced some concerns regarding the youthful state of the literature that pertains to the pricing of basket swaps and securitization structures. Not only is the theoretical work in its very early stages, but assessment of default correlation, which is critical for any such models, still appears to be very crude.<sup>21</sup>

### Risks Inherent in CRT Instruments

Two additional areas of concern related to CRT instruments themselves are legal risks and incentive problems.

#### Legal Risk

One of the key legal assumptions that make ABS and conventional CDO structures “work” is the “true sale” principle. In other words, ownership and all of the legal rights to the loans should be absolutely transferred to the SPV so that it is insulated from originator bankruptcy (i.e., it is bankruptcy remote). This has been challenged unsuccessfully in the courts, in both the United States and Canada, but the challenges serve as a reminder that no structure is completely “bankruptcy proof,” and that securitized assets can become, at least temporarily, entangled in the originator’s bankruptcy proceedings. Problems of this nature can be avoided, however, by using synthetic structures, where no ownership transfer actually takes place.

In the CDS market, the use of debt restructuring as a triggering event has become rather controversial and has been dropped from some contracts. The intent of basing CDS payouts on debt restructuring by the reference entity was to ensure that the protection covers all credit events that might cause the price of the reference asset to decline. However, circumstances occasionally arise where restructurings do not result in any damages to the protection buyer, but a payment is still triggered. Although efforts have been made to narrow the focus of this trigger to “distressed” restructurings, another issue has evolved around the delivery option that the protection buyer holds in CDSs

17. Sender (2002) provides several examples where it appeared that hedge funds had aggressively purchased protection on entities whose credit ratings hovered on the precipice of becoming “junk bonds” (i.e., rated below BBB (low) by DBRS). The point of targeting such firms is that numerous institutional investors are prohibited from holding, or at least limited in their ability to hold, junk bonds. If, in fact, aggressive CDS buying does cause fundamental ripple effects that push credit ratings into the junk bond range, such activity could be very profitable.

18. See Box 2 in Kiff and Morrow (2000) for a discussion of the linkages between CDS premiums and the yields to maturity on the reference assets. Also, see Hull, Predescu, and White (2003) for empirical evidence of the “leading” role taken by CDS spreads when credits are deteriorating. They also show that CDS spreads tend to be closely aligned with cash-market spreads when they are narrowing.

19. The BBA (2002) survey shows that hedge funds are much more active buyers of protection than sellers.

20. See Kessler and Levenstein (2001) and O’Kane and McAdie (2001) for a discussion of basis risk.

21. One difficulty with assessing default correlations, and default statistics in general, is the paucity of defaults, particularly among investment-grade entities.

that settle “physically.”<sup>22</sup> In several recent restructurings, it has been argued that protection buyers have abused the option by delivering lower-priced, low-coupon, longer-maturity bonds against the higher-valued loans that the contracts were designed to protect.<sup>23</sup> The treatment of restructuring was identified as an important issue in the BIS report, and it may not be completely resolved unless the new Basel Capital Accord drops the need for CDS hedges to include restructuring as a credit event.<sup>24</sup>

In fact, the most recent Accord proposal (BIS 2003b) does indeed make restructuring an optional event when the bank has complete control over the restructuring decision. However, since few banks are in this position, the BIS indicates that it will continue to explore alternative restructuring treatments.

### Incentive Problems

Both BIS (2003a) and Kiff, Michaud, and Mitchell (2003) discuss extensively the ways that CRT instruments change the relationships between borrowers and lenders, creating new relationships with other risk takers. Many features inherent in CRT instruments limit the conflicting incentives that could arise from these relationships.

For example, lenders have an incentive to protect only high-risk assets, and to lower their standards regarding the screening and monitoring of such borrowers after they have purchased protection. Appropriate incentives are introduced by credit support from lenders (e.g., providing letters of credit for ABSs), structural enhancements (e.g., overcollateralization and taking subordinated interests), and through the

issuer’s desire to maintain a reputation for issuing quality securities.

CDOs, which give collateral managers some latitude over the composition of the asset pool and timing of transactions within the pool, are particularly prone to incentive problems. For example, a CDO manager who is also the source of the pool’s assets might be tempted to replace maturing assets with low-quality assets off its own balance sheet. Such incentives can be mitigated by the use of independent management boards, strict substitution rules, and the provision of information on the securitized assets, plus manager participation in the equity tranche and other forms of risk retention.<sup>25</sup>

### Summary

There is little doubt that CRT instruments increase market efficiency and the dispersion of risk, but in doing so they create other potential risks and problems. These include legal and incentive-alignment issues that the market seems to be well on the way to solving. In addition, on a more systemic level, disclosure and transparency seem low, although various authorities are in the process of requiring improvements in this area for many of these instruments. Finally, the increasing complexity of these instruments is of some concern as is the increasing reliance of market participants on rating-agency and “black-box” risk assessments.

Such concerns are allayed to some extent by the still low levels of activity in these markets, particularly when compared with other risk-transfer markets, such as those for interest rate and currency derivatives. For example, the notional value of outstanding contracts for credit derivatives is only about 2 per cent of the value of outstanding interest rate and currency-swap contracts.<sup>26</sup> Also, for many lenders, managing

22. In physical delivery contracts, it is necessary to provide for more than one deliverable asset, to ensure that the contract can actually be settled.

23. In 1999, the International Swaps and Derivatives Association (ISDA) introduced some modifications to the market-standard documentation that restricted the terms to maturity of the assets that can be delivered under a restructuring event. However, this “modified restructuring” language does not seem to have completely eliminated the potential for delivery option exploitation.

24. On 3 March 2003, the Creditflux news service reported that CIBC is suing Ace Capital Re Overseas Ltd. over the monoline insurance company’s refusal to honour its side of a CDS that referenced Xerox. In 2002, Xerox’s bankers extended the maturities of some of its bank loans, triggering a controversy as to whether this was a “distressed” restructuring.

25. See Nazarian (2002) for a discussion of potentially abusive practices by CDO managers and some suggested solutions.

26. According to the ISDA (2003) there were US\$2 trillion of credit derivatives outstanding (by notional value) at the end of 2002, versus US\$100 trillion of interest rate and currency derivatives. However, the potential risk exposures being transferred by credit derivatives, relative to those being transferred by other types of derivatives, may in fact be larger than those inferred from just comparing notional values. For example, the impact of a reference entity bankruptcy on the value of a credit derivative would likely be much greater than that of even the most extreme interest rate or currency “events.”

credit risk at the origin of the transaction remains the preferred way of achieving their target profile for credit risk.<sup>27</sup>

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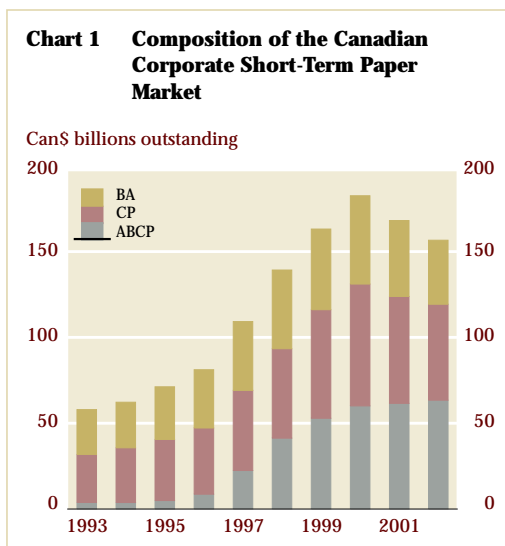
27. This is demonstrated in, for example, the Rutter Associates survey, which is summarized in Smithson et al. (2002).

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# Developments and Issues in the Canadian Market for Asset-Backed Commercial Paper

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The market for asset-backed commercial paper (ABCP) in Canada has grown considerably over the past 6 years. It now accounts for about 40 per cent of the market for short-term corporate paper (Chart 1), and is the dominant form of asset-backed securities issued in Canada (Table 1). Asset-backed securities typically repackage large quantities of small, homogeneous assets into a “special purpose vehicle” (SPV) that issues highly rated securities. Typical assets include mortgages, credit card receivables, automobile loans and leases, and trade receivables.

The development of the ABCP market has been encouraged by complementary factors. Investors have been seeking to invest in highly rated short-term securities while, at the same time, the supply of government treasury bills has shrunk (Chouinard and Lalani 2001–2002, 19).

The big buyers of ABCP appear to be money market mutual funds, pension funds, corporations, governments, and financial institutions.<sup>1</sup> There is little foreign interest in the domestic ABCP market. The 10 per cent withholding tax levied on interest payments by Canadians to U.S. residents makes it uneconomical to sell securitized short-term corporate obligations, equipment leases, residential mortgages, and personal loans to U.S. investors.<sup>2</sup>

On the supply side, securitization provides firms with an alternative source of funding, potentially at lower cost than traditional sources. The alternatives include traditional commercial paper and bankers’ acceptances. Commercial

1. This buy-side information is based on informal surveys conducted by the authors among the Canadian banks active in the ABCP market.
2. There is some expectation within the market that the withholding tax will be lifted (Fingerhut 2003).

paper will usually be more expensive for all but the highest-rated firms, since the market demands a higher rate of return on instruments rated below typical ABCP. Bankers' acceptances effectively carry the guarantee of a top-rated bank and can be issued at rates that are competitive with those on ABCP, but after the bank "acceptance" charge is factored in, they would probably be more expensive.

Another important supply-side factor has been the capital taxes levied on corporations by the federal and provincial governments. Such taxes are paid regardless of whether the corporation is profitable, and differ from province to province, recently ranging from 0.225 per cent to 0.865 per cent of capital. For purposes of this tax, "capital" includes, among other things, capital stock, retained earnings, and liabilities.<sup>3</sup> Hence, tax savings could result from paying down liabilities with the proceeds of securitizations. However, both the federal and some of the provincial governments have recently announced that they will be reducing these taxes in steps, so that by 2008 they should be completely eliminated.

The major banks account for the issuance of about 90 per cent of outstanding ABCP, with three of them accounting for over 75 per cent. In addition, some banks have been quite active in the U.S. ABCP market.<sup>4</sup>

Most ABCP issuance takes the form of a multi-seller structure, in which the sponsor, usually one of the major banks, seeks to provide financing to a diverse group of clients. Multi-seller ABCP provides funding on an anonymous basis, which could be important for some who might otherwise issue traditional commercial paper or bankers' acceptances.<sup>5</sup> In contrast, in

**Table 1**  
**Outstanding Domestic Asset-Backed Securities<sup>a</sup>**  
\$ billions

	Asset-backed commercial paper		Single-seller term	Total
	Multi-seller <sup>b</sup>	Single-seller <sup>c</sup>		
Bank of Montreal	19.476	-	3.587	23.063
CIBC	11.356	3.465	4.205	19.026
TD Bank	9.713	4.820	2.468	17.002
Scotiabank	2.681	0.534	5.561	8.776
Royal Bank	5.486	0.086	2.992	8.545
Merrill Lynch	-	-	3.709	3.709
Coventree Capital Group Inc.	3.342	-	-	3.342
National Bank of Canada	-	0.919	1.415	2.334
Other	1.862	0.058	0.488	2.408
<b>Total</b>	<b>53.897</b>	<b>9.881</b>	<b>24.426</b>	<b>88.204</b>

a. National Housing Act mortgage-backed securities (NHA-MBS) transactions are not included in the tabulation.

b. The multi-seller ABCP breakdown by institution is based on who sponsors the issuance.

c. The single-seller breakdowns are based on which institution provided lead structuring services.

Source: Dominion Bond Rating Service. Data as of 31 December 2002.

3. For more detail on capital tax calculations, see McQuillan and Cochrane (1996).
4. According to Standard & Poor's, at year-end 2002, four Canadian banks were involved in US\$31.5 billion of U.S.-based multi-seller ABCP issuance. One bank is also involved in four European structured-investment vehicles (SIVs) with an outstanding value of US\$3.7 billion at the end of September 2002. An SIV is an asset-backed structure that buys high-quality medium- to long-term fixed-income assets and funds them with commercial paper.
5. Anonymity could be important to a borrower for whom the signal effects of a more visible funding operation might reduce its access to other funding sources.

single-seller ABCP issuance, the sponsor is securitizing its own assets. Although most single-seller issuance programs are operated by one of the major banks, several retailers and automobile companies issue ABCP directly.

## The Mechanics of Credit-Risk Reduction

Ninety-five per cent of Canadian ABCP carries an R-1 (high) credit rating from the Dominion Bond Rating Service (DBRS). Few securitized assets would receive such a strong rating on a stand-alone basis.

To achieve this rating, the credit risk of the ABCP is reduced by way of various structural and third-party enhancements. The structural enhancements include transferring into the SPV assets with a greater aggregate value than the value of the ABCP issued (“overcollateralization”). Another popular enhancement is the issuance by the SPV of lower-rated securities that absorb the first defaults (“subordination”).<sup>6</sup>

Third-party credit enhancements typically take the form of letters of credit and surety bonds from highly rated financial institutions. The legal documentation for most ABCP specifies minimum ratings for such enhancers (usually AA (low) or R-1 (mid) by the DBRS), but the names of the enhancement providers are not always made known. In fact, in a typical multi-seller issuance program, the sponsor itself could be one of the credit enhancers.<sup>7</sup>

In addition to these concrete enhancements, “implicit recourse” to the originator of the loan may play a role in mitigating credit risk. Examples of implicit recourse include repurchasing assets from the SPV at an amount greater than fair value, as well as exchanging performing assets for non-performing assets. Implicit recourse is a form of moral or reputational risk mitiga-

tion. For example, should the originator’s reputation be tarnished by a poorly performing securitization, its ability to securitize cost-effectively in the future could be compromised. The originator therefore has an incentive to provide additional support. However, regulators look unfavourably on banks that provide such support to the issuance programs that they manage. For example, the most recent consultation paper on the Basel Capital Accord (BIS 2003) proposes severe regulatory penalties for banks that provide such non-contractual support.

## Reduction of Rollover Risk<sup>8</sup>

Because the assets are typically of longer maturity than the ABCP financing them, some sort of liquidity buffer is required to protect against rollover risk and timing mismatches. Hence, ABCP issuance programs purchase liquidity protection. At a minimum, such protection must safeguard against what the Office of the Superintendent of Financial Institutions (OSFI) calls a “general market disruption,” which is defined by market participants as a situation in which “not a single dollar of corporate or asset-backed commercial paper can be placed in the market—at any price.”<sup>9</sup>

A general market disruption is a highly unlikely event, and Canadian liquidity facilities, which do not cover anything beyond this minimum criterion, have never been triggered. According to OSFI (1994), a bank providing liquidity protection that embeds protection against other risks, like credit risk, would incur regulatory capital charges that, when passed on to the issuance program, could make the ABCP less economical.

U.S. regulatory charges have, however, been lighter on liquidity facilities that offer some degree of credit protection. Hence, liquidity enhancement for U.S. ABCP programs typically covers more than just general market

6. See the article by Kiff in this *Review* (p. 33) for a more generic discussion of securitization and other methods of transferring credit risk.

7. Such “self insurance” helps to align the interests of the issuance-program sponsor (and originator in the case of some single-seller ABCP) and the ABCP holders. See Kiff, Michaud, and Mitchell (2003) for a more detailed discussion of incentive-alignment issues in securitization.

8. Important contributions to the discussion of rollover risk were made by Andrew Kriegler, Huston Loke, and Maria Rabiasz.

9. OSFI (1994) provides details on the Canadian regulatory rules that apply to bank securitization activity but does not explicitly define the term general market disruption. Kriegler et al. (2002) provide the market’s generally accepted interpretation given here.

disruptions, offering some elements of protection against credit risk.<sup>10</sup>

In fact, a couple of U.S. rating agencies have questioned the adequacy of Canadian-style liquidity enhancement. Their position is that if the rollover protection is not at least somewhat specific to the issuance program, then “timely payment”—an essential element of a top-tier rating by their standards—is not guaranteed. A recent report by Standard & Poor’s points to circumstances when, even in the absence of a general market disruption, liquidity problems could arise although there was no substantive deterioration in the quality of the ABCP program’s underlying assets. These circumstances include rumours and reputational concerns regarding the program sponsor, as well as temporary program-specific operational problems (Rabiasz and Connell 2002). Moody’s has drawn a parallel with the partial market disruption that occurred in the United States following the 11 September 2001 attacks on New York City, noting that Canadian liquidity lines are currently so restrictive that they could not be invoked, even if such a clearly non-credit event caused the liquidity crisis (Kriegler et al. 2002). Because these types of events are not covered by Canadian-style liquidity enhancements, it becomes difficult for Standard & Poor’s and Moody’s to give even investment-grade ratings to Canadian ABCP.

However, the DBRS argues that Canadian ABCP is already fully protected against timing mismatches and credit-deterioration problems, via the program’s credit enhancements and operational practices. Hence, they say that it would be redundant to add U.S.-style supplemental credit-risk protection to the liquidity facility, and they give most Canadian ABCP their highest rating, R-1 (high). In a recent discussion paper, Moody’s has also proposed that the quality of the underlying structure be taken into consideration when determining liquidity-enhancement requirements for top-tier ratings.<sup>11</sup>

Moody’s suggests that while it is possible for liquidity enhancement to be completely separated from credit enhancement, doing so effectively requires a costly assessment of the stand-alone credit quality of the ABCP program.

As an alternative that does not require liquidity enhancement, some ABCP issuance programs offer “extendible commercial paper” (ECP), which gives the program sponsor the option of extending the term of an issue up to a cumulative maximum of 365 days. The extendibility feature replaces the liquidity facility, essentially passing the liquidity risk, and the compensation for bearing this risk, on to the investor. ECP accounted for about 5 per cent of the Canadian ABCP market at the end of 2002.

## Legal Risks Associated with the Securitization Process

The legal structures that support ABCP programs are complex compared with those for conventional debt securities, and there is little standardization of the legal documents that make up their structures. The situation in which ABCP is most likely to be subject to a legal challenge is one where the originator becomes insolvent and its creditors seek to bring the securitized assets back into the estate of the originator to satisfy the claims of the creditors.

The key legal risk is the risk that the transfer of assets into the SPV may be found not to constitute a “true sale,” thereby leaving the securitized assets within the estate of the originator. The legal documentation supporting an ABCP program must be carefully crafted to produce a legal sale of the assets rather than a loan. Although there have been few court challenges of asset securitization in Canada, the recent decision of the Ontario Superior Court of Justice in *Metropolitan Toronto Police Widows and Orphans Fund v. Telus Communications Inc.*<sup>12</sup> demonstrates the strict tests that the courts will apply in determining whether an asset securitization is a true sale. In this case, the Court looked beyond the wording of the contract that created the asset transfer (which clearly showed an intention to create a sale) to examine the conduct of the parties, as well as traditional indications of true sales, including transfer of ownership risk to the purchaser; which party has the right to any

10. Proposed changes to the Basel Capital Accord (BIS 2003) would require the credit risk embedded in U.S.-style liquidity enhancements to be reflected in capital charges. However, implementation of the new Accord is not expected until year-end 2006. These changes are not expected to affect OSFI’s treatment of Canadian liquidity facilities.

11. See Adams (2001) for the DBRS viewpoint and Kriegler et al. (2002) for that of Moody’s.

12. [2003] O.J. No. 128

surplus arising from the collection of the receivables; whether the assets are clearly identified; whether there is an identifiable purchase price for the assets; and which party is responsible for collecting the receivables on whose behalf. In this case, however, a true sale was deemed to have taken place.

While the need to structure the ABCP program as a true sale is the most important legal risk associated with ABCP, there are other significant legal risks. These include the risk that the SPV may not be properly structured as a legal entity separate from the originator, thus failing to make it “bankruptcy remote;” the risk that the transfer of assets to the SPV may be set aside as a fraudulent preference and, in the case of mortgage-backed securities, the risk that the rights of the holders of the commercial paper could be subordinate to the claims of creditors who have registered assignments of the mortgages on title.

The only way that the legal risks associated with ABCP can be controlled is by careful crafting of the legal structure for each securitization program. Security holders can take some comfort from the fact that an issue that has obtained a minimum rating of R-1 (high) from DBRS has likely undergone some due-diligence examination of the underlying structure. In this context, holders decide whether a high credit rating from one rating agency is sufficient comfort as to the underlying legal structure of an issue or whether further examination of the structure is needed.

## Disclosure Issues

The fact that securitization is a complicated process involving many participants would seem to argue for a high degree of disclosure. But the market is relatively opaque.

## Transaction Details Are Hard to Come By

The rating-policy decisions taken by Standard & Poor’s and Moody’s mean that the sole source of details regarding securitization transactions in the ABCP market is the DBRS. Like all commercial paper, ABCP is exempt from the prospectus and other disclosure requirements of Canadian securities law. As a result, no documents pertaining to most of the big multi-seller

issuance programs can be found on SEDAR (the System for Electronic Document Analysis and Retrieval).<sup>13</sup> Thus, an investor who wants a “second opinion” is currently constrained, although some relevant details may be available directly from the sponsor or underwriter of the issuance program. Furthermore, what little detail is publicly available is often silent on which banks are providing credit and liquidity enhancements and on the composition of the asset pool.

Although the rating agencies publish some of this information, many details are held back because of confidentiality policies. The DBRS has expressed concern in this regard:

Much more detailed information on pools and sellers, and better statistics on asset quality and enhancement levels are needed. DBRS already publishes some information on each pool monthly, but much more information is available (Schroeder and Loke 1998, 10).

Nevertheless, in the case of multi-seller programs, increased disclosure regarding the asset pool would have to be mindful of the desire for originator anonymity. There are, however, no obvious reasons why information about credit and liquidity enhancement should not be made available.

## Unclear Degree of Real Risk Transference

Real and effective transfer of risk is one of the premises upon which securitization is based. From the little information available on individual issuance programs, however, it appears that the originating institutions can choose to retain a fair degree of exposure to the assets they are securitizing. For example, in the case of some Canadian multi-seller issuance programs, some banks may have credit-risk exposures to the assets in the SPV. It would be useful if more information on such matters was disclosed.

Improvements may be on the way, thanks to moves by the Canadian Accounting Standards

13. SEDAR is managed by CDS INC., a subsidiary of The Canadian Depository for Securities Ltd. (CDS). All Canadian public companies and mutual funds must file on SEDAR all documents required by the various bodies that regulate securities markets.

Board of the Canadian Institute of Chartered Accountants and the U.S. Financial Accounting Standards Board (FASB) to improve disclosure standards for all securitization activity. These new standards may also require banks to include in their balance sheets some of the assets in the multi-seller ABCP issuance programs that they sponsor. The question of how much exposure is to be brought onto their balance sheets (i.e., consolidated) may depend in part upon the amount of credit-risk protection embedded in any liquidity enhancements provided by the sponsoring bank. It seems likely that some Canadian banks will have to consolidate the exposure that pertains to their U.S.-based programs, where liquidity protection sometimes goes beyond general market disruption. The degree of consolidation required for their Canadian-based programs is less clear, given the more restrictive nature of the liquidity enhancements.<sup>14</sup>

In addition, "Pillar 3" of the new Basel Accord will require increased disclosure of credit-risk transfer in general, although implementation is not expected to take place until the end of 2006.

## Summary

The Canadian market for ABCP has grown from near zero in 1985 to \$63.7 billion at the end of 2002, and most ABCP carries a top-tier credit rating. The market has played an important role in providing low-cost corporate funding and in filling the gaps in the high-quality, short-term paper market left by the shrinking issuance of government treasury bills.

Although ABCP poses potential legal and liquidity risks that are inherent in the securitization process, the Canadian investment community seems comfortable with them. On the other hand, current disclosure of transaction details leaves much to be desired, and information that reveals the extent to which risk has actually been transferred by the originator and where it has actually gone is lacking. This last concern is being addressed by recent initiatives introduced by accounting and regulatory authorities.

14. See Mountain (2003) for more on the FASB guidelines and Parfeniuk and Azarchs (2003) for speculation regarding the potential impact on the balance sheets of Canadian banks.

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