TITLE: LOSS PORTFOLIOS: FINANCIAL REINSURANCE

AUTHOR: Lee R. Steeneck

Mr. Lee Steeneck is a Second Vice President of the General Reinsurance Corporation. He heads the Actuarial Department. It services the rate making, reserving, and management information needs of the company. He attained Fellowship in 1976 and holds a BA in Mathematics from Virginia Polytechnic Institu and State University.

Loss Portfolios: Financial Reinsurance

Abstract

The property-casualty insurance operating environment has changed dramatically. Total return is more a function of investment results than ever before. Competition has pressured rate levels. And more of our business is becoming "long tail", making reserving difficult.

Reinsurance is becoming somewhat more financially oriented. Loss portfolio transfer reinsurance is becoming popular for a variety of reasons, not the least of which involves poor operating results. In this paper I explore the business purposes loss portfolio transfers serve (and costs), the legal, actuarial, tax and accounting aspects, and contractual and pricing considerations.

With the advent of high interest rates and cash flow underwriting, composite ratios have skyrocketed to otherwise astronomical levels. For a variety of reasons, insurance executives seeking to improve results are investigating loss portfolio transfer reinsurance.

In the simplest terms, this form of financial reinsurance involves the transfer of financial liabilities for a portfolio of unpaid losses from a cedent to a reinsurer. The liability may be for case reserves only, case reserves plus development, or case reserves plus development and IBNR losses. The transfer can include allocated and sometimes unallocated loss adjustment expenses. Transferred liabilities may belong to a single class of business, a territory, a policy holder, or an accident year. The transfer may apply to all net (of other valid reinsurance, collectible or not) losses, or depend on an aggregate attachment level or size per occurrence. The flexibility is enormous!

Understanding financial reinsurance is becoming a top priority amongst insurance executives, regulators, stock security analysts, and others in the property-casualty insurance field.[1] Current insurance financial issues include: 1) solvency versus solidity; 2) balance sheet analysis; 3) proper accounting standards; 4) asset liquidity; and 5) generally valuation of insurance companies. Selling reserves to improve the balance sheet and income statement, when used judiciously, is a valid tool. But when used to obscure a pricing or reserving problem, a deteriorating situation, or just to mislead, our various publics need to be informed.

It has been estimated that over $1 billion of such transactions have occurred during 1983. The following example, albeit a dramatic one, shows the effect loss portfolio reinsurance can have on a company's accounting position.

A New York based reinsurance company recently sold a loss portfolio at about the same time as a regular triennial examination (for the years ending December 31, 1980) proclaimed liabilities exceed assets by $12,400,000. The result of the transaction left the company with a healthy balance sheet and a statutory surplus of $10,800,000! Is this the same company or isn't it? Are they or are they not healthy?

The following two pages will outline business purposes served by loss portfolio transfers and the costs the cedent must consider. I next deal with the legal, actuarial, tax and accounting aspects. Finally, I show some contractual and pricing considerations.

Business Purposes Loss Portfolio Transfers Serve

1. Improve underwriting results. By converting future investment income into current underwriting income, the composite ratio and income statement are improved.

2. Increase GAAP earnings.

3. Improve GAAP deferred tax position.

4. Increase surplus. The after tax benefit goes directly into statutory surplus.

5. Strengthen loss reserves. A cushion between carried loss reserves and possible adversely developing loss reserves will strengthen the insurer's balance sheet implicitly.

6. Improve NAIC "Early Warning Test" results. This reinsurance form is not penalized as are surplus relief treaties.

7. Maintain premium volume. Ceded premium need not be affected.

8. Terminate a segment of business instantly. This was the original purpose of loss portfolio transfers.[2]

9. Discount reserves. A loss portfolio transfer is a legitimate transaction of limited purpose. Discounting reserves internally, if possible, sets a precedent and a change of accounting method which may be onerous.

Cost Considerations to Loss Portfolio Transfers3

1. Mortgages future GAAP earnings and surplus increases. The constricted base can only grow more slowly.

2. Adds reinsurance costs not budgeted. This includes reinsurer expenses, profit, and risk charge.

3. Reduces the liquidity of assets. The purchase may cause you to keep taxable bonds and sell tax exempts. Other liquid assets may also be sold leaving the less liquid ones.

4. This, in turn, can create future costs if the insurer gets into a taxable position. Retaining less liquid taxables will continue the taxable income stream.

5. Can create a capital loss by the sale of bonds to purchase the reinsurance.

6. Can lose tax deferred status. If in a taxable position, actual payment of taxes can occur.

7. Will likely distort schedules O and P.

8. Worrisome security of the reinsurer. The possible non-collectibility of the reinsurance (by insolvency or dispute in coverage) has a cost which is difficult to quantify.

9. Contingent Costs.

   a. The transaction may prove unacceptable to regulators, tax authorities, and auditors from a risk transfer perspective.

   b. The company's accounting may have to be restructured as the accounting profession and regulators establish stricter guidelines.

   c. There is a potential loss of company stature in the insurance community.

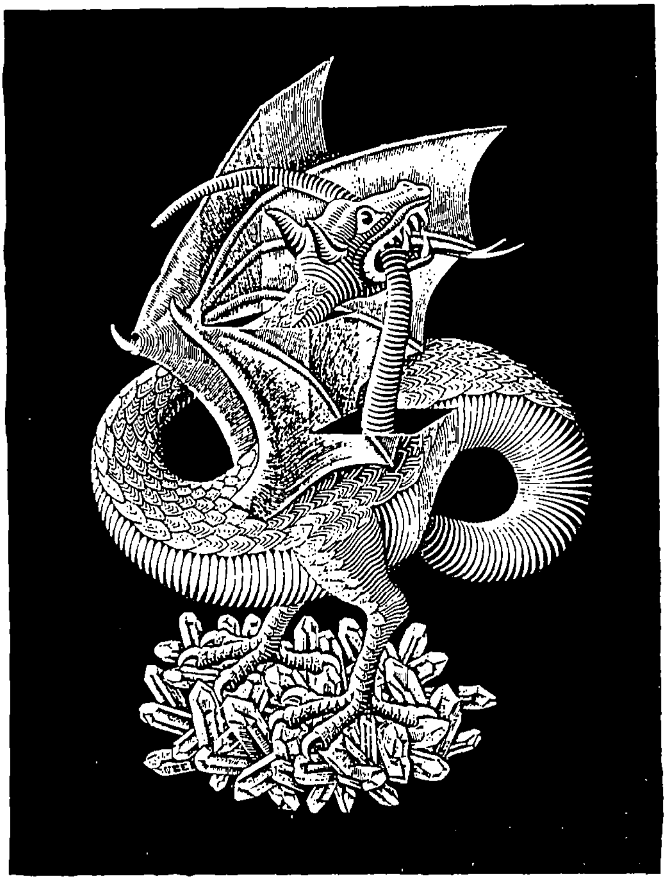
The predominant legal requirement of a loss portfolio transfer agreement is that it exhibit legitimate risk transfer. Without it, the transaction is voided and the accounting and effects must be unraveled. There must be more than mere investment risk since banks operate in that environment. There needs to be underwriting risk!

Another important legal point, the cedent must use an authorized reinsurer to get credit for the reserves taken down, or if he is using an unauthorized reinsurer, that reinsurer should post a letter of credit on the cedent's behalf or place assets equal to the transfer liability in escrow.

While specific legal requirements are minimal, the actuarial considerations are numerous.

In order to accelerate the greatest amount of investment income and place it in the underwriting account, "long tail" business (from a payment profile perspective) is required. As the humorous cartoon and caption illustrate, if you do not have the long tail business to cede, you cannot gain much financially from loss portfolio transfer reinsurance. Lines generally considered to give maximum effect are medical malpractice, workers' compensation, and products liability or other liability.

Basic actuarial loss data is required for a quantitative analysis leading to a responsible reinsurance offer. Payment and reported loss development triangles for the subject business are essential. All our standard and non-standard actuarial techniques in testing case reserves and setting developmental and IBNR loss reserves are required. Confidence intervals are set wherever possible. In addition, the timing of the payments is critical. Large loss "outliers" and under represented losses must be normalized. Allocated loss adjustment expenses are studied and included where necessary. And finally, although subject to possible manipulation, unallocated loss adjustment expenses may be studied and included as transferrable liabilities (a word of warning; annual statement schedule P data includes the unallocated provision and this tends to mask true loss plus allocated expense reserve and payment patterns).



Don't Bite the Long Tail that Feeds You.

Secretly, you know your profits *really* come from writing all that zonky, long-tail business. You hold the money in blind trust until everyone concerned is *dead*. Hung juries, court delay, late reporting, are all your friends.

Although I know of no completely stochastic process in viewing potential outcomes regarding ultimate loss and payment profile, reinsurance actuaries look at best case-expected case-worst case in determining outgoing cash flow. The various present values of those outgoing cash flows are calculated.

It is likely that reinsurers will attempt to match bond maturities with expected cash requirements. Bonds lock in specific returns (as opposed to many other investment vehicles). The reinsurer's investment department, in conjunction with top management, specify the quality of the securities acceptable in loss portfolio transfer reinsurance arrangements. Depending on secured rates of return and the reinsurer tax position, a variety of corporate and Governmental bonds with taxable and tax exempt status are available for the dedicated portfolio. Reinvestment risks on coupons is of staggering importance.[4] Currently, there are a variety of "felines" on the market to eliminate this risk. For example, Merrill-Lynch has a TIGR or Treasury Investment Growth Receipts product which repackages T-Bonds to act like zero coupon bonds. Felines offer somewhat lower yields as investment houses require a hedge on reinvestment.

As I briefly stated before, the reinsurer tax position is critical in the choice of taxable or tax exempt bond purchases and the resulting present value (market value) cost of the bond portfolio. Insurers are taxed like other corporations except as noted in Parts 2 and 3 subchapter L of the Internal Revenue Code. We use a modified accrual accounting system and have two classes of income: underwriting and investment. If the reinsurer or his consolidating parent has taxable income, the underwriting loss will effectively shield federal income taxes and a "grossed up" rate of tax exempt interest may be credited in the pricing. If the reinsurer has no taxable income and expects none in the forseeable future, then marginal expected results suggest taxable bonds are most advantageous as an investment vehicle.

Let me stress, a structured transaction may be viewed by the IRS as, in essence, a single premium immediate annuity purchase. In that event, the ceding company would include in taxable income a portion of each payment recovered from the reinsurer. Taxes are an important consideration so set structure carefully.

Only the best risk adjusted yields combined with the lowest reinsurer margins get attention in the marketplace. This places great pressure on the reinsurer to quote favorable terms. Bond yields vary considerably, almost from day to day. Today's best price offer must expire quickly and be subject to requotation. Changes in interest rates have a leveraged effect on cost.

The following exhibit demonstrates the effect tax positions have on a sample costing situation.

Example, Marginal Effects

1/1/85 loss portfolio transfer date	interest: 7% per coupon semi-annually on taxable bonds (including reinvestment)
1/1/86 $1,000 loss payment expected 1/1/87 $1,000 loss payment expected	5% per coupon semi-annually on tax exempt bonds (including reinvestment)

#1 Taxable Bonds

Present Value = 1,000 $\frac{a_{\overline{4}|.07}}{s_{\overline{2}|.07}}$ = \$1,636.33

	1985		1986	
	Underwriting Income	Investment Income	Underwriting Income	Investment Income
Net P.E.	$1,636.33		$ - 0 -	
Inc. Loss	2,000.00		- 0 -	
Result	$ (363.67)	$237.10	$ - 0 -	$ 126.57
Carryforward to 1986	$ (126.57)			$126.57

#2 Tax Exempt Bonds

Present Value = 1,000 $\frac{a_{\overline{4}|.18}}{s_{\overline{2}|.18}}$ = \$1,565.20

	1985		1986	
	Underwriting Income	Investment Income	Underwriting Income	Investment Income
Net P.E.	$1,565.20		$ - 0 -	
Inc. Loss	2,000.00		- 0 -	
Result	$ (434.80)	$160.43	$ - 0 -	$ 74.37
Recouped Taxes (46%)	$ 200.00			
Net	$ (234.80)	$160.43		$ 74.37

Depending on the reinsurer's tax position, the net present value is between \$1,565.20 and \$1,636.33. Reinsurer expenses and profit/risk charge have not been included in P.E. (premium earned).

The challenge facing the pricing actuary is to meet the financial objectives of the cedent while at the same time, offering a risk product which has the expectation of reinsurer profit. This is frequently difficult since potential payment profiles, possible runoff liabilities, and unanticipated "shock" disturbances play havoc. The following example demonstrates the effect (1) payment profile and (2) quality of carried reserves have on the present value (at 10%) of potential outcomes.

The cession of the entire portfolio is cash intensive but with slightly less benefit (reserve less present value), the portfolio ceded may be structured more effectively in scenarios (B) and (C).

Also notice, that if the cedent believes the likely outcome to be 2a and the reinsurer believes the likely outcome to be 3b, a deal may be struck. They may agree to cede/accept company paid losses after 24 months but with an overall limitation in recoveries of $3.5 million. This cedent releases some of his carried reserves and gets some income while the reinsurer perspective is preserved. And yet each has vastly different overall profile expectations.

Loss Portfolios
(in 000's)

		Current O/S + IBNR	Payment Profile (in months) + 12	+ 24	+ 36	+ 48	+ 60	+ 72	+ 84
1.	Optimistic	$6,000							
	a. Fast pay		2,000	1,500	1,500	1,000			
	b. Slow pay		1,500	1,500	1,000	1,000	500	300	200
2.	Expected	$8,000							
	a. Fast pay		2,600	2,000	2,000	1,400			
	b. Slow pay		2,000	2,000	1,300	1,300	700	400	300
3.	Pessimistic	$12,000							
	a. Fast pay		4,000	3,000	3,000	2,000			
	b. Slow pay		3,000	3,000	2,000	2,000	1,000	600	400

Present or Current values at 10% interest and payments made in 12 month increments.

	(A) Entire Portfolio	(B) Over 24 Months	(C) Over $5,000,000 Retained
1a.	$4,867,837	$1,809,986	$ 683,013
1b.	4,620,069	2,016,763	582,434
2a.	6,475,377	2,458,848	2,158,323
2b.	6,150,083	2,679,009	1,927,694
3a.	9,735,674	3,619,971	5,272,864
3b.	9,240,137	4,033,525	4,859,972

At this point, there is no standard accounting treatment for these transactions. The simplest accounting treatment, however, from the cedent's perspective is to note, for example, that a $1,000 loss reserve is offset by a negative $1,000 reinsurance recoverable. Further, a $700 paid loss is registered and the gain flows through the balance sheet, income statement, and schedule O or P (as appropriate). I will call this accounting treatment the "loss method".

There is also a "premium method". The treatment calls for premium reduction of $700. Paid losses remain unchanged. Reserves are reduced by $1,000. Implied by this treatment, the cedent's loss ratio goes down and his expense ratio goes up. If the reinsurer offers a commission ($100), ceded premium goes up and so will the net loss ratio. But the commission will offset insurer operating expenses and, therefore, the expense ratio will decline. To illustrate (statutory accounting):

		Premium Method	
Ceding Company Marginal Effects	Loss Method	No Commission	Commission
Earned Premium (+)	$ 0	$ -700	$ -800
Operating Expenses (-)	$ 0	$ 0	-100
Paid Losses (-)	$ 700	0	0
Change in O/S Losses (-)	-1,000	-1,000	-1,000
Underwriting Gain	$ 300	$ 300	$ 300

The reinsurer could mirror these accounting entries by merely changing signs and penalizing surplus. As an aside, for GAAP accounting purposes, the reinsurer might book the present value ($700) of expected payments to escape this "surplus hit". He could do this if (1) he normally discounts for GAAP purposes, and (2) he makes adequate disclosure.

"Another (reinsurer) statutory alternative is to consider the transaction as other income as opposed to underwritng income. A rationale here is that the investment income to be earned to offset future loss payments does not flow through underwriting income either, and the effect of the transactions still impact statutory results. This treatment has not received broad acceptance."5

There are other considerations to be made in the pricing of loss portfolios. Some are contractual. Others deal with reinsurer margin requirements. First, I deal with some contractual issues.

Extra contractual obligations (ECO) can be defined as punitive and/or compensatory damages assessed against an insurer as a consequence of his tortious acts. ECO's do not fall under the auspices of the original subject insurance policy. Historic data is not generally available nor projectable so cedent payments from his hazard should be excluded.

The reinsurer will also insist on some verbal, if not written, understanding on the use of structured settlements. The commutation of a claim by the purchase of a life annuity changes both the expected liability transfer amount and the payment timing. Special treatment is required.

The insurance industry now faces more "common cause" losses than ever before. By these I mean the "asbestos type", unpredictable, from one exposure over time. But when they occur, they create a flood of individual claimants demanding tremendous aggregate sums of money. For certain classes of insurance, the reinsurer will consider the likelihood of common cause events, charge for it, or limit it in some way contractually, or both.

Claims handling is also important. Loss portfolio transfers are frequently sought by self-insureds wishing to extricate themselves from their developing insurance experience or are being acquired and need a fully insured program. It is difficult to properly run off liabilities without continuity in claims handling. A front company may be necessary to issue a primary insurance policy which is then reinsured.

Having considered all of the above, the reinsurer now must decide how much to charge in excess of the bond portfolio cost. The reinsurer will have expenses, both current in the marketing and initial set up of administration, as well as on going administrative costs. In addition, he will desire a profit and risk charge dependent on the following:

1. Predictability of results - I mentioned investment risk and underwriting risk. To the extent a structure of reimbursements exists as to timing and amount, this lessens risk.

2. The surplus rent - The reinsurer's charge against surplus will restrict his writings for potentially 5-30 years. This requires substantial profit loading.

3. The contractual risk - I mention structured settlements, common cause losses, and claims handling features have some bearing on the value the reinsurer places on the proposed transaction. Other features such as a contingent commission or an experience rating will cause the reinsurer to change profit and risk charge expectations.

As you can see, loss portfolios involve more than "shelf technology". Only the educated professional can and will be successful. But what does the future hold?

The ultimate destiny of loss portfolio transfer reinsurance may be in the hands of the Government taxing authorities and accountants.

The AICPA is studing the issue of loss reserve discounting. They see four types of claims: (1) Short term claims closing in one or at most two years. Discounting is not economically justified here. (2) Long term uncertain claims like medical malpractice and auto bodily injury having reserves which earn investment income but are not subject to rigorous loss payment schedule. It is, therefore, impractical to discount since conservative interest rates are indicated. (3) Long term reasonably certain claims like periodic medical payments for life under worker's compensation pension cases and (4) long term claims with fixed payment like some workers' compensation fixed periodic indemnity for life claims. These are subject to intense accurate discounting procedures.

Discounting has some negative connotations including the publication of unstable and potentially unreadable insurer results. These could confuse regulators, analysts, and the public. Loss reserve evaluations and tests would prove difficult. Some actuaries observe that in recent years, reserve shortfalls are generally offset by investment earnings. As the crutch is removed, the lame patient must fall. The pressure on actuaries to set adequate reserves would intensify if the investment crutch were removed.

Finally, the Government has a large stake in the loss reserve discounting arena. There are current attempts to restructure life and health and property-casualty insurance company taxation regulations in order to generate substantially greater tax revenues. It is quite conceivable that the 1983 proposal to discount liabilities for schedule P lines at a 5% rate of interest could be eventually adopted. These would generate taxable income. Accountants would likely endorse this, I believe.

Some companies discount loss reserves on a GAAP basis already (but these are largely offshore companies). If the definition of taxable income changes to embrace discounted loss reserves, can a change in statutory accounting principles be far behind? The market for loss portfolio financial reinsurance would largely evaporate. But there are some very unhealthy implications currently under investigation and discussion. Until the final outcome is known, loss portfolio transfer reinsurance will continue to be a valuable tool for insurance and self-insured company managements.

FOOTNOTES

1. See "Games insurers play with loss reserves", Institutional Investor, November 1983, by Mary Rowland.

2. For example, in 1595 "one Roemer Visscher of Amsterdam took over the insurance of certain marine risks, because the original insurer, Jacob Bruynsen Smallinck, had gone bankrupt". (Excerpted from a speech by Mr. Michael Felts, CAS Special Interest Seminar on Reinsurance, 1982).

3. Some business purposes and cost considerations come from a speech Mr. John Murad gave the American Academy of Actuaries Loss Reserve Seminar, 1983.

4. "Duration". Presented by Mr. Ronald Ferguson in Toronto at the November 1983 CAS meeting.

5. Taken from a speech by Mr. James Faber given at the American Academy of Actuaries Loss Reserve Seminar, 1983.