PACICC

Property and Casualty Insurance Compensation Corporation
Société d'indemnisation en matière d'assurances IARD

Issue papers

(Re)Assurance of Solvency

Reinsurance assets in insurance company liquidations

November 2008

PACICC's mission and principles

Mission Statement

The mission of the Property and Casualty Insurance Compensation Corporation is to protect eligible policyholders from undue financial loss in the event that a member insurer becomes insolvent. We work to minimize the costs of insurer insolvencies and seek to maintain a high level of consumer and business confidence in Canada's property and casualty insurance industry through the financial protection we provide to policyholders.

Principles

- *In the unlikely event that an insurance company becomes insolvent, policyholders should be protected from undue financial loss through prompt payment of covered claims.*

- *Financial preparedness is fundamental to PACICC's successful management support of insurance company liquidations, requiring both adequate financial capacity and prudently managed compensation funds.*

- *Good corporate governance, well-informed stakeholders and cost-effective delivery of member services are foundations for success.*

- *Frequent and open consultations with members, regulators, liquidators and other stakeholders will strengthen PACICC's performance.*

- *In-depth P&C insurance industry knowledge – based on applied research and analysis – is essential for effective monitoring of insolvency risk.*

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Executive Summary

Reinsurance is an important and valuable risk management tool for the insurance industry. It can provide capacity and assistance to an insurer, enhancing a company's resilience to shocks. However, reinsurance does not change the basic nature of the underlying insurance coverage and in the long-run, it cannot protect an insurer against the risk of failure due to poor underwriting or governance.

The purchase of reinsurance has solvency implications for insurers because it is essentially a capital decision, as equity capital and reinsurance effectively act as substitutes. Further, reinsurance assets, like other assets, contain risk. In particular, reinsurance assets have the potential to deteriorate in value quickly and cannot be readily sold. As a result, insurance companies and their solvency supervisors must consider the quality and nature of the reinsurance purchased when evaluating the financial health of an institution. This paper surveys the role and use of reinsurance in the Canadian property and casualty (P&C) insurance industry from a solvency perspective. From this review several observations can be made:

- while rare, P&C insurance companies do fail. Over the past fifty years credit risk challenges related to reinsurance programs contributed to 25.7% of Canadian insurance company failures. Further, once in liquidation difficulties have been encountered in securing reinsurance recoverables in 100% of wind-ups.
- Canadian reinsurance exposure is significant. Canadian insurers are among the largest users of reinsurance within the OECD, and for 12.5% of PACICC members, reinsurance recoverables exceed the company's equity.
- reinsurance counterparty credit risk can be real. Since 1996 an estimated 52 reinsurance companies have exited involuntarily. Further, in some cases up to one third of reinsurance receivables owing to insurers in the United States have been found to be more than four months overdue.

Reinsurance has been instrumental in supporting the solvency of insurance companies – for example, helping keep several companies from experiencing financial distress after the 1998 ice storm. However, lessons drawn from failed insurance companies in Canada and other jurisdictions suggest that:

- insolvency clauses greatly improve the collectability of reinsurance recoverables in P&C insurance company liquidations by converting the indemnity contract into a poolable asset
- most insurance companies have a material reinsurance exposure, so they need to actively manage their reinsurance risk, including incorporating reinsurance counterparty risk into their Enterprise Risk Management (ERM) frameworks.

A key theme in PACICC's research is the collectability of reinsurance recoverables. Policy options that reduce reinsurance credit risk create a benefit which will be shared by all remaining insurers through lower industry insolvency costs and increased consumer confidence. Interested readers will find a review of key reinsurance policy issues in Appendix A.

Insurer insolvency and reinsurance

During the period 2000 to 2005, P&C insurers in the United States and United Kingdom were assessed USD $5.7 billion (CDN $7.1 billion) and □630.6 million (CDN $774 million) respectively by guarantee funds.[1] A record number of Canadian insurers were placed on the watch list[2] by solvency regulators and six companies were wound-up with an assessment liability of CDN $87.5 million. In a competitive property and casualty insurance industry, it is inevitable that some insurers will encounter financial difficulties, and in exceptional circumstances, like the early part of this decade some become insolvent.

Over the last thirty years the Canadian P&C insurance industry has experienced three waves of insolvency. The first wave coincided with the market softening in the early 1980s. The second wave occurred during the longest soft market in Canadian insurance history beginning in 1989. The latest such wave of insolvency began in 2000, coinciding with the poorest period of profitability on record for the industry.

Reinsurance was a primary or contributing cause in nine (25.7%) of the thirty-five insolvencies that have occurred in Canada since 1960. Table 1, which provides a brief high level summary of the various reinsurance issues that these Canadian involuntary exits experienced prior to being wound-up.

Table 1: Reinsurance Issues and Canadian Involuntary Exits

Involuntary exit	Wind-up	Reinsurance issues contributing to or causing insolvency
Canadian Millers Mutual Insurance Company	2001	Misunderstood reinsurance program resulted in capital shortfall
Century Insurance Company of Canada	1989	Collectability of recoverables from insolvent reinsurer
Phoenix Assurance Company of Canada	1989	Collectability of recoverables from insolvent reinsurer
American Mutual Liability Insurance (branch company)	1989	Lack of risk transfer. Reinsurance arrangements with affiliate swapping risk without booking IBNR
Northumberland Insurance Company	1985	Offshore reinsurance arrangements and questions on the collectability of recoverables
United Canada Insurance Company	1986	Dependence on reinsurance. Loss of program resulted in deficient assets
Northern Union Insurance Company	1983	Collectability of reinsurance recoverables. Mismanagement of reinsurance program
Cardinal Insurance Company	1982	Collectability of booked recoverables
Strathcona General Insurance Company	1981	Collectability on offshore reinsurance contracts

Note: It should be noted that these summaries do not provide a full picture of the complexity of how reinsurance affects insurer solvency. Only in one case were reinsurance issues a primary cause of insolvency (United Canada). In all other cases, reinsurance credit risk issues exacerbated and contributed to the eventual winding-up of the insurance company.

[1] This includes both actual invoices sent to insurers and the recoveries from past liquidations that were used for current liquidation instead of being returned to insurance companies.

[2] The term "watch list" is used as a generic term for enhanced supervisory scrutiny rather than to indicate any particular level of staging.

As can be seen from Table 1, a lack of understanding or proper management of reinsurance risks resulted in collectability issues for several insurers. A reliance on reinsurance and the subsequent failure of a reinsurer was also a factor in several of these involuntary exits.

Once in a liquidation, regardless of the cause of insolvency, reinsurance recoverables are typically the single largest remaining asset of a failed P&C insurance company. In liquidation, collectability of the reinsurance recoverables is a major issue for the court-appointed liquidator. Considerable time and effort is expended seeking to collect recoverables.

In the United States, the National Association of Insurance Commissioners (NAIC) Reinsurance Task Force has reported that reinsurance collections are a more difficult and contentious process in an insolvency. This is due in part to the absence of any future business relationship. The NAIC's recent Reinsurance Collateral White Paper in particular cited the Legion and Reliance liquidations, with liquidators (receivers) having reported various challenges – resulting in higher incurred expenses and lower asset recoveries – in collecting reinsurance recoverables. For example, according to the NAIC report, Reliance Insurance Company reportedly experienced a significant slowdown in reinsurance collections when it entered rehabilitation and then liquidation. Reliance Insurance Company (in liquidation) in its December 2007 Quarterly Report stated the following:

> *"Notwithstanding these efforts [on reinsurance recovery], reinsurance collections are a difficult and lengthy process in liquidation. In almost all cases, time frames for responses and payments from reinsurers have lengthened considerably. While there are some reinsurers who have dealt with Reliance in a professional, responsive manner, many do not fall into this category." (page 9)*

To date, more than USD $200 million in reinsurance recoverables by Reliance Insurance Company is estimated to have become uncollectable or lost through commutation during the course of liquidation.

Since 2000, there have been six insolvencies of P&C insurers in Canada and in three cases reinsurance recoverables were about half (ranging between 45 percent and 55 percent) of the total assets available to run-off the insolvent operation. This is three to four times the industry average for going-concern insurers.

In evaluating the reinsurance experience for recent PACICC liquidations, there is a strong negative correlation between the proportion of total assets represented by reinsurance recoverables and the level of clams recoveries to policyholders expected from a liquidation. In fact, the correlation coefficient (a statistical function used to determine the degree of relationship between two variables) is -67%. As reinsurance recoverables increase as a proportion of total assets, the cost of insolvency to PACICC member insurers also increases.

While the sample is too small for a statistically valid analysis, the introduction of the insolvency clause into most Canadian reinsurance contracts in the early and mid-1990s appears to have improved the collectability of reinsurance recoverables – although reinsurance management in a liquidation is still a critical task. International experience, as noted below, indicates that the absence of an insolvency clause greatly adds to the difficulty of (and costs of) winding-up failed insurers.

Insolvency Clause

Normally for an operating insurer, the insurance company must first pay a loss and then seek reimbursement for that loss from its reinsurer. During an insolvency, the insolvent company initially does not pay claims, but instead "allows" claims against the assets of the estate for future distribution to policyholders and creditors in the order of priority established under the *Winding-up and Restructuring Act* (WURA). In the United States, during the 1930s, an argument arose – based on the concept that reinsurance policies are contracts of indemnity – that reinsurers did not have to pay if the insolvent insurance company could not pay its underlying claims obligations. A U.S. Supreme Court decision upheld this argument. Accordingly, regulatory authorities in most states over time introduced statutory requirements that only reinsurance coverage with an insolvency clause would be recognized as an asset.[3] The National Association of Insurance Commissioners (NAIC) adopted a model insolvency clause in 1950. With the increase in insolvencies in the U.S. in the 1990s, between 1995 and 2001, many states either introduced for the first time or strengthened their insolvency clause provisions.[4]

More recently, in the United Kingdom during the mid-1990s and in Australia following the failure of HIH Insurance in 2001, some reinsurers challenged their obligation to pay insolvent clients using the same arguments made in the 1930s in the United States.[5] In the U.K. this led the previous liquidation clause being replaced by a more robust insolvency clause in U.K. reinsurance arrangements. In Australia, the HIH experience has played a role in recent discussions regarding balance sheet credit for reinsurance.

Insolvency clauses clarify that if the reinsured stops making payments for losses because of insolvency, the reinsurer must continue to make payments to the reinsured or to its liquidator as if the insolvency had not occurred. An important difference relating to the recoverables during liquidation is that those recoverables are not allocated toward the payment of specific policyholder claims. Rather, the reinsurance recoverables paid under

[3] The case was Fidelity & Deposit Co. of Md. v. Pink, 302 U.S. 224 (1937). In response to this case, the state of New York passed a statute precluding reinsurance credit with respect to any reinsurance contract that did not provide for payment to the receiver on the basis of the "liability" of the insurer and without diminution because of the ceding company's insolvency (N.Y. Ins. Law § 1308).
[4] According to the Reinsurance Association of America website information on insolvency clauses.
[5] In the U.K. the Charter Reinsurance Company Limited vs. Fagan (1997). HIH Casualty & General Insurance Limited (in liquidation) v. Wallace & Ors - Lloyd's Syndicate 683 which reinsured HIH Casualty & General Insurance Limited used this argument. The decision failed to settle the issue in Australia.

an insolvency clause become general assets of the estate with payment of policyholders taking place in accordance to the legislated priority of claims.

While the insolvency clause is not necessarily statutorily required for every purchase of reinsurance, insurance statutes in the United States require some form of insolvency clause if a reinsured company intends recognize reinsurance recoverables as an asset on its balance sheet. In Canada, recommended wording for an insolvency clause was developed by the Reinsurance Research Council of Canada (RRC) in 1991, but it is not currently required before reinsurance recoverables can be recognized as an asset for regulator capital purposes.

An informal survey of several reinsurance brokers and reinsurers conducted by PACICC found that reinsurance agreements to third party reinsurers commonly include an insolvency clause. Moreover, virtually all recent insurance failures have involved companies that used insolvency clauses, and this has resulted in enhanced collectability of reinsurance recoverables. However, it should be noted that while uncommon, examinations by regulators in the United States have on occasion found examples of reinsurance contracts that did not contain an appropriate insolvency clause. It is unclear whether Canadian solvency supervisors have conducted similar examinations of insolvency clauses in Canada.[6]

Further, it has been noted that the Canadian insolvency clause was developed in 1991. As such, it does not yet include recent clarifications added to the clauses now used in the United States and the United Kingdom. Each of these clauses are included in Appendix B.

Offsets, cut-throughs and related issues

Reinsurance offset is a common and uncontroversial issue in a going-concern. Yet it is often in dispute in an insolvency. Offset refers to the use of net accounting between two parties to a single contract (or collection of contracts) and the mutual debts and credits in existence between the reinsurer and the primary insurance company are netted out and only the remaining balance is paid between the parties. During an insolvency in Canada, reinsurance offset effectively seeks to place the reinsurers' claim ahead of the statutory priority of claims against the estate set out in the legislation in section 161 of the *WURA*.

In practice, there are two dimensions to the issue: domestic and international. For a domestic insurer, allowing an offset may force the reinsurer to honour the reinsurance contract and disallowing the offset may trigger delays in payment and other forms of resistance from the reinsurer. Historically, the offset issue is greatest where the failed insurer is an international entity and the reinsurer seeks to offset the obligations of one part of the corporate group against the Canadian entity. This disadvantages Canadian policyholders to the benefit of foreign policyholders and creditors.

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[6] For example: Pacific Union Insurance Company, examination by California Department of Insurance and filed March 3, 2006 (inappropriate clause) or CoFace North America Insurance Company, examination by Massachusetts Division of Insurance filed May 25, 2007 (did not contain an insolvency clause).

In practice, liquidators will evaluate the reinsurance arrangements and on a case by case basis to identify whether it is in the best interests of the estate to allow an offset to occur. Internationally practice is mixed, with some jurisdictions (such as California) restricting or eliminating the right to offset in the insolvency clause, while others expressly permit it (for example New York state). In Canada, liquidations are a court-driven process and under the *WURA* the courts have ruled against the use of offsets when they are not in the interests of the estate. However, the *WURA* is an infrequently used statute and the offset issue is recurring, particularly when liquidations involve other jurisdictions where offsets are more likely to be permitted. The experience of several of these liquidations suggests that prolonged court actions, which have resulted in the offset being set aside under the *WURA*, use up valuable resources of the estate and delay the estate's ultimate settlement.

In addition to offsets, the issues such as cut-throughs (exceptions to the general rule that an insured has no direct right of action) which allow a claimant to by-pass the regular liquidation process and effectively placing its claim ahead of others; the jurisdiction of arbitration and dispute resolution, for example, it is possible that Canadian courts and laws may not be applicable – particularly where there is use of off-shore reinsurance; and other issues may also require discussion in the context of the insolvency clause.

Recommendations:

- Only reinsurance arrangements that include an appropriate insolvency clause should be recognized as an allowable asset under the MCT/BAAT tests for property and casualty insurance companies.

- The Reinsurance Research Council of Canada, in conjunction with solvency regulators, liquidators and PACICC, should review the insolvency clause periodically (for example, every five years) to ensure that it continues to be appropriate and up-to-date with the fast changing reinsurance market.

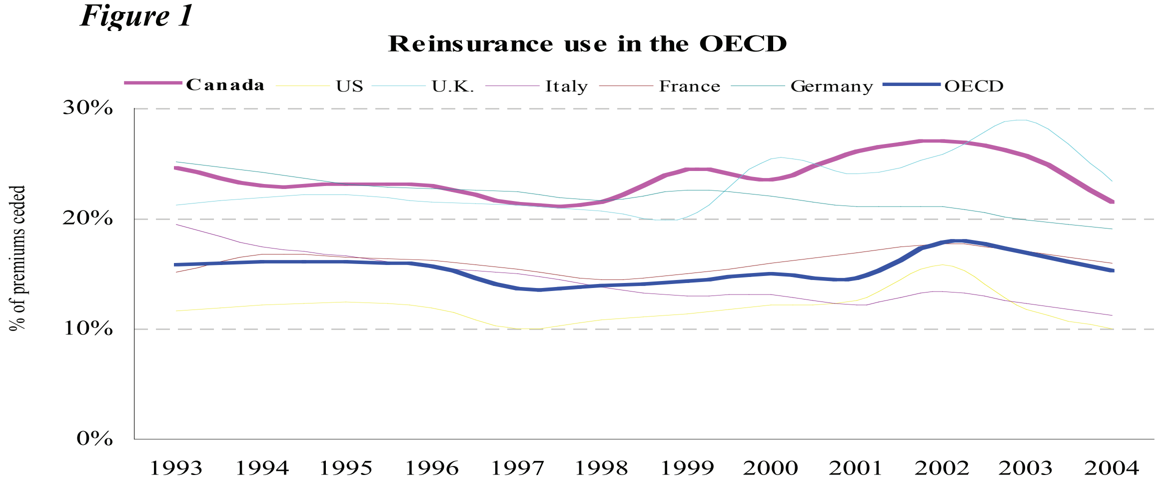
- The insolvency clause should clarify that offset can be used at the discretion of the court-appointed liquidator and in liquidation that Canadian law should apply in the dispute resolution process.

A survey of reinsurance risk – Reinsurance in Canada

Canadian primary insurers are subject to regulatory limits on their use of reinsurance. Insurers may cede up to 75 percent of their gross written business. There is a further maximum limit of 25 percent of the gross premiums that may be ceded with reinsurers not registered with OSFI.[7]

Canadian insurance companies ceded $8.1 billion in premiums in 2007, up from $3.8 billion in 1999. This growth is in line with the growth in the direct premium written by the industry and the relative proportion of premium ceded to reinsurers by the primary companies has remained stable throughout the period. On average, since 1999, Canadian insurers have ceded 24.2 percent of their premiums to reinsurers. Canadian insurers are among the biggest users of reinsurance within the OECD.[8] Only insurers in the United Kingdom cede as much of their premium to reinsurers as Canadian insurers.

Figure 1



Source: PACICC, with data from MSA Research & OECD Insurance Statistical data

Two factors may contribute to the relatively high level of reinsurance cessions among Canadian insurers: relatively low exposure to natural catastrophes and the international nature of the Canadian property and casualty (P&C) insurance industry.

The impact of insured catastrophe losses in Canada has been less than in many other jurisdictions. In particular, disaster claims paid, as a share of premiums, by insurers in Canada are, on average approximately half that of the United States. Although insured losses from natural disasters in Canada have displayed an upward trend during the past

[7] Provincial supervisory authorities also have their own limits and restrictions for insurers they supervise for solvency purposes. For example, the *Ontario Insurance Act* Part II, section 41, prohibits the use of non-approved reinsurance. However, most reinsurance is conducted through OSFI supervised insurers.
[8] This includes both intercompany pooling balances in Canada and reinsurance arrangements to unaffiliated reinsurers. The distinction should be made that while both are technically classified as reinsurance, counterparty risk with unaffiliated reinsurers poses a different set of risks from those risks associated with the internal interdependencies with affiliated reinsurers.

decade – tripling in the last decade – they remain relatively low compared to total industry claims costs. Seen from a global perspective, the scale on which most reinsurers operate, compared to the hurricanes and wildfires of the United States, the floods and windstorms of Europe and earthquakes of Japan, the Canadian natural disaster environment is benign. For global reinsurers looking to diversify, this has made Canada an attractive place to do business, in turn, driving down the cost of reinsurance. Reinsurance rates are generally lower in Canada than in many other jurisdictions and with lower costs Canadian insurers choose to buy more reinsurance.

Insurance groups (two or more affiliated insurance companies) are becoming more sophisticated in identifying their true cost of capital and allocating it accordingly across business divisions and geography. By reinsuring with an affiliate, including overseas parents, insurance groups are able to better manage their capital. Depending on the type of arrangement, reinsurance may be a mechanism for sending cash (premium) to a central investment division. In the event that claims arise and there are recoverables/receivables due back to an individual insurer's operations, resources are returned.[9] In profitable years, more premium goes to the affiliated reinsurer than is returned back to the individual insurer to pay claims.[10] Reinsurance with an affiliate is both a capital management tool and a risk transfer mechanism.

Table 2:	**Reinsurance ceded by authorization and affiliation (2007)**		
$'000	**Affiliated**	**Unaffiliated/ Arm's Length**	**Total**
Authorized	$4,512,031 *53.1%*	$1,989,801 *23.4%*	$6,501,832 *76.7%*
Unauthorized	$1,364,186 *16.1%*	$614,999 *7.2%*	$1,979,185 *23.3%*
Total	$5,876,217 *69.3%*	$2,604,800 *30.7%*	$8,481,017
Source: PACICC, with data from MSA Research			

Structure of Canadian Reinsurance Cessions

Like primary insurance, reinsurance is a mechanism for spreading risk. A reinsurer takes some portion of the risk assumed by the primary insurer (or in the case of retrocessions, a reinsurer) for a premium. One major difference between reinsurance and primary insurance (at least in the personal lines) is that reinsurance is generally specifically tailored to particular risks. While reinsurance treaties vary according to the nature of the risks, there are broadly speaking two general forms: *proportional* and *non-proportional*.

[9] There are also tax implications.

[10] For foreign insurers, reinsurance may be used as a mechanism for sending capital back to a parent due to the relatively high capital requirements in Canada. Reinsurance recoverables are an asset that counts for the capital test, lessening the need for cash or investments to be held at the subsidiary level or within Canada. However, since OSFI approval is required, strong reinsurance management mechanisms and other assurances are typically required by these insurers for such transfers to occur.

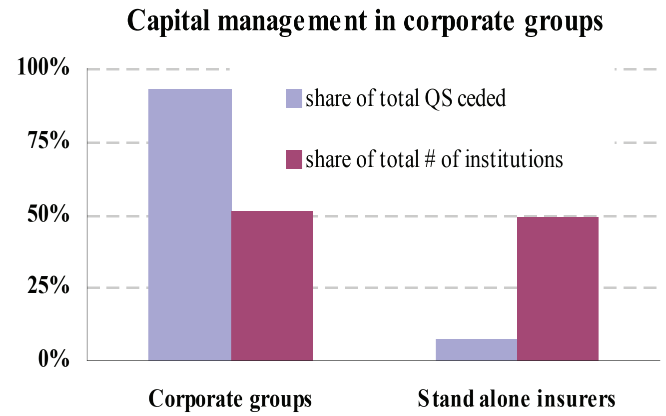
Proportional reinsurance involves a reinsurer taking a stated share of each policy that an insurer writes, with a ceding commission from the reinsurer to the insurer to account for the insurer's efforts in generating the premium. Quota share and surplus insurance are examples of proportional reinsurance.

Non-proportional reinsurance only responds if a loss incurred by an insurer exceeds a specified amount. The main forms of non-proportional reinsurance in Canada are *excess of loss* and *stop loss*. Facultative reinsurance, or reinsurance linked to a particular policy ("a per policy basis") rather than on a book of business, may be either proportional or non-proportional.

Quota share

Quota share reinsurance, a proportional form of reinsurance where the reinsurer assumes a set percentage of risk for the same percentage of the premium (less an allowance for the ceding company's expenses) is the most advantageous for the capital allocation role of reinsurance. Since 1999, the amount of quota share reinsurance ceded has grown from $2.1 billion to $5.6 billion in 2007, an increase greater than the growth of the P&C insurance industry. In 2007, quota share reinsurance accounted for 69.8 percent of the reinsurance ceded by the industry, up from 54.7 percent in 1999.

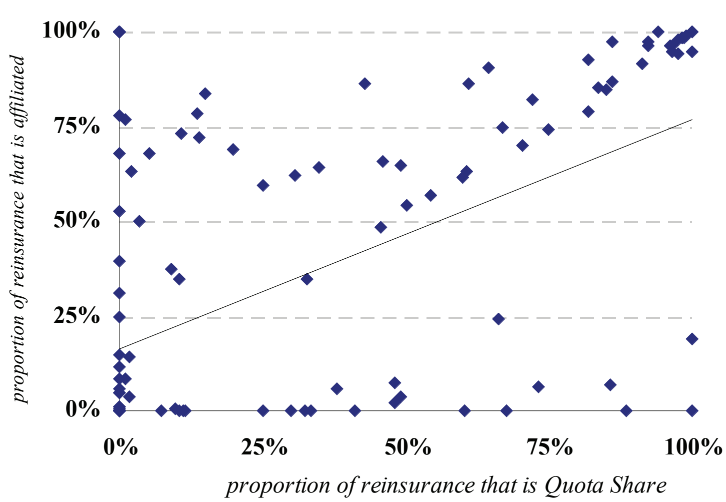
Figure 2



Source: PACICC, with data from MSA Research

Insurers belonging to a corporate group with two or more P&C insurance companies operating in Canada accounted for 51 percent of the insurance companies in the industry but were responsible for 93 percent of the quota share reinsurance cessions.[11] This suggests that reinsurance is an important capital allocation tool for the insurers operating within a group structure.

Figure 3: Affiliated reinsurance & Quota Share use



A confidential study commissioned by PACICC using 2003 data on reinsurance usage confirmed that insurers with significant books of business in personal property and automobile physical damage and personal accident lines, were the most material users of quota share treaties. Among commercial lines, only boiler and machinery was identified as a heavy user

[11] Insurers belonging to a group also generally used more reinsurance – 74% of total reinsurance cessions of all types – than non-group insurers.

(half its ceded premium) of quota share. Statistical correlations ("correlation coefficient") between quota share reinsurance usage and characteristics of primary insurance companies find the highest correlation coefficients between quota share usage and reinsurance ceded to an affiliate (49.8 percent). It was also somewhat correlated with the primary insurer writing personal lines insurance (35 percent). Virtually all material users of quota share were members of a corporate group in Canada. The remaining three were branch companies. Using the guideline of Williams (1968) for gauging the strength of the bivariate correlation, this suggests a substantial relationship between quota share reinsurance and ceding to an affiliate and a definite but small relationship to personal lines business (and in particular auto insurance).

Surplus

Surplus reinsurance contracts are more complicated than quota share contracts. Under a surplus reinsurance contract, the reinsurer does not participate in all risks. The primary insurer retains all risks up to a specified threshold, which may be defined separately by type of risk. The reinsurer is responsible for a proportion of amounts that exceed the specified threshold, up to a pre-defined limit, usually a multiple of the primary insurers retention.

During 2007, surplus reinsurance contracts in the industry totalled less than $300 million, or only 3.3 percent of all cessions by primary insurers. This is down from 5.2 percent of cessions in 1999, the peak year. Reflecting this, only a handful (15 percent) of insurers used this form of reinsurance contract in 2007. Insurers with modest commercial property exposure (<25 percent of their total premium) are more prominent users of surplus reinsurance. Other lines were modest users of surplus reinsurance. There were no particular significant correlations between other company characteristics and the use of surplus reinsurance, although it was much more likely to be placed with a Canadian non-affiliate reinsurer.

Excess of loss

Excess of loss contracts are structured differently from quota share or surplus contracts. As a non-proportional reinsurance contract, the reinsurer is responsible for the entire loss in excess of a specified limit or deductible, below which the primary insurer is wholly responsible for losses.

Following the 1998 ice storm, which resulted in $1.8 billion in claims to the insurance industry, mostly absorbed by reinsurance, the Canadian P&C industry purchased a record proportion of excess of loss reinsurance. In 1999, excess of loss reinsurance cessions accounted for 29.3 percent of all reinsurance ceded. Since then, it has averaged 14.9 percent of cessions, or $1.2 billion in 2007.

There is a small but definite correlation between the use of excess loss reinsurance and operations in personal lines and being provincially chartered (and an equally large negative correlation with being federally regulated). Personal property, auto liability and to a small extent commercial property were the primary users of excess of loss reinsurance. Consistent with Mayers and Smith (1990) using U.S. data in Florida and other U.S. states, no correlation was found with geographically concentrated (or British Columbia concentrated) insurers suggesting, notwithstanding the 1999 year, that natural catastrophe risk management in the normal course of business is not the primary rationale for this form of reinsurance.

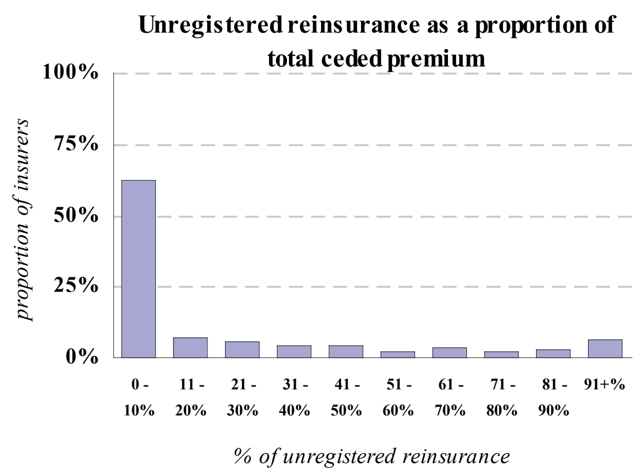
Facultative

The original and oldest form of reinsurance, facultative insurance, is reinsurance for specific or individual policies or risks being underwritten by the primary insurer. Canadian insurance companies cede $1 billion annually in the form of facultative contracts, or 12 percent of all reinsurance ceded. This ratio has been largely stable since 1999. Facultative contracts have a definite correlation with commercial lines business, in particular commercial property and boiler and machinery insurance.

Unregistered reinsurance

Reinsurers and reinsurance brokers are not required to register with Canadian supervisory authorities. Canada's direct insurers are subject to regulatory limits on their use of unregistered reinsurerance. The *Reinsurance Regulations* of the *Insurance Companies Act* limits the placement of reinsurance with non-approved (unregistered) reinsurers to 25 percent of the amount of business that can be ceded.

Figure 4



Source: PACICC, with data from MSA Researcher

Canadian insurance companies, on average since 2003, have ceded 23 percent of their reinsurance cession ($2 billion annually) to reinsurers that were not registered with a Canadian supervisory authority. On average, 70 percent of the unregistered cessions were to affiliated companies. Annually, $600 million in premium is ceded to more than 54 offshore unregistered and unaffiliated reinsurers.

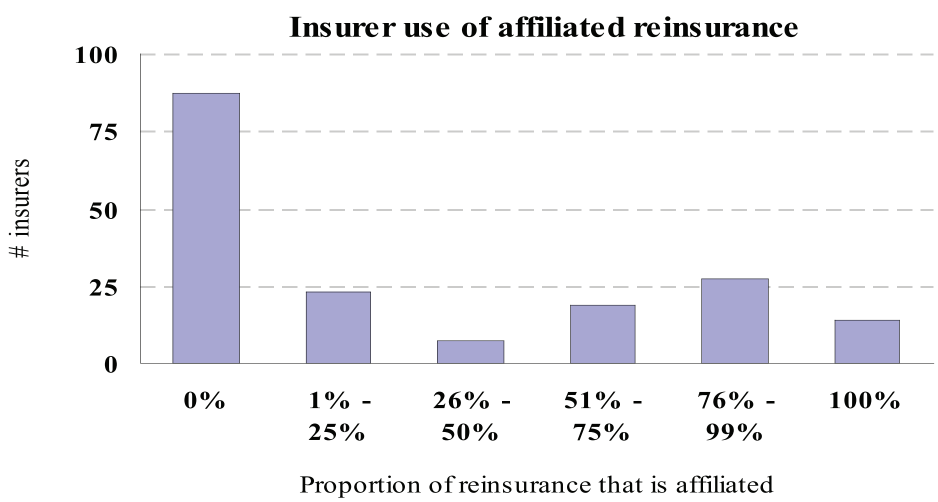
Unregistered reinsurance is generally believed to be higher risk than reinsurance placed with registered reinsurers. Reflecting this, the MCT and BAAT have a risk factor for unregistered recoverables built into the tests. Similarly, many other jurisdictions impose restrictions or higher capital requirements for counterparty risk. For example, Australia is proposing including a risk-based scale of capital charges for unregistered reinsurers of different financial strength ratings.

PACICC estimates the average financial strength rating of an unregistered reinsurer as two rating grades below that of large registered reinsurers. While many unregistered reinsurers are strong financially, a rating could not be identified for nearly half (45.2 percent) of identified unregistered reinsurers used by Canadian insurance companies. For nearly three dozen P&C insurance companies, unregistered reinsurance represented more than 50 percent of their total ceded premium. For a dozen insurers, unregistered reinsurance represented more than 90 percent of their total ceded premium.

Affiliated reinsurance

Half of all Canadian insurers do not cede any premium to affiliated reinsurers. These insurers are typically smaller companies. Two-thirds of premiums ceded in Canada are to affiliated reinsurers. Three quarters of this premium to affiliated insurers is ceded to Canadian registered reinsurance writers. One-quarter, or $1.4 billion in premium, is ceded to unregistered affiliated reinsurance writers. Personal lines premium was much more likely to be reinsured with an affiliated reinsurer. Insurers reinsuring 75 percent or more of their cessions with an affiliated reinsurer represented 41.1 percent of personal lines premium but only 14.1 percent of commercial lines premium. With affiliated reinsurance transactions, risk remains within the corporate group.

Figure 5



Source: PACICC, with data from MSA Research

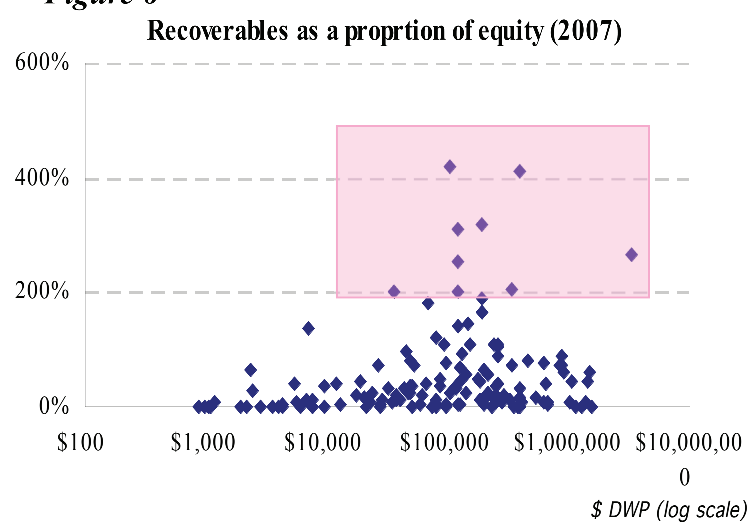
Reinsurance Risk

While reinsurance has a long history of working successfully with insurers, nevertheless reinsurance recoverables may be a potentially risky asset on an insurer's balance sheet. The key risk is that the reinsurance party in an agreement will default. During 2007, PACICC member insurers ceded one-quarter of their premiums ($8.5 billion) to reinsurers and booked $16.1 billion in reinsurance recoverables as assets on their balance sheets. (Note that the total equity reported by PACICC members in 2007 was $33 billion.)

Reinsurance counterparty credit risk can occur from two key sources: (i) the insolvency of a reinsurer, and (ii) and its unwillingness to pay. Solvency is tied to a reinsurer's ability to discharge obligations as they become due. Willingness to pay can be measured by the degree of friction encountered when collecting recoverables from solvent reinsurers — arising from differences in understanding contractual arrangements and other sources. In general, reinsurance default risk can be reduced by active review and management of reinsurance recoverable assets, and informed analysis of counterparty credit risk arising from existing or potential reinsurance contracts.

Among PACICC members, 12.5 percent of companies in 2007 had reinsurance recoverables equating to more than 100 percent of their company's equity. This is the lowest proportion of insurers with this degree of reinsurance reliance since 1996 and down from a quarter of companies in 2002. Since data became available in 1996, an average of 19.1 percent of insurers have reinsurance recoverables in excess of 100 percent of their equity level. For a third of these companies, reinsurance recoverables are equivalent to more than 200 percent of company equity.

Figure 6



Source: PACICC, with data from MSA Research

Some institutions rely on reinsurance as a substitute for capital. For a half dozen of these insurance companies, reinsurance recoverables account for over half of their total assets.

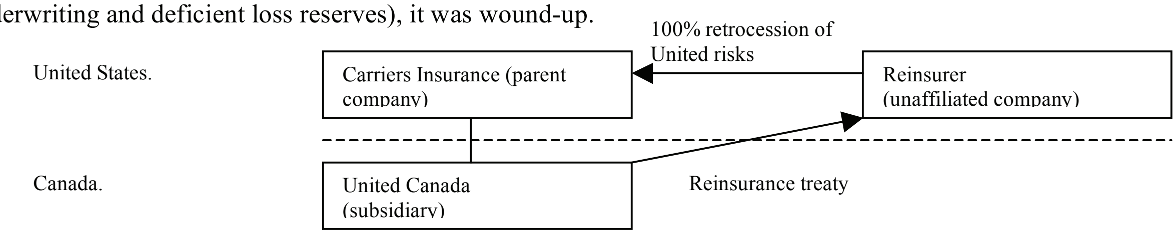
These companies are more vulnerable to reinsurance risk through contract disputes or hardening reinsurance markets. Historically, 'gentleman's agreements' between insurers and reinsurers had as much importance as the reinsurance contract language itself. Clarity and fullness of detail in reinsurance contracts has not always been a common occurrence, as was evident in the World Trade Center litigation and dispute over contract

Mini-Case Study: United Canada Insurance Company
Wound-up: March 1986

Profile: A small niche insurer writing with NPW $16 million (adjusted for inflation - $28 million in 2008) and active in providing coverage to trucking and bus line firms. Company was owned by a U.S. parent, Carriers Insurance.

Proximate cause of failure: Reinsurance
Contributing causes of failure: deficient loss reserves (liability crisis in the industry)

Reinsurance recoverables comprised an estimated 16.2% of assets ($3 million) or 151% of the company's equity. Reinsurance and retrocessions effectively meant that there was no risk transfer within the corporate group. When the parent (Carriers) became insolvent, the collectability of recoverables became questionable as the reinsurer's position was that Carriers had assumed the risk. Unable to secure additional reinsurance (largely due to its underwriting and deficient loss reserves), it was wound-up.



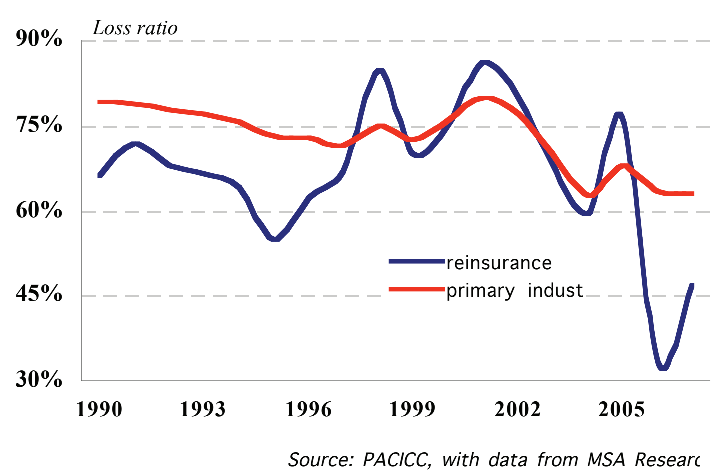
terms. An international trend toward greater clarity in reinsurance contracts will reduce this form of risk in the long run.

Hardening reinsurance markets can also present challenges to companies with high rates of reinsurance utilization. As the price of reinsurance rises, an insurer may have limited capital available to support its liabilities. This puts pressure on its Minimum Capital Test (MCT)/Branch Adequacy of Assets Test (BAAT). As the reinsurance cycle is more volatile (see Figure 7) than the primary insurance cycle this presents a risk to be managed by insurers with significant reliance on reinsurance.

In the event of a loss of reinsurance support, the implications for a primary insurer would be extensive and could result in financial impairment. In Canada, reinsurance has not been a major source of insurance company insolvency, but it has been a contributing factor in a quarter of all failures over the past 50 years. In the majority of insolvencies where reinsurance was a contributing factor, the issue appears to have been one of reinsurance management by the failed insurer, rather than failure of the reinsurer. In some cases there were complex inter-group arrangements; in others, there was an over-reliance on reinsurance assets that became more difficult to obtain when the reinsurance

Figure 7

Canadian insurance cycles



market hardened.

REINSURER INSOLVENCY

There is a body of research concerning the insolvency of P&C insurance companies. One of the most recent studies concerning the sources of P&C insurance involuntary exit is the A.M. Best's insolvency report (2004) and its subsequent updates. This report examines nearly one thousand insurance companies identified as being financially impaired in the United States since 1969. Reinsurance companies are included in the sample but are not separated from primary writers. The primary cause of financial impairment identified in the study for all types of insurers was deficient loss reserves and inadequate pricing (which accounted for 37 percent of failures) and rapid growth (which accounted for an additional 22 percent of financial impairments).

This research series by A.M. Best has identified a general trend among primary insurers of a flight to quality combined with some greater discipline in the reinsurance market, leading toward a reduction in the contribution that reinsurance has played in primary insurer insolvency in recent years.

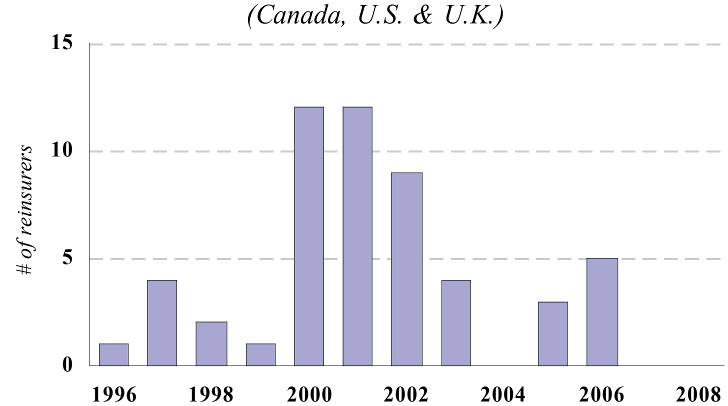
A study by Financial Services Authority (FSA) in United Kingdom analyzed the experiences of failed insurance companies across the life and non-life sectors covering fifteen countries of the European Union. The FSA analysis is based upon the Sharma (2002) report. Similar to the A.M. Best study, whether an insurance company was a primary or reinsurance writer was not distinguished. Overall, The FSA study found that poor underwriting or reserving contributed to over 60 percent of insurer failures. The second most important factor was found to be asset risk stemming from investments whose value was likely to be adversely affected by the same occurrences leading to large claims, thus exposing the firm to a 'double gearing' effect. Other causes identified were management/governance, external causes and reinsurance risk. All the case studies had significant underlying management or governance issues.

Using Canadian data, PACICC's 2007 study on the dynamics of insurer insolvency identified inadequate pricing and under reserving as the leading cause of involuntary exit among Canadian P&C insurers. Similar to the previously mentioned studies, reinsurance writers were not separated from the sample. Over the period of study (1960 – 2005) four reinsurers operating in Canada exited involuntarily. For the purposes of this paper, a reinsurer is defined as an institution where more than half of its total premium is from assumptions from other insurers. In addition, while not being primarily reinsurance writers, another five insurers had significant reinsurance assumed as a proportion of their total business. All were small relative to the Canadian reinsurance market.

Figure 8

Reinsurer insolvency

(Canada, U.S. & U.K.)



Source: PACICC, with data from A.M. Best and FSCS

While the overall risk in Canada has been low, internationally reinsurance companies do fail. For example, in the United States during the 1980s, a number of reinsurance companies that had entered the reinsurance business during the period of high interest rates in the early part of the decade exited the market, some as a result of insolvency or financial distress. Consequently, some primary insurers were unable to collect their recoverables under their reinsurance contracts (III, 2004).

Since 1996, an estimated 52 reinsurance writers in Canada, the United States and the United Kingdom have exited the market involuntarily through a winding-up or liquidation order.[12] All were relatively small players in the reinsurance market and the majority consisted of reinsurers affiliated with insurance groups that became insolvent. Three of these departures had a direct impact, albeit a small one, on the Canadian market. Reinsurers have also involuntarily exited the market in other jurisdictions but there is insufficient information on these exits for them to be included here.

The contributing causes of reinsurer failure are somewhat more difficult to identify than those of primary insurers because reinsurance is a global business, without a primary regulator or source of data, making analysis exceptionally difficult. The following table identifies the primary or proximate causes of involuntary exit identified by A.M. Best for companies that were primarily reinsurance writers and which entered liquidation in the United States between 1996 and 2007.[13]

Table 3: Proximate causes of reinsurer involuntary exit (1996 – 2007)

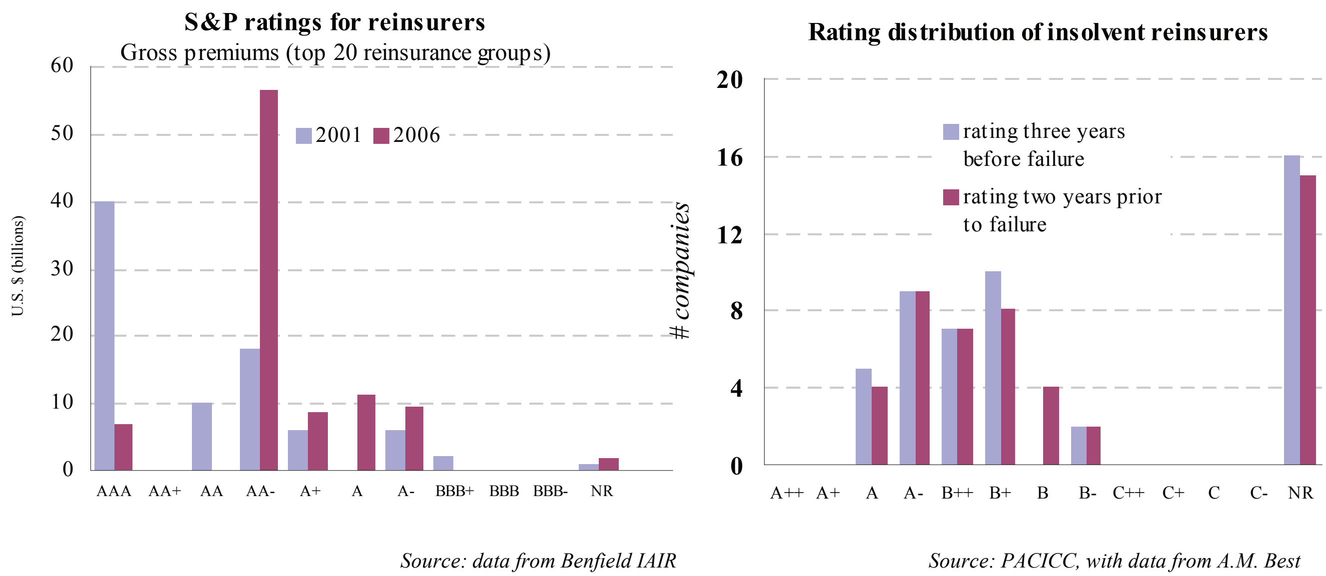
Inadequate pricing/deficient loss reserves (DLR)	*70.3%*
catastrophe losses	*16.2%*
affiliate failure	*8.1%*
overstated assets	*2.7%*
alleged fraud	*2.7%*

Similar to primary insurance writers, inadequate pricing or deficient loss reserves are the leading cause of reinsurer insolvency. At this point, the similarity ends. Catastrophes represent the second largest cause of reinsurer insolvency, accounting for 16.2 percent of insolvencies, compared to 7.7 percent for primary writers. In fact this probably understates the importance of catastrophes as Bermuda and other offshore reinsurers that provide catastrophe cover are not included in this analysis and several such reinsurers are known to have failed or experienced financial distress following large loss events such as Hurricanes Andrew and Katrina.

[12] As already noted a reinsurer is defined as an insurance company whose assumed premium from other insurers represents 50% or more of its total premium. A number of other insurers who failed also wrote reinsurance business.
[13] Data on the cause of failure for U.K. reinsurance companies and U.S. reinsurers prior to 1996 was unavailable

Three-quarters (73.5 percent) of insolvent reinsurers had a financial strength rating (FSR) below an A- rating two and three years prior to insolvency. None of the insolvent reinsurers had the higher quality FSR of A++ or A+ two or three years prior to insolvency (see Figure 9: Rating distribution of insolvent reinsurers). Further, it is worth noting that the financial strength of large solvent reinsurance companies, while still strong, has weakened over the past several years (Figure 9: S&P ratings for reinsurers). The number of financial strength rating downgrades of reinsurance companies has exceeded upgrades in recent years.[14]

Figure 9



One note of caution related to rating agencies, Pottier and Sommer (2006) note the difficulty of identifying counterparty risk is such that even rating agencies frequently disagree on the financial strength of an insurance company, producing different ratings more than 77 percent of the time. Reflecting this difficulty in assessing reinsurer counter party risk, financial strength ratings of reinsurers did not change in the years just prior to insolvency.

COUNTERPARTY CREDIT RISK: (UN)WILLINGNESS TO PAY

An assessment of the ultimate collectability for amounts recoverable from reinsurers may include an assessment of the ability or willingness of the reinsurer to meet its commitments. Willingness to pay can be measured by the degree of friction encountered when collecting recoverables from solvent reinsurers arising from differences in understanding contractual arrangements and other sources. Typically in jurisdictions where willingness to pay has generated some financial distress, there has been a

[14] In part as a result of this, some reinsurance agreements have begun to include a downgrade clause, permitting the reinsured to cancel the reinsurance contract if the reinsurer's financial strength rating is downgraded. Variations on the downgrade clause may require the reinsurer to post security in the event of a downgrade. In general such clauses are uncommon as they one-sidedly favour the reinsured and where they do occur, they may be accompanied by agreements that narrows their interpretation and application.

reassessment of how to account for the ultimate collectability for amounts recoverable from reinsurers – and hence its capital treatment and financial strength rating.[15]

For example, in the United States the National Association of Insurance Commissioners (NAIC) requires insurance companies to deduct 20 percent of anticipated reinsurance receivables[16] from their policyholders' surplus on their financial statements – a provision for overdue reinsurance under Schedule F of the annual financial return – when receivables are overdue by more than 90 days.[17] For the state solvency regulators, this helps identify problem reinsurers and encourages insurers to purchase reinsurance from reinsurers that are willing to pay more promptly. In addition to the overdue reinsurance provision, concerns regarding reinsurance receivables have also resulted in other reporting changes to increase the available reinsurance data for regulators.[18]

PACICC's research on reinsurance recoverables, conducted with MSA Research, has identified reinsurance risks for some PACICC members. Using 2003 data for a sample of companies, a pairwise analysis found material differences between what many insurers claim as recoverables, and what reinsurers identify as being their liability being assumed. This reflects differences in interpretation or understanding of contractual terms and obligations and the longer time frame and uncertainties associated with resolving claims. These differences represent potential counterparty risk as not all the recoverables booked may be ultimately collectable.

In that sample of fifteen paired insurer and Canadian registered reinsurers only three cases had matched bookings on their balance sheet. In the 80 percent of cases where there was divergence between what the insurer ceded and what the reinsurer assumed on their statements, about half were modest discrepancies. In a fifth of the cases, the discrepancy was material and in one case, exceeded $50 million. In terms of differences in estimations of outstanding losses payable to the ceding insurer, 53 percent of reinsurers had a higher estimate of what they owed than insurers claimed as outstanding. Among the remaining 47 percent where reinsurers claimed a lower outstanding amount than the ceding insurer, the total difference in estimates was $283 million in 2003.

A.M. Best's September 2007 Special Report on reinsurance recoverables, using U.S. data on the aging of reinsurance receivables as a measure of reinsurance credit risk, found that 32 percent of reinsurance receivables on paid losses and loss adjustment expenses (LAE) were more than 90 days overdue. According to 2006 data from Schedule F of the U.S. financial statements, while for most insurance companies (93.7 percent) overdue reinsurance receivables represented less than 1 percent of their capital, a small number (eleven) had overdue reinsurance receivables representing more than a quarter of their

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15 Both S&P's SPCAR and A.M. Best's BCAR increase credit risk with overdue recoverables.

16 The definition of 'recoverables' differs between the United States and Canada. In the United States, recoverables has a broader definition including recoverables on paid claims (defined as receivables in Canada), and recoverables on unpaid claims and unearned premiums (defined as recoverables in Canada). While the U.S. statements call them recoverables, in Canada they would be defined as receivables and hence the term receivables is used throughout where in Canada they would be defined as receivables.

17 It also requires 20% for amounts in dispute.

18 The U.S. is reviewing its regulatory framework for reinsurance.

capital. For four companies, overdue reinsurance receivables represented more than 100% of their capital. Further, A.M. Best's August 13, 2007 Special Research Report found that following rating downgrades for several reinsurers (PXRE, Converium and Gerling) U.S. insurance companies through commutations settled for less than 100 percent of their outstanding balances on receivables.

Recently (spring of 2008) Australia issued new draft requirements that would require the appointed actuary to evaluate a foreign reinsurer's willingness to pay. In Canada, regulators do not have a specific provision for overdue reinsurance but actuaries will typically include a provision for such an occurrence in their reserve estimates.[19]

In general, industry commentators have identified a number of "frictions" with solvent reinsurers that are likely to reduce willingness to pay and ultimately net reinsurance collectibles, including:

- reinsurer in run-off (including solvent schemes of arrangement)
- long-tail lines of business
- distance from regulatory authority.

Run-off

Higher levels of friction occur when a reinsurer is in run-off.[20] When an insurer opts to exit a market voluntarily there are only two mechanisms available – a transfer of liabilities to another insurance company or entry into run-off. Companies in run-off are therefore companies that for business reasons, usually due to low profitability (which generally does not bode well for collectability), have decided to exit the market.

Companies in run-off have no premium inflows and are limited to three mechanisms for maximizing the return to their shareholders – reducing administration costs, earning returns on investments or reducing claims costs. All three generate incentives to avoid claims, delay the payment of claims or to commute treaties, each of which may have important implications for net recoverables, capital requirements and in a worst case scenario, the primary insurer's solvency. Data on the aging of reinsurance recoverables from reinsurers in run-off were not available to directly test whether run-off contributes to lower levels of willingness to pay.

However, using data on insurers in run-off and going-concern insurers from PACICC's 2008 publication *Why insurers fail: A Survey of the Canadian Run-off Market*, it can be seen in Table 4 that the correlation between claims paid and claims reserves for insurers in run-off is about half that of going-concern insurers. While the relationship between claims incurred and an insurer's technical provisions or reinsurance arrangements is more

[19] The Memorandum for the Actuary's Report on Property and Casualty Insurance Business s. 4.1 requires the appointed actuary to comment on any relevant issue of delay, including whether a reinsurer has a history of settling reinsurance accounts promptly.

[20] It also occurs when an insurance company is in liquidation, which is a more extreme version of run-off.

complicated than this simple bivariate relationship, it is indicative that willingness to pay may be lower for companies in run-off.[21]

Table 4: Comparison of Correlations between Run-off and Going-Concern Insurers

	Run-off	Going-Concern
claims & claims reserves	50.0%	93.8%
claims & recoverables	3.5%	36.7%
# of insurers in sample	87	178

The relationship between claims payments and reinsurance recoverables would be expected to be weaker than the relationship with claims reserves (due to the existence of triggers and other nuances to reinsurance contracts). The stronger relationships with going-concern institutions may be related to having to balance willingness to pay issues with the long term profitability of a customer relationship, counterbalancing incentives to delay or reduce payments. In run-offs, such counterbalancing incentives are not in play.

Related to run-offs are solvent schemes of arrangement. These solvent schemes of arrangement are a cut-off mechanism used in some cases to get out of contractual arrangements and bring finality to business that is in run-off or insolvent. Their use by insurers to place a part or all of their liabilities in such arrangements has been growing in popularity in the United Kingdom and Europe. While schemes of arrangement have met with little success in Canada, any increased use of off-shore reinsurance (particularly if the changes to Part XIII mean more reinsurers reinsure from offshore) then there is an increased risk that undesirable risks may be placed into schemes of arrangement. For a liquidation, a scheme of arrangement represents a likely reduction in collectability.

Friction may also result where a reinsurer cedes premium to another reinsurer *(the retrocessionaire*) who subsequently goes into run-off, decreasing payments to the reinsurer, ultimately with the potential to flow through to the insurer.

Long-tail lines of business

The challenges are generally expected to be greater in lines of business with long timelines for claims payments, particularly, as was more common in the past, where a detailed contract has not been drawn up (with various contract certainty initiatives this is becoming rarer). Longer timelines increase the likelihood that the original reinsurer may no longer exist and the portfolio may have been transferred to a reinsurer – with an increased likelihood of turnover among key individuals party to the original relationships, who may also have different interpretations of the reinsurance agreement.

[21] At least in the case of going-concern insurers, where other factors such as risk aversion or changes in the operating environment may also have an impact. Logically, for an insurer or reinsurer in run-off the relationship between claims and technical provisions would be expected to be ***stronger*** than a going concern if it were purely a matter of paying claims and exiting the market. That it is weaker suggests that incentives to delay or reduce payments are strong.

PACICC analyzed the aging of reinsurance receivables of U.S. insurance companies detailed in Schedule F of the NAIC financial statements. The correlation between the age of the reinsurance receivables and line of business written by the primary insurer was not significantly different from zero. Similarly, aggregations into personal lines and commercial lines indicated no significant correlation between aged receivables and the line of business.

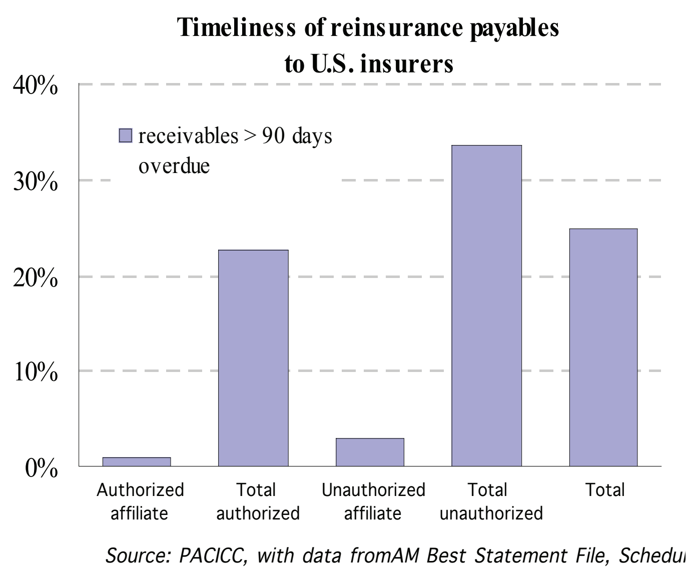
In general, while the profile of an insurer might be a determinant of whether it seeks reinsurance, the characteristics of the cedent appear to have little correlation with overdue reinsurance receivables, suggesting that characteristics of the reinsurer are more important determinants of willingness to pay than characteristics of the insured.

Distance from regulatory authority

Reinsurance is a global business and reinsurers and reinsurance brokers are not required to register with Canadian supervisory authorities. Internationally, reinsurance is subject to less regulation than primary insureance. As a result, Canada's primary insurers have traditionally been subject to regulatory limits on their use of unregistered reinsurance as claims in the same or related jurisdiction(s) are believed to typically have less friction than those in more distant jurisdictions. The *Reinsurance Regulations* of the *Insurance Companies Act* limits the placement of reinsurance with non-approved (unregistered) reinsurers to 25% of the amount of business that can be ceded. Further reflecting this perceived level of risk, the Minimum Capital Test (MCT) and Branch Adequacy of Assets Test (BAAT) have a risk factor for unregistered recoverables built into the tests.

PACICC analyzed the aging of reinsurance receivables from unregistered reinsurers from Schedule F of the U.S. NAIC's financial statement pages for insurers operating in the United States during the period of 1996 to 2006 to estimate the proportion of overdue reinsurance receivables by regulatory oversight.[22] Unauthorized reinsurers were a third more likely to have overdue reinsurance receivables than authorized reinsurers. However, affiliated reinsurers, both authorized and unauthorized were far less likely to have overdue receivables. Similar data are not disclosed for Canadian insurers so it is unclear if this problem is also present in Canada.

Figure 10



Further, with regards to the risk of insolvency, PACICC research assessed a sample of the unregistered reinsurers

[22] Recoverables in dispute are not considered overdue since the source of non-payment is uncertainty about the amount of the reinsurers liability. Similarly, workers compensation and accident and health insurance was a small part of the sample as insurers primarily involved in those lines were excluded.

providing reinsurance to Canadian insurers. Using financial strength ratings from A.M. Best and Standard and Poors, PACICC estimates that the average financial strength rating of an unregistered reinsurer is approximately two rating grades below that of registered reinsurers.

Net collectibles

In situations where the reinsurer is not willing to pay, the net collectibles of the primary insurer may be substantially less than expected. In general the following characteristics appear to affect willingness to pay and hence the net reinsurance collectables:

- reinsurers in run-off, on average, are more likely to delay or dispute payment of recoverables
- affiliated reinsurers are much more likely to pay than unaffiliated reinsurers, but historically they are also more likely to become insolvent than unaffiliated reinsurers
- unregistered reinsurers, on average, are more likely to have weaker financial strength ratings and to have a higher rate of overdue receivables

Summary

Reinsurance is an important and effective risk management tool for insurers. For example, the Canadian insurance industry was able to absorb major shocks including the 1998 ice storm and the 2005 Suncor fire without any insurers becoming insolvent, in large part due to the appropriate use of reinsurance.

Nevertheless, reinsurance assets involve risk and valuable lessons can be drawn from historical experience in Canada and elsewhere:

- insolvency clauses improve the collectability of reinsurance recoverables in P&C insurance company liquidations by converting the indemnity contract into a poolable asset

- the current reinsurance market is functioning well in Canada: there have been no domestically initiated reinsurance failures in two decades, and anecdotal evidence indicates that reinsurance collectability issues among going-concerns are relatively minor

- however, the bulk of Canadian reinsurance capacity is international and external shocks in reinsurance can have a large impact on the Canadian reinsurance market

- credit risk from reinsurance failure can be significant, although it is relatively rare. In fact, there have been 52 reinsurance company failures since 1996 and nearly three-quarters of these failed reinsurers had a financial strength rating of less than A- or were not rated up to two years prior to their failure

- while comparable Canadian data are not available, willingness to pay issues among some reinsurers are evident in the U.S. data, particularly from reinsurers in run-off or further from supervisory oversight

- several Canadian insurers actively reinsure with affiliated companies and international data show that affiliated reinsurers provide more timely payment of reinsurance receivables. Yet affiliated reinsurers are somewhat more likely to fail than independent reinsurers.

Accordingly PACICC recommends that:

- only reinsurance arrangements that include an appropriate insolvency clause should be recognized by solvency regulators as an allowable asset by the Minimum Capital Test

- insurance companies with a material reinsurance exposure need to demonstrate that they are actively managing their reinsurance risk, ideally incorporating reinsurance counterparty risk into an Enterprise Risk Management (ERM) framework

- as part of its ERM, if an insurer has a material reinsurance exposure, the company's reinsurance program should have a "home", for example, a Committee of the Board of Directors or a person responsible for briefing the Board

- in any risk-based environment, the solvency framework should include appropriate tiering of those risks, encouraging and providing incentives for insurers to manage their reinsurance risk. For example, Australia's linkage of capital charges to reinsurer financial strength ratings, or New York's practice of disallowing credit for reinsurance with reinsurers who do not pay eligible claims in liquidation)

PACICC also recommends that further research be conducted in the following areas:

- to what extent are the reinsurance collectability issues evident in the U.S. and international environment also present in Canada? If not, why and how can this be preserved during consideration of changes in supervisory policy?

- what is the ideal solvency clause for Canadian insurers?

- what objectives should solvency supervisors seek to achieve with respect to assessing the relative contribution of reinsurance arrangements to risk transfer and to capital management?

- in an international reinsurance market, are there additional low cost measures that would further support policyholder confidence in the industry?

    - for example, would the development of some tools such as an algorithm to conduct pairwise analysis of financial statement between insurers and registered reinsurers to match booked amounts (with material differences outside of some tolerance level triggering further discussions about the reinsurance program) be useful?
    - should additional reporting requirements be adopted, for example, an interrogative on page 10.4x to determine if all reinsurance treaties have an insolvency clause?

Appendix A:
Reinsurance Policy Issues

Insurance and reinsurance is the business of risk. Insurance companies are knowledgeable consumers of reinsurance. Universal to all policy discussions on reinsurance, are the following considerations. First assets and liabilities are the cornerstone elements of the financial reporting model, and both are based upon the probable future flow of economic resources. For some insurers, reinsurance is the largest single asset on the financial statements. Second, not all reinsurers are created equal and while low in many cases, reinsurance credit risk does exist and in some cases can be material. Finally all insurers pay for any reinsurance mismanagement resulting in uncollectable amounts incurred by a failed company.

Given these considerations, regardless of the specific policy question under consideration, PACICC makes the following universal recommendations regarding reinsurance:

- at a minimum, for reinsurance to be recognized as an allowable asset in the MCT/BAAT, an appropriate insolvency clause should be a provision in the reinsurance arrangement.

- insurers with an extensive reliance on reinsurance should be able to articulate and produce a reinsurance management guide and plan, outlining the objectives of their reinsurance strategy (catastrophic risk management etc) and appropriately aligning their reinsurance program to that strategy.

In addition to these recommendations, which PACICC believes should be implemented, there are a number of observations and considerations applicable to various specific policy questions. The following sections represent a list of common policy questions related to reinsurance. The brief discussion in each section link the observed data provided in earlier sections and identifies some of the relevant considerations for that particular policy question.

Mutual recognition

According to the International Association of Insurance Supervisors (IAIS) 90% of the worldwide reinsurance capacity is in the reinsurance companies and markets of Bermuda, France, Germany, Ireland, Japan, Switzerland, the UK and the USA. In general, large reinsurers operate in a group structure whereby local operating subsidiaries in specific countries around the world, in practice retain very little risk. In order to achieve sufficient levels of business and geographic diversification, the risk within the group is then pooled by means of internal retrocession to a central group entity. This presents challenges for solvency supervisors with a mandate for supervising local legal entities

For reinsurers, the benefits of mutual recognition include reduced compliance costs, increased certainty of the regulatory process, more efficient allocation of capital with the removal of regulatory barriers to the flow of capital between companies in reinsurance groups. For insurers the benefits of mutual recognition include increased access to reinsurance markets, potentially allowing better risk diversification. The primary benefit for solvency supervisors is greater transparency and a potential for reduced regulatory arbitrage.

Broadly speaking mutual recognition has the potential to account for the fact that risk is spread globally, and contributes to the efficiency of the insurance markets through reduced regulatory arbitrage.

Challenges and risks to mutual recognition that would likely need to be addressed include:

- does the supervisory system have solvency regulation largely consistent with that of OSFI?
- is there sufficient transparency or information sharing between supervisory authorities in different jurisdictions, and
- in the event of an insurer insolvency resulting in a liquidation, is the insolvency framework and the treatment of assets consistent with the Canadian system (for example is the insolvency clause enforceable and can assets be transferred to the Canadian estate)

25% rule on unregistered reinsurance

The *Reinsurance Regulations* of the *Insurance Companies Act* limits the placement of reinsurance with non-approved (unregistered) reinsurers to 25% of the amount of business that can be ceded.

PACICC estimates from the limited data available that the average financial strength rating of an unregistered reinsurer is likely two rating grades below that of registered reinsurers. While many unregistered reinsurers are strong financially, a rating could not be identified for nearly half (45.2%) of identified unregistered reinsurers used by Canadian insurance companies. Given these facts, if this limit were to be eased or removed then consideration might be given to the following:

- should MCT/BAAT credit be granted on the basis of likely collectability, with higher capital charges for higher risk collectables. For example, similar to the Australian proposals, should a risk-based scale based on the financial strength rating of the reinsurer be used?
- however, noting the divergence of opinion in assessing the financial strength of reinsurers among rating agencies, should the highest level of MCT/BAAT credit be allowed for companies with strong ratings from two rating agencies?
- should the limit only be eased or removed for reinsurers with a home jurisdiction that has a solvency supervisory system that is largely consistent with that of OSFI and IAIS supervisory standards (i.e. linked to a mutual recognition system).

APPENDIX A

Limit on proportion of direct business that can be reinsured (75% limit)

While there is perhaps no specific rationale as to why 74% is better than 77%, a clear link exists between an insurer's reliance on reinsurance and its exposure to counterparty credit risk, both in terms of willingness to pay and the risk of reinsurer insolvency. Further, greater reliance on reinsurance increases an insurance company's exposure to a volatile reinsurance cycle.

Increased reliance on reinsurance should be accompanied by increased resources and attention to reinsurance management. Therefore, given the risks evident in the international experience on reinsurance collectability, and similar to IAIS guidance on the use of internal capital models, should additional reliance on reinsurance above this threshold only be granted in an environment with a strong enterprise risk management (ERM) system has been demonstrated?

Should Canadian P&C insurance financial reporting include a Schedule F?

The U.S. approach allows for a standardized approach for supervisory authorities to assess the collectability of reinsurance recoverables. However, the regular and repeated revisions to the schedule highlight the difficulty in practice of standardizing reporting on a product that is highly heterogeneous.

The current approach of the appointed actuary assessing a provision for bad debts is more common internationally and appears to have been largely effective under the current solvency system and treatment of reinsurance. However, an important consideration is how other revisions to the supervision of reinsurance might affect the measurement and reporting of reinsurance credit risk.

PACICC has consistently supported the significant benefits of transparency and financial disclosure. Increased availability of financial data, including information about reinsurance, reduces the risk of insolvency and enhances consumer confidence in the insurance industry.

Appendix B:
Comparison of International Insolvency Clauses

Canada

"In the event of the insolvency of the Company, recoveries under this Agreement shall be payable by the Reinsurer directly to the Company, or to its liquidator, receiver, or statutory successor, on the basis of the liability of the Company under the policy or policies reinsured without diminution because of the insolvency of the Company.

The Company, or its liquidator, receiver or statutory successor, shall give written notice to the Reinsurer of all reported claims against the Company on any policy reinsured which might affect this Agreement within a reasonable time after such claim is filed in the insolvency proceedings. The Reinsurer may investigate and/or defend any such claim in the place of the Company. The expense thus incurred by the Reinsurer shall be chargeable, subject to the approval of the court, against the Company as part of the expense of liquidation to the extent of the proportionate share of the benefit which may accrue to the Company solely as a result of the defence undertaken by the Reinsurer.

Where two or more Reinsurers are involved in the same claim and a majority interest elect to interpose defence to such a claim the expense shall be apportioned in accordance with the terms of this Agreement as though such expense had been incurred by the Company.

In the event of the insolvency of any party hereto, the Company or the Reinsurer may offset any balances, whether with respect to premiums, commissions, losses, loss expenses, salvages or any other amount, due from one party to other under this Agreement or any other reinsurance agreement heretofore or hereafter entered into between the Company and the Reinsurer."

RRC 1991

United Kingdom

Clause Lirma G86: Insolvency Clause

Where an Insolvency Event occurs in relation to the Reinsured the following terms shall apply (and, in the event of any inconsistency between these terms and any other terms of this Agreement, these terms shall prevail):

1. Notwithstanding any requirement in this Agreement that the Reinsured shall actually make payment in discharge of its liability to its policyholder before becoming entitled to payment from the Reinsurer:
    a. the Reinsurer shall be liable to pay the Reinsured even though the Reinsured is unable actually to pay, or discharge its liability to, its policyholder; but
    b. nothing in this clause shall operate to accelerate the date for payment by the Reinsurer of any sum which may be payable to the Reinsured, which sum shall only become payable as and when the Reinsured

would have discharged, by actual payment, its liability for its current net loss but for it being the subject of any Insolvency Event.

2. The existence, quantum, valuation and date for payment of any sum which the Reinsurer is liable to pay the Reinsured under this Agreement shall be those and only those for which the Reinsurer would be liable to the Reinsured if the liability of the Reinsured to its policyholders had been determined without reference to any term in any composition or scheme of arrangement or any similar such arrangement, entered into between the Reinsured and all or any part of its policyholders, unless and until the Reinsurer serves written notice to the contrary on the Reinsured in relation to any composition or scheme of arrangement.

3. The Reinsurer shall be entitled (but not obliged) to set-off, against any sum which it may be liable to pay the Reinsured, any sum for which the Reinsured is liable to pay the Reinsurer.

An Insolvency Event shall occur if:

A.

i. (in relation to (1), (2) and (3) above) a winding up petition is presented in respect of the Reinsured or a provisional liquidator is appointed over it or if the Reinsured goes into administration, administrative receivership or receivership or if the Reinsured has a scheme of arrangement or voluntary arrangement proposed in relation to all or any part of its affairs; or

ii. (in relation to (1) above) if the Reinsured goes into compulsory or voluntary liquidation;

or, in each case, if the Reinsured becomes subject to any other similar insolvency process (whether under the laws of England and Wales or elsewhere) and

B. the Reinsured is unable to pay its debts as and when they fall due within the meaning of section 123 of the Insolvency Act 1986 (or any statutory amendment or re-enactment of that section).

International Underwriting Association of London (IUA)
http://www.iuaclauses.co.uk/G86.doc

United States

Sample from reinsurer:
In the event of the insolvency of the Company, reinsurance under this Certificate shall be payable by XYZ Reinsurance on the basis of the liability of the Company without diminution because of such insolvency, directly to the Company or its liquidator, receiver, or statutory successor, except as otherwise provided by law.

APPENDIX B

<u>*California Insurance Code:*</u>
In the event of insolvency and the appointment of a conservator, liquidator, or statutory successor of the ceding company, the reinsurance shall be payable to the conservator, liquidator, or statutory successor on the basis of claims allowed against the insolvent company by any court of competent jurisdiction or by any conservator, liquidator, or statutory successor of the company having authority to allow such claims, without diminution because of that insolvency, or because the conservator, liquidator, or statutory successor has failed to pay all or a portion of any claims. Payments by the reinsurer as set forth in this subdivision shall be made directly to the ceding insurer or to its conservator, liquidator, or statutory successor, except where the contract of insurance or reinsurance specifically provides another payee of such reinsurance in the event of the insolvency of the ceding insurer.

The reinsurance contract may provide that the conservator, liquidator, or statutory successor of a ceding insurer shall give written notice of the pendency of a claim against the ceding insurer indicating the policy or bond reinsured, within a reasonable time after such claim is filed and the reinsurer may interpose, at its own expense, in the proceeding where such claim is to be adjudicated, any defense or defenses which it may deem available to the ceding insurer or its conservator, liquidator, or statutory successor. The expense thus incurred by the reinsurer shall be payable subject to court approval out of the estate of the insolvent ceding insurer as part of the expense of conservation or liquidation to the extent of a proportionate share of the benefit which may accrue to the ceding insurer in conservation or liquidation, solely as a result of the defense undertaken by the reinsurer.

NAIC Insurers Rehabilitation and Liquidation Model Act

"In the event of insolvency and the appointment of a receiver, the reinsurance obligation shall be payable to the receiver upon demand, with reasonable provision for verification, on the basis of claims allowed pursuant to Section 48 of this Act, without diminution because of the insolvency or because the receiver has failed to pay all or a portion of any claims. Payments by the reinsurer as set forth above shall be made directly to the ceding insurer or to its receiver …"

NAIC Model Liquidaiton Act S. 36(B)(1)

Appendix C: Insuring the Insurer – a brief on what reinsurance does

The International Association of Insurance Supervisors 2007 reinsurance market report estimates the size of the global property and casualty reinsurance industry to be USD $173 billion ($175 billion CDN) in direct written premium. The worldwide reinsurance market is an important backstop to Canada's P&C insurers and the Canadian property and casualty (P&C) industry is a heavy consumer of reinsurance products. Reinsurance, a highly complex global business, accounts for about 24 percent of the Canadian P&C insurance industry's direct written premiums. In comparison, reinsurance accounts for about 10 percent and 15 percent respectively of U.S. and OECD direct written premiums. While Canada's primary insurance market accounts for only 2.5% of the global insurance premiums written, Canadian insurers accounted for 4.9% of gross premium ceded to reinsurers.

Highlighting the value of reinsurance to primary companies, in 1998 the global reinsurance market bore about two-thirds of the Canadian P&C industry's combined CDN $1.8 billion in catastrophe losses that resulted from the ice storm of that year. In the U.S., the reinsurance industry absorbed half of the CDN $68.2 billion in losses related to hurricanes Katrina, Rita and Wilma (KRW). Despite the magnitude of these losses, three times that of Hurricane Andrew, only six insurance companies failed. Acting as a risk transfer mechanism for large losses, reinsurance has been an important part of the insurance industry for nearly 170 years, contributing directly to the stability of the Canadian insurance markets.[23]

Insurers transfer risk to reinsurers for a number of reasons including:

> *Solvency protection (reduce ruin probability):*
> Reinsurance protects primary insurers from large unexpected losses that could threaten the solvency of the institution. This was evident during the 1998 ice storm which generated $1.8 billion in insurance claims for the industry or more than 28% of the total property premiums written that year. Following the storm, primary insurers recovered nearly $1 billion of total losses from reinsurers, or approximately two-thirds of claims paid. Without reinsurance support, PACICC estimates that up to three insurers may have experienced financial distress from the ice storm.
>
> *Decrease balance sheet volatility:*
> Reinsurance enhances stability by providing protection to insurers from unexpected adverse losses and helping to understand the assumed risks better and ensure correct risk assessment and pricing.

[23] Cologne Reinsurance Company, established in 1842, was the first professional reinsurance company. Others such as Frankfurt Re (1857), the Swiss Reinsurance Company (1863), Munich Reinsurance Company (1880) were also among the fist reinsurance companies. (Source: Swiss Re (2002).)

APPENDIX C

Increase underwriting capacity:
By transferring risks to reinsurers, primary insurers may hold less capital against these risks. They can therefore underwrite more risk or a broader base of risks.

Capital management:
Reinsurance may be a mechanism to manage an insurer's capital requirements and allocations. For example, within a corporate group, reinsurance may be used to centrally manage assets, transferring resources to subsidiaries to pay claims as they arise.

Support risk management:
Reinsurance companies provide risk management services and assistance to insurers, helping them to understand the assumed risks better and ensure correct risk assessment and pricing.

Should there be a loss of reinsurance support, the implications for a primary insurer are extensive and could result in the financial impairment of the primary insurance company. In Canada, reinsurance has not been a major source of insurance company insolvency but it has been a contributing factor in a quarter of all failures over the past 50 years. In the majority of insolvencies where reinsurance was a contributing factor, the issue appears to have been one of reinsurance management by the failed insurer, rather than failure of the reinsurer. In some cases there were complex inter-group arrangements; in others, there was an over-reliance on reinsurance assets that became more difficult to obtain when the reinsurance market hardened.

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