Uncollectible Reinsurance Reserves

by Bruce E. Ollodart
FCAS, MAAA
American Actuarial LLC

Abstract

This paper provides an introduction to concepts and methods for developing estimates of uncollectible reinsurance reserves. Such reserves may be required if an insurance or reinsurance company has ceded reinsurance losses recoverable that have become uncollectible. Topics covered include sources of uncollectible reinsurance, insolvency issues, data sources, relevant legal concepts, financial reporting issues, contract termination issues, reserve estimation methods, and federal income tax matters.

Table of Contents

Biography 1
Acknowledgments 1
Introduction 1
Background 2
Reinsurance Recoverable Asset Impairment 4
Sources of Uncollectible Reinsurance 5
  Disputes 5
  Financial Difficulty 7
    Late Payers 7
    Weakening Financial Strength 8
    Receivership 10
      Rehabilitation 11
      Liquidation 12
      Information on Receiverships 15
  Other Sources of Uncollectible Reinsurance 16
    Governmental/Legal Actions 16
    Criminal Actions 16
Offset Rights 17
Cancellation, Commutation, and Novation 19
Tax Issues 21
Estimating Uncollectible Reinsurance Reserves 22
  Source of Loss Fact Sheet 23
  Specific Versus Bulk Sources of Uncollectible Reinsurance 23
  Estimate of Total Exposure 24
    Accuracy and Credibility 25
    Adjustable/Special Reinsurance Contract Features 25
  Credits 26
  Probability of Future Liquidation 26
An Example 29
References 31

Biography

Bruce Ollodart is a consulting actuary with the firm of American Actuarial LLC, Wallingford, Connecticut. He is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. Bruce's experience with uncollectible reinsurance reserves includes analysis of uncollectible reinsurance for insurance companies and insurance company litigation involving uncollectible reinsurance. He is the author of a related paper "Review of Bad-Debt Reserves," Society of Actuaries, 1994, which explores predictive models for non-insurance bad debts.

Acknowledgments

The author wishes to thank Mr. Kai-Jaung Pei, FCAS, MAAA, ASA, Ph.D., for his helpful comments and peer review of the earlier drafts.

Introduction

This paper covers a series of topics related to the estimation of uncollectible reinsurance reserves for property and casualty exposures. For purposes of this paper, we concern ourselves primarily with loss and loss adjustment expense reserves (hereafter referred to as losses). Matters regarding adjustable features (retro-rating plans, profit sharing plans, contingent commissions, etc.) are discussed briefly. The concepts and methods discussed in this paper are applicable to most general types of reinsurance, be they prorata, excess of loss, aggregate, or some combination thereof. The concepts in this paper apply to both treaty and facultative reinsurance. Issues that may be specific only to financial and finite risk reinsurance transactions are not addressed.

The author assumes a basic knowledge of both insurance and reinsurance terminology as well as familiarity with common reserving methods used within the actuarial profession. For those readers requiring a primer on reinsurance terminology, several good references are available[1]. Basic knowledge of statutory accounting principles is also assumed.

In the discussions and examples included in this paper, risk transfer is assumed for transactions between an insurance company and a reinsurance company unless otherwise specified. Statutory Accounting Principals (SAP), rather then Generally Accepted Accounting Principals (GAAP), are used for most examples. Where GAAP is being used, specific reference to GAAP is made.

This paper discusses matters with legal, tax, and accounting ramifications. As the author is neither a lawyer nor accountant, these matters are summarized from an actuary's perspective based on the author's research and experience and do not constitute either legal or accounting opinions. Detailed legal and/or accounting opinions on such matters can be obtained from qualified experts in those professions.

Background

When an insurance company cedes (the "ceding company") business to another insurance company (the "reinsurer"), the transaction results in transfer of liability from the ceding company to the reinsurer. In a typical reinsurance transaction, the ceding company pays the reinsurer a premium in exchange for the promise to pay claims (or some portion thereof) on a specified book of business written by the ceding company.

As claims occur that are covered by the reinsurance contract, a reinsurance asset or reduction in liability is created. For that portion of the ceded claims that have already been paid by the ceding company, the asset is normally reported as a reinsurance receivable. This treatment is consistent with standard reinsurance contract provisions

that reimburse a ceding company only after a reinsured claim covered by the primary policy is paid. Depending on the type of accounting treatment used, that portion of the ceded claims that are unpaid by the ceding company may be netted against carried reserves (SAP), or may be shown as a reinsurance recoverable asset (GAAP)[2]. As the direct claim has not been paid and the reinsurance contract specifies payment only after the direct claim is paid, the term recoverable is used here instead of receivable. For example, actuaries often work with loss development data that is net of reinsurance ("net data"). The net data will be net of reinsurance received and receivable on paid losses and net of reinsurance recoverable on unpaid reported losses (i.e., excluding IBNR). When the actuary performs an analysis of the net data, the estimate of ultimate losses is net of reinsurance received on paid losses, reinsurance receivable on paid losses, and reinsurance recoverable on unpaid losses (for both reported and unreported claims). To simplify the discussion that follows, the term reinsurance recoverable will be used to indicate reinsurance receivable on paid losses and reinsurance recoverable on all unpaid losses, unless otherwise specified.

Net data may be determined by claims personnel, a reinsurance department, automated reinsurance systems, or other processes. These processes are based on an interpretation of the reinsurance contract language. For various reasons some reinsurers may or may not pay their share of the reinsured losses, either partially or entirely. Hence, until actual payment of reinsurance is received, the netting process is an estimate of the amount of reinsurance recoverable. When reinsurance recoverable becomes uncollectible in part or in whole, an estimate of the amount of reinsurance uncollectible is necessary. The estimated amount of uncollectible reinsurance is called the uncollectible reinsurance reserve.

Given the complexity of estimating the amount of uncollectible reinsurance, the role of the actuary in the process becomes important. In fact, according to the National Association of Insurance Commissioners (NAIC) instructions to the Annual Statement[3], the actuary is responsible for such estimates when providing a statutory opinion on insurance company loss reserves. Although the actuary may not be required to perform

these estimates directly, a thorough review of their reasonableness is required. General guidance concerning reinsurance collectible is also included in the American Academy of Actuaries Property and Casualty Notes[4] and in certain standards promulgated by the Actuarial Standards Board[5]. Where uncollectible reinsurance is potentially material to an insurance company's financial condition, the actuary should carefully review estimates of uncollectible reinsurance for reasonableness. In many cases, the actuary should perform an independent review of uncollectible reinsurance reserves using actuarial methods and assumptions. An example of such methods and assumptions is provided in this paper.

Reinsurance Recoverable Asset Impairment

To simplify the discussions that follow, the author refers to the ceded amounts on both paid and unpaid claims that are due but not yet collected from a reinsurer as an asset, regardless as to where the amounts are recorded in SAP or GAAP financial statements. Historically, SAP and GAAP have differed in how such amounts are recorded, with SAP recording reinsurance recoverable on unpaid claims as a reduction to gross loss reserves, and GAAP recording this amount as an asset on the balance sheet. Uncollectible reinsurance reserves are then either an increase in net loss reserves under SAP or a reduction in the reinsurance receivable asset under GAAP. For purposes of this paper, the term reinsurance recoverable asset as defined here is interchangeable with a reduction in gross reserves.

To estimate reserves for uncollectible reinsurance, it helps to have a definition for when a reinsurance recoverable asset is uncollectible. The term "impairment of an asset" is often used by accountants to indicate that an asset has lost some or all of its value. According to the Financial Accounting Standards Board (FASB), collectibility of receivables is considered a loss contingency and is to be treated in a manner comparable to other loss contingencies such as insurance claims[6]. FASB provides specific guidance regarding the definition of receivable asset impairment[7]. In summary, FASB indicates

that a receivable asset is impaired if it is probable that the amount to be collected is less than the amount of the receivable, based on available information. FASB defines probable to mean "the future event or events are likely to occur.[8]" Although this definition of asset impairment is for GAAP, the author believes this definition is reasonable for actuarial estimates and relies on this concept of receivable asset impairment to determine which reinsurance recoverable assets should be considered uncollectible.

Sources of Uncollectible Reinsurance

There are numerous reasons why some reinsurers may not pay their share of reinsured losses, either partially or entirely. Sources of uncollectible reinsurance can be grouped into the following general categories:

1. Disputes
2. Financial difficulty
3. Other

What follows is a general discussion of the most common sources of uncollectible reinsurance within each category.

Disputes

Reinsurance contract language is often complex and may be interpreted differently by ceding companies and their reinsurers. When these interpretations differ in a material way (i.e., where a material difference in reinsurance recovery depends on the interpretation of the reinsurance contract language) and cannot be resolved easily, a dispute between the ceding company and reinsurer ensues. Disputes have included the meaning of an occurrence for asbestos and pollution claims, the definition of an

occurrence for catastrophe claims, the scope of business covered by the reinsurance contract, the application of rates and rating plans, territories covered/excluded, proper use of underwriting policy, treatment of IBNR, proper notification of a claim, and numerous other matters. Disputes are usually resolved at the company management level (often involving senior management). When this fails, the dispute can escalate to arbitration and/or a legal battle in the courts.

Given the high cost of litigation, many reinsurance contracts have mandatory arbitration clauses. Such clauses require that the dispute first be arbitrated before actual litigation ensues. Some arbitration clauses are also exclusive. That is, arbitration is both a mandatory and exclusive remedy under the contract – any attempt at litigation would violate the contract's arbitration provision and could completely void the contract.

In a few cases, reinsurance disputes will end up in litigation. For example, a recent dispute was over the definition of an occurrence for asbestos claims. Ceding companies wanted to aggregate all claimants under one occurrence for a specified policyholder, which would increase the severity of a ceded claim. This definition of an occurrence would have cost the excess of loss reinsurers much more than a definition of occurrence that applied separately to each claimant, as only one retention would be paid by the ceding company per policy as opposed to a separate retention for each claimant.

During a dispute between a ceding company and a reinsurer, the estimate of the amount of reinsurance recoverable becomes more uncertain. In the case of a litigated dispute, this uncertainty is significant and can continue for several years, well beyond the time when assets and liabilities associated with the reinsurance in dispute would be recorded for financial purposes. To assess the impact of disputed reinsurance, actuaries should review all major and/or significant disputes and evaluate the probability of the outcomes. If it is probable that your company will lose the dispute or a material portion of the amount in dispute, reinsurance recoverable asset impairment has occurred.

Attorney involvement is usually required to estimate reserves for disputed reinsurance. The attorney can assist with determination of the probability of winning or losing a dispute, as the facts and applicable laws may differ in each case. The attorney can also provide an estimate of the additional legal costs associated with arbitration and litigation. In certain litigated cases, utilizing the services of legal counsel can provide attorney-client-privilege and protect vital information from discovery by the opposing party.

Another factor to consider in a dispute is the collection of a judgement. If your company wins the dispute and receives a judgement (amount awarded in your favor), the reinsurer may still refuse to pay. In such situations, your company will have to obtain a court order to seize the reinsurer's assets, if any exist, to satisfy the judgement. This process will take additional time and expense. If the reinsurer also has financial difficulties or there is fraud involved (discussed later), the amount of assets available may be insufficient to satisfy the judgement.

Financial Difficulty

Financial difficulty is a broad label the author uses to describe those reinsurance companies that have trouble paying their claims. This would include reinsurers that delay payments for long periods of time, only pay a portion of the amounts they owe, and those that cannot pay anything at all. There are major categories of degree of financial difficulty that can be used to group reinsurers for analysis of uncollectible reinsurance. This section provides a discussion of the categories used by the author.

Late Payers

Late payers are reinsurers that have a history of paying their bills late. All other factors would indicate that the reinsurer is financially secure. The risk to the ceding company

is related to an over extension of credit. When payment by a reinsurer is delayed beyond the period specified in the reinsurance contract, the ceding company is implicitly extending credit to that reinsurer. The longer the delay, the larger the amount of credit extended. When something unexpected happens that affects the reinsurer's ability to pay (e.g., catastrophic losses), the ceding company is at risk of not being paid in full on amounts that are owed. The payment default risk increases for late paying reinsurers. This risk also increases during periods when the insurance industry is experiencing unfavorable economic trends (e.g., a soft underwriting cycle). Although the degree of impairment to the reinsurance recoverable asset for late payers may be low, it is not zero. Therefore, some impairment to the reinsurance recoverable asset is likely for late payers.

Schedule F of the Statutory Annual Statement is a source for finding reinsurers that are late payers. In Schedule F of the Statutory Annual Statement there is a penalty computed that applies to the ceding company's surplus for reinsurance amounts more than 90 days overdue. This penalty does not affect income. According to SAP, reserves for uncollectible reinsurance are in addition to the penalty for overdue reinsurance[9]. Adding such a reserve would reduce income and also further reduce SAP surplus.

Weakening Financial Strength

Reinsurers in this category are experiencing a trend towards weaker financial strength. They have not defaulted on their claim payments, although they may be slow paying. Trends in financial strength can be monitored in a variety of ways. Examples of such trends include:

- A series of downgrades by rating agencies such as A.M. Best Company, Standard & Poor's, Dun & Bradstreet, and Moody's.

- A series of downgrades in recommendations by investment analysts for publicly traded stock companies, taking into consideration that the entire insurance and reinsurance sector can be affected by global investor sentiment that has little to do with financial strength. Investment analysts that follow insurance companies include Conning & Company and Duff and Phelps.

- Deteriorating results of statistical solvency screening tests such as the NAIC's Insurance Regulatory Information System (IRIS) and the Financial Analysis Solvency Tracking System (FAST). These statistical tests are discussed in more detail later.

- Deteriorating levels of risk based capital

- Slowdown in payment of claims

- Increase in disputed claims

While review of many of these sources will identify reinsurers that may be heading into financial difficulty, to support inclusion of the reinsurers in the analysis of uncollectible reinsurance reserves, the companies in this group should also show a probable rate of default based on statistical analysis. That is, the underlying financial problems that can cause future insolvencies should already be occurring in this group of companies. When this is the case, impairment of the ceding company's reinsurance recoverable asset is probable. IRIS, FAST, or other similar financial analysis systems that have predictive value in determining which reinsurers are candidates for financial difficulty should be applied to each reinsurer identified with this group.

Receivership

When insurers become financially impaired, they can be taken over by state regulators in a process known as receivership. Receivership is governed by the laws in the state of domicile (or foreign jurisdiction) and can vary from one state to another. Complexities arise when insurers operate in multiple states and jurisdictions. Receivership is a large and complex topic. In this paper the author summarizes certain receivership concepts relevant to uncollectible reinsurance analysis. Depending on the laws of each state, receivership may have specific and different meanings, different terminology, and different rules than those used in this paper, although the general concepts should be comparable.

Insurance companies are generally exempt from Federal laws governing bankruptcy. Instead, state receivership laws apply that differ from state to state. Many state receivership laws are based on either the Uniform Insurer's Liquidation Act (depression era legislation) or the NAIC Model Law #555-1, "Insurers Rehabilitation and Liquidation Model Act" (published in 1998). The NAIC Model Act provides considerable background information on the receivership process and is recommend reading for actuaries working with uncollectible reinsurance reserves.

There are various forms of receivership that vary in the degree to which an insurer is taken over. The first form of receivership is conservation, a procedure that allows a regulator to take over the affairs of an insurance company via a court order, usually without prior notice. The regulator's powers during conservation are limited in scope and time, and provide a period of protection to policyholders by conserving assets while the regulator reviews the affairs of the insurer. Depending on state laws, administrative supervision, a procedure requiring regulators to review and pre-approve certain management activities of an insurer, is sometimes used prior to or in lieu of conservation. In some states, administrative supervision can be implemented without prior court approval and without prior notice. The next two forms of receivership are

rehabilitation and liquidation. Orders to rehabilitate or liquidate an insurer must be issued by a court of competent jurisdiction. This occurs after a petition is filed by the regulator and approved by the court. Other interested parties may also file such petitions including creditor groups, trustees, policyholders, reinsurers, and ceding companies, depending on the situation. The company subject to the petition has an opportunity to appear at a hearing and offer evidence opposing the petition. If the petitioning party does not provide sufficient evidence to justify the order, the petition will be denied. Therefore, a petition for rehabilitation or liquidation should not be considered a definitive indicator of financial difficulty until it has been reviewed and approved by a court. If the order is approved, usually a regulator is appointed as the receiver. Companies that are initially put into rehabilitation can later be petitioned for liquidation if the rehabilitation fails.

Rehabilitation

The term rehabilitation is applied to insurance companies that the regulator believes can be saved. Rehabilitated companies are expected to resume business after a period of management changes and restructuring. The company may be solvent or insolvent, but the degree of the problem is considered manageable. Usually an insolvent company in rehabilitation is only technically insolvent. That is, the company will have inadequate or negative surplus on a SAP basis, but has sufficient funds (including future investment income) to satisfy its liabilities. In other cases, the insolvent companies will not have sufficient funding, but the regulator believes that better control of assets and liabilities will result in adequate funding sufficient to rehabilitate the company. Examples of actions a regulator may take to shore up company operations include rescinding certain contracts that were entered into improperly, collecting reinsurance that is in dispute, subrogating against other parties, staying pending litigation, and denying unsubstantiated claims.

For purposes of estimating uncollectible reinsurance reserves, reinsurers that are in rehabilitation are at higher risk of defaulting on payments. Some rehabilitated reinsurers will pay all of their claims and return to normal operation, some will pay all their claims and eventually cease operations, and others will fail and be liquidated. If your company entered into any special contracts with the reinsurer, particularly if they were entered into within one year of receivership, those contracts could be rescinded under the "voidable preference rules" of some state receivership laws. These rules allow the receiver to rescind contracts that provide certain preferences to a creditor at the expense of other creditors. An example of a voidable preference would be commutation of reinsurance, where the commutation was favorable to a specific ceding company, entered into just prior to rehabilitation of the reinsurer, and would not have been commuted if not for the pending receivership.

Liquidation

When regulators do not believe an insurer can be saved, they petition for an order to liquidate the company. When a reinsurer is put into liquidation by a court order, it is almost certain that assets are insufficient to pay liabilities. The severity of an insolvency (the amount by which liabilities exceed assets) will range from mild to extreme. The ceding company may receive most of its reinsurance amounts recoverable if the insolvency is mild and nothing at all if the insolvency is extreme. The net assets available to pay creditors are referred to as the estate of the reinsurer and the receiver must go through a process of running off the company and settling the estate. As many insolvent companies suffer from mismanagement, the receiver usually finds that information is inaccurate, incomplete, and missing. Hence, it may take several years to assemble complete financial records and accurately determine the extent of the insolvency. In the meantime, creditors must make estimates of the amount they will ultimately collect from the liquidated estate.

The receivership laws of each state set up a priority list for creditors that specify which creditors get paid first. Creditors can include employees of the liquidated company, state and federal tax authorities, state guaranty funds, ceding companies, reinsurers (for unpaid premiums), direct policyholders, and shareholders, amongst others. These laws vary, but the majority of the laws use a priority list comparable to the list that follows. All prior (lower numbered) categories on the list get paid in full before the next category receives any payment:

1. Administrative costs to administer the receivership
2. Guaranty fund expenses, other than policyholder claims, for services related to the receivership
3. Claims under direct policies of the liquidated insurer or reinsurer, including reimbursement of guaranty funds that paid such claims on behalf of the liquidated company.
4. Federal government claims not included in Category 3.
5. Debts due to employees (excluding officers) for compensation and benefits.
6. General creditors including state and local government claims not included elsewhere, reinsurers, ceding companies, and banks.
7. Certain state and local government claims related to penalties.
8. Surplus notes and refunds of retro premium adjustments
9. Shareholders and owners

In most states, reinsurance recoverable by a ceding company falls into the general creditor category (category 6 above). Direct and assumed claims for policyholders of a liquidated insurer usually constitute the largest liability. Costs for Categories 1 and 2 are much smaller after insolvency than the normal cost to operate an insurer because insurer non-claim expenses including premium tax, marketing cost, acquisition cost, agents commissions, etc. all cease when the company stops writing new business. Category 4 claims are related to income taxes in most cases and due to the financial loss (rather than profit) as a result of the insolvency, such taxes are often minimal. Category 5 claims are also relatively small in states where receivership laws cap the amount of

benefits employees can receive. Hence, if the reinsurer wrote only reinsurance, then it is more likely that general creditors will recover a portion of their debts from the estate. However, if the reinsurer wrote a significant amount of direct policies, it is less likely that general creditors will recover a portion of their debts from the estate. In either case, the amount recovered from the estate of the reinsurer will depend on the severity of the insolvency as well as amounts paid to higher priority creditors.

Review of the facts for reinsurers in liquidation should include potential recovery from the estate. Such information can be obtained from legal counsel, estimates made by the receiver, and independent estimates made from recent financial reports and other industry sources. As a creditor, a ceding company is an “interested party” in a liquidation proceeding and should have access to a considerable amount of confidential financial information not generally available to the public regarding the insolvent company. This information often includes data that can be used to estimate future recoveries. In certain cases, general creditors are likely to recover significant amounts from the estate. The actuary should reflect these recoveries in the estimate of uncollectible reinsurance reserves. Examples of circumstances that increase the likelihood of significant recovery include:

1. Company insolvency is not severe.
2. Company only wrote reinsurance and has very few higher priority creditors.
3. Company has a parent organization that will step in to guarantee debts.
4. Company is in a dispute and has a good chance of winning, in which case, considerable assets will be available to pay claims.
5. Company’s solvent reinsurer has a cut-through clause that would apply to your claims.
6. Company is a member of a solvent pool, association, or syndicate that provides claim payment guarantees to policyholders of its insolvent members.
7. Stolen assets expect to be recovered.

During the liquidation proceeding, the ceding company will be requested to submit written proofs of claim for approval. To be approved, claims must have occurred prior to the date of liquidation. Properly documented case reserves and paid losses recoverable are approved in most cases and where permitted by statute, IBNR is approved if properly supported (e.g., by actuarial analysis). A cut-off date for submission of proofs of claim limits the approval of IBNR claims in cases where statutes do not permit IBNR to be included in the proof of claim.

Information on Receiverships

Information on insurance companies subject to receivership can be obtained from several sources. The author believes several sources should be checked and cross-referenced, as there may be conflicting information that needs verification. Following is a sample of such sources:

1. NAIC Report on Receiverships – provides listings and summary status reports on a large number of receiverships, updated annually.
2. NAIC Multi-state and Single-state Receivership Listings.
3. NAIC Rehabilitators and Liquidators Task Force Contact Persons Reports.
4. A.M. Best Company (Key Rating Guide, Best’s Insurance Reports, Company Reports, Best’s Insolvency Study – June 1991).
5. Insurance Periodicals (Business Insurance, National Underwriter).
6. American Academy of Actuaries Study of Property-Liability Insurance Company Insolvencies, March 1992.
7. Annual financial reports and correspondence on individual companies in receivership prepared by receivers, creditor committees, auditors, actuaries, and trustees.

General information on receivership can be found in the NAIC Model Act (noted above) and the NAIC’s Receivers Handbook for Insolvencies.

Other Sources of Uncollectible Reinsurance

There are other sources of uncollectible reinsurance that may result in financial difficulty or, in certain cases, are independent of financial difficulty. The two most common are governmental/legal actions and criminal actions. An insurance company's legal and reinsurance departments, reinsurance intermediaries, newspapers, insurance periodicals, and word of mouth provide information on these sources.

Governmental/Legal Actions

Governmental/legal actions can cause uncollectible reinsurance without putting a reinsurer into receivership. Such actions are not common and hard to predict. The reinsurers involved may be in good financial condition. There may not be any disputed claims. For example, due to problems associated with market conditions of the early 1980's, Administratia Asigurarilor De Stat, an insurance company run by the Socialist Republic of Romania obtained a Romanian court order to cancel all reinsurance contracts placed through certain brokers and agents throughout the world[10]. During World War II, Nazi occupation in Europe resulted in confiscation of insurance company assets and default on reinsurance contracts with numerous parties.

Criminal Actions

Fraud and embezzlement are the primary criminal actions that result in uncollectible reinsurance. These reinsurance companies will use false or misleading financial information to attract business and then default on claims payments. Sometimes the reinsurance companies do not even exist and ceding companies pay premiums to companies that soon after disappear into thin air. Because the companies do not exist, regulatory aspects do not apply. Sometimes reinsurance company management steals the funds, leaving creditors and regulators with no assets to pay claims. When fraud is

involved, the resulting default on claims payments can be severe, as such criminals typically leave nothing of value behind.

Offset Rights

In the process of collecting reinsurance, the ceding company may not receive all of the amounts it is contractually due from a reinsurer. If the reinsurer also ceded business that was assumed by the ceding company, or the ceding company owed moneys to the reinsurer, offset rights may exist. Offset (sometimes called setoff) is the ability of the first party to offset debts owed to a second party by the amount the second party owes the first party. That is, amounts owed by the ceding company to the reinsurer could be offset by amounts the reinsurer owes the ceding company. This is important in cases where a significant amount is owed to the reinsurer, as that amount reduces the amount of uncollectible reinsurance reserve. Each dollar of reinsurance recoverable that is offset, is a full dollar reduction in liability to the ceding company. This compares to receiving only a percentage of reinsurance recoverable as a result of the settlement of the reinsurer's estate in a liquidation or court settlement.

Offset rights are generally assumed to exist in most cases, although there are jurisdictions and circumstances where offset may be disallowed. Offset rights are established in several ways:

- Reinsurance contracts often have an offset clause that specifies that offset is permitted as a normal business practice. Some clauses specifically include circumstances involving insolvency.

- Offset rights have been established under common law, including cases tried by the U.S. Supreme Court (e.g., 129 U.S. 252 - Carr, Superintendent of Insurance of Missouri, v. Hamilton, January 28, 1889).

- Some state statutes contain provisions that address offset rights between mutual debtors. Where state statutes are silent on offset, common law usually applies. Certain state liquidation statutes as well as the NAIC Model Act, contain exceptions where offset is not permitted.

In liquidation cases, the receiver may deny a ceding company's right to offset and attempt to collect all amounts due the defunct reinsurer. If the receiver is successful, they can collect the entire amount due the defunct reinsurer and pay the ceding company only the amount it would receive as a general creditor. In these cases, a ceding company with offset rights may have to assert such rights in court before the offset is permitted.

Offset may not apply to IBNR because IBNR is not due and owing under the reinsurance contract. If the offset applies to comparable lines of business, then IBNR would be mutually offset as it emerges. However, if the lines of business are different (e.g., property versus long tail casualty), the ceding company should review applicable offset laws to determine what portion of the IBNR, if any, can be offset.

Offset during liquidation can occur in at least two ways, depending on the laws and/or rules followed by the receiver. The first method ("type 1") is to offset mutual debts first, then any remaining net amount owed by the liquidated company is paid based on the percentage received by general creditors. For example, if the ceding company owed a reinsurer in liquidation $50 and the reinsurer owed the ceding company $100, the net amount owed by the reinsurer to the ceding company is $50. If the liquidated estate pays general creditors 50 percent of net claims, then the ceding company would recover $25 dollars from the estate [($100 less $50) times 50%]. The second method ("type 2") is to offset amounts owed and not recovered from the liquidated estate by the amounts owed the estate. For example, assume the ceding company owed a reinsurer in liquidation $50 and the reinsurer owed the ceding company $100. If the liquidated estate pays general creditors 50 percent of net claims, then the recovery before offset

would be $50. The ceding company recovers the $50 from the estate and then owes nothing to the estate after offset [($100 times 50%) less $50].

Due to the complexity of the laws regarding offset, legal assistance is required to determine what offset rights should be reflected in the uncollectible reinsurance reserves for a specific reinsurer.

Cancellation, Commutation, and Novation

When it is desirable to terminate a reinsurance contract with a reinsurer, the approaches commonly used are cancellation, commutation and novation. We deal with these briefly here, as they may affect the reserves for uncollectible reinsurance. Detailed treatment of these transactions is not discussed in this paper, as such transactions have been reviewed extensively in other actuarial literature and publications.

Cancellation of reinsurance is a procedure where contracts are terminated retroactively to inception (complete cancellation) or cancelled for business written after a specific date that falls during the policy period (partial cancellation). If completely cancelled, the usual treatment is for accounting entries related to the cancelled contract to be reversed with the contract treated as if it never existed. Any monies exchanged are returned by/to the original parties to the contract. When a contract is partially cancelled, the usual treatment is to treat the contract as a shorter term contract and any premiums, losses, and expenses related to the cancelled portion are reversed and returned by/to the original parties to the contract.

Commutation is "the termination of all obligations between the parties to a reinsurance agreement, normally accompanied by a final cash settlement. Commutation may be required by the reinsurance contract or may be affected by mutual agreement."[11] Under normal business practices, commutation would occur several years after inception when the runoff of claims is fairly predictable and the parties wish to terminate the contract.

The usual treatment from the ceding company perspective is to receive a cash payment from the reinsurer in exchange for assuming the reinsurer's remaining liability under the contract (e.g., ceded losses unpaid by the reinsurer).

Novation involves an agreement among three parties (the ceding company, the original reinsurer, and a new reinsurer), where a new reinsurer replaces the original reinsurer. In most cases, cash payment is made to the new reinsurer in exchange for assuming the reinsurer's remaining liability under the contract. The cash payment may come from the original reinsurer, the ceding company, or some combination thereof. Depending on the specifics of the deal, the ceding company's accounting may be affected in various ways. For example, additional premiums may be paid, partial assumption of ceded liability may occur, or no affect occurs at all because the transfer of assets and liabilities is only between the original and new reinsurer.

Cancellation, commutation, and novation may be used to transfer, limit, and terminate business with reinsurers that have financial difficulty. These procedures are also used in the normal course of business with reinsurers in good financial condition. From the ceding company perspective, cancellation of reinsurance restores liabilities to a direct basis and removes the recoverable assets from the balance sheet, commutation adds assets and liabilities to the balance sheet, and novation must be reviewed case by case for its effect on the balance sheet. These procedures may affect the analysis of net reserves. For example, if a reinsurance contract is commuted, the ceding company now retains the losses that would have been ceded. If these losses remain in the net loss development data, distortions can occur as loss development from the addition of ceded losses suddenly appears in the loss development data after the commutation effective date. To deal with this problem, some companies will continue to net all claims against the original reinsurance contract and establish a separate liability for terminated reinsurance. This liability is sometimes characterized as uncollectible reinsurance. Other companies will restore historical data for net loss development for terminated reinsurance to a direct basis (as if the reinsurance never existed) and create an offsetting asset for reinsurance already received.

In cases where additions to uncollectible reserves are made for any of the termination procedures noted above, the author recommends that the amounts be separated from other uncollectible reinsurance reserves. The author also recommends that recognition of the above transactions for financial statement purposes correspond with the effective date of the transaction. For example, a commutation that is under negotiation this year with a proposed effective date next year would not be recognized in the current year financial statement as a commutation. If the purpose of the proposed commutation is to limit future exposure to collection problems, reserves for that reinsurer should be estimated and included with the bulk reserve estimates discussed later. Once the commutation takes effect, the reserves can be moved from bulk reserves to a specific reserve for commuted business.

Tax Issues

This section provides a brief overview of tax issues regarding uncollectible reinsurance. Detailed analysis of this issue should be obtained from qualified tax attorneys and accountants.

Internal Revenue Service (IRS) treatment of uncollectible reinsurance has been unclear. Uncollectible reinsurance related to claims paid was treated under Section 166 (revenue code dealing with bad debts). Treatment of uncollectible reinsurance related to unpaid claims was either treated under Section 166 or under Section 832 (revenue code dealing with loss reserves) depending on the facts and circumstances of each situation. Review of Sections 832 and 166 reveal certain conflicts. For example, Section 166 allows taxpayers to write off only the amounts of uncollectible reinsurance where all collection activity is exhausted and amounts collectible are firmly established. This could preclude write off of IBNR and case reserves where collection issues are still unresolved. Under Section 832(b)(5)(A)(iii), losses incurred are to reflect the change in estimated reinsurance recoverable. NAIC accounting also reflects uncollectible reinsurance on

unpaid losses in the provision for incurred losses (i.e., in the loss reserves), where such amounts include cases where collection activity is still unresolved.

In 1997, the IRS issued a technical advice memorandum (TAM) on the subject of uncollectible reinsurance[12]. This TAM attempts to unify the treatment of uncollectible reinsurance recoverable on paid and unpaid losses. According to this TAM, a taxpayer may write-off uncollectible reinsurance on paid and unpaid losses under Section 832 as losses incurred. Reserves for uncollectible reinsurance on unpaid losses must still meet the fair and reasonable estimate requirements of Section 832, and the examples shown in the TAM suggest that such reserves are to be included in the actuarial estimate of IBNR. The TAM does not appear to address earned and unearned premiums or disputed reinsurance recoverable.

Given the IRS's position per the TAM, insurers are likely to take advantage of the tax deductibility of uncollectible reinsurance on unpaid losses under Section 832. The author believes that actuarial analysis of uncollectible reserves supported by documented facts, accepted actuarial methods, and reasonable assumptions should increase an insurer's ability to support tax deductions for uncollectible reinsurance on unpaid losses under Section 832. Potential issues regarding changes in accounting method should be reviewed with a tax advisor for companies that have used Section 166 to deduct uncollectible reinsurance in the past and desire to switch to Section 832.

Estimating Uncollectible Reinsurance Reserves

In this section we review techniques for analyzing uncollectible reinsurance reserves. An understanding of the concepts and definitions as described earlier in this paper is assumed.

Source of Loss Fact Sheet

Hereafter, source of uncollectible reinsurance will be referred to as source of loss. The author finds organizing information by creation of a source of loss fact sheet useful as a starting point. On this sheet, we summarize relevant facts that can be used to group uncollectible reinsurers by source of loss. Other relevant information can be included on the source of loss fact sheet that will help the actuary expedite review. Start by making a master list of all reinsurer's of the ceding company that have either open contracts or outstanding ceded amounts. This list should cover all potential reinsurers that could affect ceded reserves. Schedule F of the Annual Statement and the ceding company's reinsurance department are good sources for this information. For each reinsurer on the master list, the actuary should review information to determine if any of the reinsurers are sources of uncollectible reinsurance as discussed previously. All other reinsurers can be eliminated from the list. For the reinsurers that remain on the list, information should be compiled to aid in the analysis. We will refer to these reinsurers as the exposed reinsurers, as they are the ones that have the potential to expose the ceding company to uncollectible reinsurance liability. The author compiled a sample source of loss fact sheet using data for a small group of insurance companies as displayed on Exhibit 1.

Specific Versus Bulk Sources of Uncollectible Reinsurance

To estimate uncollectible reinsurance reserves, the author recommends that the sources of uncollectible reinsurance be put into two major groups for analysis:

1. **Specific Reserve** - The first group includes those sources of uncollectible reinsurance for which specific collection problems by reinsurer are certain. We can estimate a "specific" reserve for this group. This group would include serious disputes, liquidations, certain government/legal actions, and certain criminal actions.

2. **Bulk Reserve** - The second group includes those sources of uncollectible reinsurance for which collection problems are likely but not certain. That is, we cannot identify those specific reinsurers that will default on reinsurance payments. This group would include all other sources of loss not included in group one. We can estimate a "bulk" reserve for this group. Although the information that is available on asset impairment would be compiled separately for each reinsurer in this group, those reinsurers that will have collection problems are not yet known. Hence, the author uses the term "bulk" reserves to describe the uncollectible reinsurance reserves for these reinsurers. Reinsurers in rehabilitation are included in this group because rehabilitation is undertaken with the expectation that the company can be saved and legitimate policyholder claims will be paid. We know from past history that some rehabilitations will fail and become liquidations, but we do not know which rehabilitations will do so.

The author uses the terms specific and bulk reserves to describe the reserves for group one and two, respectively. This avoids confusion with the case and IBNR reserves, as case and IBNR reserves on the underlying reinsured books of business are components of both the specific and bulk reserves for uncollectible reinsurance. Within each major grouping, it is preferable to separately estimate reserves by source of uncollectible reinsurance if sufficient information is available.

Estimate of Total Exposure

To determine what reinsurance recoverable losses could be uncollectible, an estimate of the total ultimate loss exposure to the exposed reinsurers (assuming that the reinsurance is fully collectible) is needed. Techniques for computing ultimate losses for ceded reinsurance are covered by numerous papers and other publications on actuarial reinsurance reserving techniques. We will not repeat any of that here. Below, we discuss a few caveats regarding uncollectible reinsurance that should be considered

when estimating the ultimate loss exposure. In addition, when offset rights apply and there are amounts available for offset, an estimate of the ultimate loss that can be used for offset must also be estimated.

Accuracy and Credibility

There are many approaches to estimating ultimate ceded losses by reinsurer. These include allocating estimates made using aggregate techniques, allocating estimates made by reinsurance contract, and estimates made directly on each reinsurer's ceded data. As we are concerned only with a subset of reinsurers out of the total reinsurers that a company ceded losses to, it is important to make the estimates of ultimate ceded loss as accurate and specific to each of the exposed reinsurers as possible. Allocating estimates made using aggregate techniques (e.g., allocating to reinsurer the difference between direct and net ceded losses based on ceded premium) may be reasonable in the aggregate, but could significantly understate or overstate ultimate losses for a specific reinsurer. Care should be taken in developing ultimate loss estimates on specific reinsurance programs to ensure they represent the type of business ceded to exposed reinsurers. Variations by line of business, excess versus first dollar coverage, underwriting/accident year participation, and type of reinsurance (aggregate versus occurrence) can affect the estimate of ultimate loss for an exposed reinsurer. The author's preference is to estimate ultimate loss directly using each exposed reinsurer's ceded data by underwriting or accident year where credible, or if not credible, allocating ultimate loss estimates made by reinsurance contract to each exposed reinsurer using actual ceded premium or percentage shares specified in the reinsurer's contract.

Adjustable/Special Reinsurance Contract Features

Reinsurance contracts that contain features such as retro rating plans, profit sharing plans, contingent commissions, aggregate limit features, and other adjustable features of

reinsurance contracts can present special problems for the actuary. The actuary should review the calculations of net loss reserves for these cases to determine what adjustable features have been reflected in net ultimate losses. Both reinsurance receivable assets and liabilities created by adjustable features and reflected in net ultimate losses should be reviewed as they affect the amount of recoverable assets as well as potential offsets. Expected profit sharing and contingent commission accruals may also be reported as assets or liabilities in the insurers financial statements under accounts other than net loss reserves. All material accruals for adjustable/special features should be identified and included in the estimate of ceded ultimate loss for the exposed reinsurers.

Credits

Many reinsurance contracts will provide credits, particularly if the reinsurer is an unauthorized company. For unauthorized reinsurers, a surplus penalty in Schedule P is computed for reinsurance recoverable that is not supported by certain funds[13]. Unauthorized reinsurers will deposit funds and provide other security to reduce the ceding company's surplus penalty. Credits for these reinsurers can be significant. Credits available to offset reinsurance recoverable from exposed reinsurers should be reviewed and used to reduce the uncollectible reinsurance reserves. Credits should not be confused with amounts the ceding company may owe the reinsurer under assumed reinsurance contracts, as these amounts maybe subject to offset as discussed in a prior section. Examples of credits that may be available include funds deposited with the ceding company by the reinsurer, funds withheld by the ceding company, letters of credit, and other notes and securities provided by the reinsurer.

Probability of Future Liquidation

It is assumed that the reinsurers in the bulk reserve group are currently solvent or sufficiently funded to pay their claims as of the valuation date of the uncollectible

reserve analysis. To estimate the bulk reserves for the reinsurers in group two, certain assumptions about the probability of a future liquidation are needed. To determine these probabilities, a statistical model can be used. As noted previously, the NAIC has developed the IRIS and FAST models to predict insolvency:

- IRIS is a series of financial ratios for a company that are measured against specific ranges. When the results fall outside of the range considered normal, the test is considered a failure. Companies with four or more failures are considered potential risks for financial difficulty and are assigned a higher priority for regulatory review.

- FAST is a more current statistical model that uses financial ratio tests similar to IRIS combined with a scoring system. The ratio tests are assigned point ratings based on the ratio test result (e.g., the worse the failure of a given test, the more weight the result of the test ratio is given in the scoring system). Companies are graded based on their overall score relative to scores for the insurance industry in the aggregate.

- Hindsight testing of IRIS[14] and FAST[15] has shown them to be effective predictors of financial difficulty one year in advance for IRIS and one to three years in advance for FAST.

Models such as IRIS and FAST use internal company data to predict future insolvency. Historical experience shows that insolvency can be related to a number of internal factors such as lines of business written, premium volume growth, state of domicile and other factors[16]. Researchers have recently tested external data and found that it added additional predictive value. Variables that provide high predictive value include the industry combined ratio and the number of insurance companies in operation[17]. Given these results, it is likely that a combination of internal and external variables would yield the most predictive models. Development of predictive models for insurance company failure is beyond the scope of this paper and is recommended for further research.

The following list contains references on the topic of insurer insolvency prediction:

1. *Ambrose, Jan M. and Anne M. Carroll, "Using Best's Ratings in Life Insurer Insolvency Prediction," Journal of Risk and Insurance, 61-317, 1994*
2. *Ambrose, Jan M. and J. Allen Seward, "Best's Ratings, Financial Ratios and Prior Probabilities in Insolvency Prediction," Journal of Risk and Insurance, 55-229, 1988*
3. *Barniv, Ran and James B. McDonald, "Identifying Financial Distress in the Insurance Industry: A Synthesis of Methodological and Empirical Issues," Journal of Risk and Insurance, 59-543, 1992*
4. *Brockett, Patrick L., William Cooper, Linda L. Golden, and Utai Pitaktong, "A Neural Network Method for Obtaining an Early Warning of Insurer Insolvency," Journal of Risk and Insurance, 61-402, 1994*
5. *Browne, Mark. J. and Robert. E. Hoyt, "Economic and Market Predictors of Insolvencies in the Property-Liability Insurance Industry," Journal of Risk and Insurance, Vol. 61, No. 2, 1995*
6. *Cummins, J. David, Scott E. Harrington, and Robert W. Klein, "Insolvency Experience, Risk-Based Capital, and Prompt Corrective Action in Property-Liability Insurance," Journal of Banking and Finance, 19-511, 1994*
7. *Grace, M., Scott. E. Harrington, and Robert W. Klein, "Identifying Troubled Life Insurers – An Analysis of the NAIC FAST System," Journal of Insurance Regulation, Vol. 16, Issue 3, Spring 1998*
8. *Lee, Suk Hun and Jorge L. Urrutia, "Analysis and Prediction of Insolvency in the Property-Liability Insurance Industry: Comparison of Logit and Hazard Models," Journal of Risk and Insurance, 63-121, 1996*
9. *Thornton, J. H. and J. W. Meador, "Comments on the Validity of the NAIC Early Warning System for Predicting Failures Among Property and Liability Insurance Companies," CPCU ANNALS, Vol. 30, September 1977*
10. *Willenborg, Michael, "In Search of Candidate Predictor Variables: Financial Statement Analysis in the Property and Casualty Insurance Industry," Journal of Insurance Regulation, 10-269, 1992*

In addition to the results of statistical models, the actuary may have access to detailed information regarding the financial condition of certain reinsurers in group 2. If the actuary has sufficient evidence to determine that any of the group two reinsurers are significantly insolvent and will be liquidated, they can be assigned a high probability of liquidation (e.g., 98 percent). It is recommended that such reinsurers still be included with the bulk reserves until an official court order is issued to liquidate the estate, as new evidence may be provided at the court hearing that changes the probability of failure.

An Example

In this section the author develops an example of reserving for uncollectible reinsurance using the concepts and principles discussed above. The valuation date for the example is December 31, XXXX. Each reinsurer in the example is assumed to have written one contract for one line of business without adjustable features. Estimates of ultimate loss are assumed to have been prepared by reinsurer reflecting the caveats noted earlier, both for ceded losses and any assumed losses used for offset. All data is hypothetical and the assumptions are based on the author's experience – the reader should not assume that these data and assumptions accurately depict real events.

1. On Exhibit 2, the author compiled a source of loss fact sheet for a group of hypothetical reinsurers. In the specific reserve group there is one reinsurer in dispute, three reinsurers in liquidation with increasing levels of collection difficulty, one reinsurer that rescinded all U.S. contracts (and kept the premiums), and one reinsurer that took the premiums and then disappeared. In the bulk reserve group there is one reinsurer that pays late but is otherwise in good financial condition, three currently solvent reinsurers with progressively worse indications of weakening financial condition, and one marginally solvent reinsurer in rehabilitation.

2. On Exhibit 3, an estimate of loss reserves for disputed reinsurance is shown. This dispute is over the definition of an occurrence for asbestos claims. Assumed side offsets shown are for the same types of claims as currently in dispute. Hence, the reduction for an offset to the disputed losses assumes that the probability of success applies conversely to the assumed losses that are also in dispute. Estimated costs for legal and collection contemplate additional expenses related to litigation and possible collection services on a judgement. Legal expenses for disputes can be significant.

3. On Exhibit 4, Sheet 1, an estimate of loss reserves for liquidated reinsurers is shown. Details are provided in the footnotes. Offsets are computed differently depending on whether the offsets are type 1 or type 2 as defined above. The recovery from the liquidated estate is computed on Exhibit 4, Sheet 2 and varies with the degree of insolvency and the type of business written (reinsurance only versus reinsurance and direct insurance).

4. On Exhibit 5, an estimate of loss reserves for other specific sources of loss is shown. Details are provided in the footnotes.

5. On Exhibit 6, we show estimated reserves for all bulk sources of loss. Columns (2) through (6) are computed similar to corresponding quantities for specific reserves. Column (7) represents the maximum estimated loss if the reinsurer were to fail. Estimates for the probability of failure are based on statistical analysis and solvency-screening tests as described above. The recovery from the estate is based on assumptions that vary with projected degree of insolvency (assets less liabilities) type of business written (reinsurance only versus reinsurance and direct insurance), and any guarantee funds or parent company recoveries that would be available.

6. Exhibit 7 summarizes the results of the analysis of uncollectible reinsurance.

References

[1] Strain, Robert W., “Reinsurance”, Strain Publishing, Inc., 1980

[2] Financial Accounting Standards Board, “Statement of Financial Accounting Standards No. 113”, December 1992, p. 5. This statement discusses accounting for reinsurance by ceding companies.

[3] American Academy of Actuaries, “Property and Casualty Practice Note”, December 1998, p. 13

[4] *Ibid.*, pp. 16-17

[5] Actuarial Standards Board, Second Exposure Draft, “Actuarial Standard of Practice for Statement for Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves”, January 1999, p. 12

[6] Financial Accounting Standards Board, “Statement of Financial Accounting Standards No. 5”, March 1975, p. 2. This statement discusses accounting for contingent events.

[7] *Ibid.*, pp. 11-12

[8] *Ibid.*, p. 2

[9] Feldblum, S., “Reinsurance Accounting: Schedule F”, Casualty Actuarial Society Forum, Winter 1994

[10] Business Insurance, February/March, 1982

[11] “Glossary of Selected Reinsurance Terms,” Gill and Roeser, Inc., 1989

[12] “Uncollectible Reinsurance Deductible Under Section 832(b)(5)(A),” TAM 9732004, April 30, 1997.

[13] Feldblum, S., p. 181

[14] Thornton, J. H. and Meador, J.W., “Comments on the Validity of the NAIC Early Warning System for Predicting Failures Among Property and Liability Insurance Companies,” CPCU ANNALS, Vol. 30, September 1977

[15] Grace, M., Harrington, S., and Klein, R., “Identifying Troubled Life Insurers – An Analysis of the NAIC FAST System,” Journal of Insurance Regulation, Vol. 16, Issue 3, Spring 1998, also includes information on analysis of FAST for property casualty companies.

[16] “Best’s Insolvency Study, Property/Casualty Insurers 1969-1990,” A.M. Best Company, Special Report, June 1991

[17] Browne, M. J. and Hoyt, R. E., “Economic and Market Predictors of Insolvencies in the Property-Liability Insurance Industry,” The Journal of Risk and Insurance, Vol. 61, No. 2, 1995

Uncollectible Reinsurance Source of Loss Information Sheet

Exhibit 1

Reinsurer	Source of Loss Event	Date of Event	Domicile	Type of Business
American Druggist	Liquidation	Apr-86	Ohio	Direct and Reinsurance
Beacon Ins	Rehabilitation and Insolvent	Jul-87	North Carolina	Direct and Reinsurance
Cherokee Ins	Rehabilitation	Jul-84	Tennessee	Predominantly Reinsurance
Colonial Assurance	Liquidation	Mar-84	Pennsylvania	Direct and Reinsurance
Delta American Re	Liquidation	Sep-85	Kentucky	Predominantly Reinsurance
Dominion - Re	Liquidation	Aug-86	New York	Reinsurance
Interamerica Re	Rehabilitation	Jul-88	New York	Reinsurance
Mentor Ins Co. Ltd.	Liquidation	Jun-85	Bermuda	Predominantly Reinsurance
Ohio Re	Liquidation	Mar-90	Ohio	Reinsurance
Pine Top Ins	Liquidation	Jan-87	Illinois	Direct and Reinsurance
Proprietors	Liquidation	Aug-81	Ohio	Direct and Reinsurance
Realex Group - NYIE	Liquidation	Dec-87	New York	Reinsurance
Security Casualty	Liquidation	Dec-81	Illinois	Direct and Reinsurance
Transit Casualty Co.	Liquidation	Dec-85	Missouri	Direct and Reinsurance
Union Indemnity	Liquidation	Jul-85	New York	Direct and Reinsurance

Uncollectible Reinsurance Source of Loss Information Sheet
As of December 31, XXXX

Exhibit 2

Reinsurer	Source of Loss Event	Date of Event	Domicile	Type of Business	Type of Reinsurance	Type of Offset
Specific Reserves						
Bight Me Re	Dispute	1996	Delaware	Reinsurance	Excess	Type 1
Slightly Defunct Re	Liquidation	1995	New York	Reinsurance Syndicate	Excess	Type 1
Moderately Defunct Re	Liquidation	1995	Bermuda	Reinsurance	Excess	Type 2
Totally Defunct Re	Liquidation	1995	Illinois	Direct and Reinsurance	Excess	Type 1
Third World Re	Government Action	1991	Iraq	Reinsurance	Excess	None
Smoke & Mirrors Re	Fraud	1998	None	Reinsurance	Excess	None
Bulk Reserves						
Snail Pay Re	Late Payer	Current	North Carolina	Reinsurance	Excess	Type 1
Hiccup Re	WFC	Current	Tennessee	Reinsurance	Excess	Type 1
Coughing Re	WFC	Current	Pennsylvania	Predominantly Reinsurance	Prorata	Type 1
Drowning Re	WFC	Current	Kentucky	Direct and Reinsurance	Excess	Type 1
Fix Me Re	Rehabilitation	1995	New York	Direct and Reinsurance	Excess	Type 1

Notes:
WFC=weakening financial condition
Type 1 = offset mutual debts first, then compute recovery from estate
Type 2 = compute recovery from estate first, then offset mutual debts

Uncollectible Reinsurance Reserve Estimate
Specific Reserves - Disputes
As of December 31, XXXX
(000 omitted)

(1) Reinsurer	(2) Total Ceded Ultimate Loss Exposure in Dispute	(3) Ceded Amounts Received	(4) Credits	(5) Total Offsets	(6) Probability of Unsuccessful Outcome	(7) Estimated Costs for Legal/Collection	(8) Estimated Reserve
Bight Me Re	$ 1,560	$ 112	$ 15	$ 176	60%	$ 546	$ 1,300

Notes:
(2) represents ceded ultimate loss and loss adjustment expense that is in dispute, amounts not in dispute are excluded
(3) ceded losses already paid by reinsurer regarding amounts in (2)
(5) estimated offsets relate to business assumed from the reinsurer with similar disputed issues
(6) estimate of chance of losing the dispute regarding amounts in (2), from legal department
(7) legal departments estimate of remaining cost to settle dispute and collect judgement (35% of (2))
(8)={ [(2) - (3) - (4) - (5)] x (6) } + (7)

Uncollectible Reinsurance Reserve Estimate
Specific Reserves - Liquidations
As of December 31, XXXX
(000 omitted)

Exhibit 4
Sheet 1

(1) Reinsurer	(2) Total Ceded Ultimate Loss Exposure	(3) Ceded Amounts Received	(4) Credits	(5) Total Offsets	(6) Estimated Recovery From Estate	(7) Estimated Recovery Other Sources	(8) Estimated Costs for Legal	(9) Estimated Reserve Excluding Legal	(10) Estimated Reserve Including Legal
Slightly Defunct Re	$ 2,400	$ 1,350	$ -	$ 250	86%	$ 250	$ 120	$ -	$ 120
Moderately Defunct Re	780	235	25	55	53%	0	39	190	229
Totally Defunct Re	1,050	50	425	-	4%	0	53	552	605
Total	$ 4,230	$ 1,635	$ 450	$ 305		$ 250	$ 212	$ 742	$ 953

Notes:
(2) represents ultimate loss and loss adjustment expense ceded to reinsurer
(3) ceded losses already paid by reinsurer regarding amounts in (2)
(5) estimated offsets relate to losses assumed from reinsurer and unpaid ceded premiums
(6) Exhibit 4, Sheet 2, estimate of percentage of approved claims that will be recovered from the estate by general creditors
(7) Slightly Defunct is a member of a reinsurance syndicate whose insolvency guarantee fund provides $250,000 of coverage per cedant.
(8) legal departments estimate of remaining cost to monitor liquidations (5% of (2))
(9) type 1 offsets={ [(2) - (3) - (4) - (5)] x [1 - (6)] } - (7), subject to a minimum of 0
(9) type 2 offsets={ [(2) - (3) - (4)] x [1 - (6)] } - (5) - (7), subject to a minimum of 0
(10)=(9) + (8)

Uncollectible Reinsurance Reserve Estimate
Liquidation Recovery
As of December 31, XXXX
(000 omitted)

Exhibit 4
Sheet 2

(1) Reinsurer	(2) Estimated Assets	(3) Estimated Liabilities	(4) Liabilities Attributed to Higher Priority Creditors	(5) Estimated Percentage Recovery
Slightly Defunct Re	$ 780,000	$ 890,000	$ 15,000	86%
Moderately Defunct Re	65,000	120,000	1,500	53%
Totally Defunct Re	100,000	250,000	90,000	4%

Notes:
(2), (3), (4) from analysis of reinsurer financial reports and correspondence prepared by receiver
(3) stated at present value to reflect future investment income, includes runoff expense reserve
(5)=[(2) - (4)]/(3), subject to minimum of 0

Exhibit 5

Uncollectible Reinsurance Reserve Estimate
Specific Reserves - Other
As of December 31, XXXX
(000 omitted)

(1) Reinsurer	(2) Source of Loss Event	(3) Total Ceded Ultimate Loss Exposure	(4) Ceded Amounts Received	(5) Credits	(6) Total Offsets	(7) Estimated Percentage Recovery	(8) Estimated Reserve
Third World Re	Government Action	$ 750	$ 400	$ 200	$ 25	0%	$ 125
Smoke & Mirrors Re	Fraud	230	-	-	-	25%	$ 173
Total		$ 980	$ 400	$ 200	$ 25		$ 298

Notes:
(3) represents ultimate loss and loss adjustment expense ceded to reinsurer
(4) ceded losses already paid by reinsurer regarding amounts in (3)
(6) unpaid ceded premiums on Third World Re
(7) On Smoke & Mirrors Re, suspects in custody, assets seized by police - legal department estimated recovery at $50,000 to $60,000
(8)=[(3) - (4) - (5) - (6)] x [1 - (7)], subject to minimum of 0

Exhibit 6

Uncollectible Reinsurance Reserve Estimate
Bulk Reserves - All Sources
As of December 31, XXXX
(000 omitted)

(1) Reinsurer	(2) Total Ceded Ultimate Loss Exposure	(3) Ceded Amounts Received	(4) Credits	(5) Total Offsets	(6) Estimated Costs for Legal	(7) Estimated Net Amount At Risk	(8) Estimated Probability of Failure	(9) Estimated Recovery From Estate	(10) Estimated Reserve
Snail Pay Re	$ 3,400	$ 1,300	$ -	$ 250	$ 170	$ 2,020	2%	95%	$ 2
Hiccup Re	1,200	600	25	55	60	$ 580	25%	50%	73
Coughing Re	2,700	1,350	425	-	135	$ 1,060	55%	30%	408
Drowning Re	1,350	675	500	-	68	$ 243	95%	5%	219
Fix Me Re	1,750	400	230	350	88	$ 858	75%	90%	64
Total	$ 10,400	$ 4,325	$ 1,180	$ 655	$ 520	$ 4,760			$ 766

Notes:
(2) represents ultimate loss and loss adjustment expense ceded to reinsurer
(3) ceded losses already paid by reinsurer regarding amounts in (2)
(5) estimated offsets relate to losses assumed from reinsurer and unpaid ceded premiums
(6) legal departments estimate of cost to monitor liquidations (5% of (2))
(7)= (2) - (3) - (4) - (5) + (6)
(8) based on statistical analysis and insolvency screening models
(9) based on expected recovery for reinsurer reflecting type of business written and projected degree of insolvency
(10)=(7) x (8) x [1 - (9)]

Uncollectible Reinsurance Reserve Estimate
Liquidation Recovery
As of December 31, XXXX
(000 omitted)

Exhibit 7

(1) Reinsurer	(2) Source of Loss Event	(3) Estimated Reserve
Specific Reserves		
Bight Me Re	Dispute	$ 1,300
Slightly Defunct Re	Liquidation	120
Moderately Defunct Re	Liquidation	229
Totally Defunct Re	Liquidation	605
Third World Re	Government Action	125
Smoke & Mirrors Re	Fraud	173
Sub-Total		$ 2,551
Bulk Reserves		
Snail Pay Re	Late Payer	$ 2
Hiccup Re	WFC	73
Coughing Re	WFC	408
Drowning Re	WFC	219
Fix Me Re	Rehabilitation	64
Sub-Total		$ 766
Total		**$ 3,317**

Notes:
WFC=weakening financial condition
(2) from Exhibit 2
(3) From Exhibits 3, 4, 5, and 6