REINSURANCE ACCOUNTING: SCHEDULE F

By Sholom Feldblum

[April 2003]

REINSURANCE ACCOUNTING: SCHEDULE F

Sholom Feldblum[1]

Abstract

Schedule F, Parts 1 – 3, disclose a company's reinsurance transactions for both ceded and assumed business. Parts 4 – 7 provides the data to compute the provision for reinsurance for recoverables from unauthorized reinsurers and from slow-paying authorized reinsurers, for loss recoverables more than 90 days past due, and for amounts in dispute. Part 8 shows the statutory balance sheet restated to be gross of ceded reinsurance.

This paper provides complete documentation of Schedule F, for both reporting companies completing the schedule and regulators using the schedule. Numerical illustrations and examples show the procedures used in each exhibit. The last section of the paper discusses whether Schedule F fulfills the needs of solvency regulators concerned with reinsurance arrangements.

Introduction

Purposes of Schedule F

Schedule F serves several purposes:

- Parts 1-3 provide the *supporting data* for the company's assumed and ceded reinsurance accounting entries. Part 1 shows assumed premiums and losses by type of reinsured, and Part 3 shows ceded premiums and losses by type of reinsurer. Part 2 shows premiums (but not losses) on portfolio reinsurance transactions effected during the most recent year.
- Parts 4-7 develop the *provision for reinsurance*. Part 4 is an aging schedule for recoverables on paid losses and loss adjustment expenses. Part 5 calculates the statutory provision for reinsurance recoverables from unauthorized companies: unsecured total recoverables, overdue recoverables, and amounts in dispute. Part 6 calculates the provision for non-slow-paying authorized reinsurers, and Part 7 calculates the provision for slow-paying authorized reinsurers.
- The statutory financial statements are net of reinsurance: reinsurance recoverables are offsets to direct liabilities. Part 8 of Schedule F *restates the statutory balance* sheet from a net to a gross basis.

Most *Annual Statement* exhibits and schedules are subdivided by line of business; this is the format in the Underwriting and Investment Exhibit, Page 14 state exhibits, Schedule P, and the Insurance Expense Exhibit. Reinsurance transactions in Schedule P are by line of

[1] Vice President, Liberty Mutual Group, Boston, MA, email: sholom.feldblum@libertymutual.com

business as well: primary line for ceded business and for assumed proportional business and reinsurance line (property, casualty, and financial) for assumed non-proportional business. In contrast, the Schedule F entries are all lines of business combined, subdivided by reinsurer for ceded business and by reinsured for assumed business.

Part 1: Assumed Reinsurance

Part 1 of Schedule F lists assumed reinsurance by reinsured (ceding) company, subdivided by affiliated versus unaffiliated company, U.S. versus alien company, and type of company (mandatory pools versus voluntary pools versus other companies).[1]

The assumed reinsurance in Part 1 of Schedule F and the ceded reinsurance in Part 3 of Schedule F are prospective reinsurance only. Retroactive reinsurance affects the special surplus entry on the liability side of the statutory balance sheet (page 3 of the *Annual Statement*), but it is not reflected in the exhibits and schedules, such as Schedule F.[2]

Assumed reinsurance entries are of four types:

- Losses payable to the reinsured company on paid losses and on case reserves
- Premiums assumed from the reinsured company, the unearned portion of the assumed premiums, and assumed premiums that are still uncollected
- Contingent commissions receivable from or payable to the reinsured company
- Security, or funds deposited with the reinsured company

Losses Payable

Losses payable to the reinsured company are divided between reserves on losses already paid by the ceding company (column 6) and reserves on reported but unpaid losses of the ceding company (column 7). Column 6 agrees with line 2 of page 3 (the statutory balance sheet), which has an explicit reference to Schedule F, Part 1, column 6.

The column 7 total of Schedule F, Part 1 is similar to the column 2 total on the Underwriting and Investment Exhibit, Part 2A. The match is not exact, since the Schedule F entry includes loss adjustment expense whereas the Underwriting and Investment Exhibit entry does not.

The reporting company (the company preparing Schedule F) holds reserves for estimated IBNR losses of the ceding companies. These are shown in the Underwriting and Investment Exhibit, Part 2A, column 6, which reports the total for all ceding companies by line of business. The reporting company's IBNR reserves are not subdivided by ceding company, so they are *not* shown in Schedule F, Part 1.[3]

Reinsured losses paid during the year are not shown in Schedule F. They are shown by line of business for all ceding companies combined in the Underwriting and Investment Exhibit, Part 2, column 2.

Premiums and Commissions

Column 9, which shows contingent commissions (sometimes called profit commissions) payable, may be positive or negative. A positive figure means that the reporting company expects to pay contingent commissions to the ceding company. A negative figure means that the reporting company expects a return of contingent commissions previously paid to the ceding company.

Column 10 shows assumed premiums receivable, and column 11 shows unearned premium. The column 10 entry is net of regular commissions (which do not appear in column 9).

Illustration: Suppose the reporting company has two reinsurance treaties, both with a gross premium of $1,000,000. One treaty has a fixed commission rate of 30% of gross premiums. If no premium has yet been received, the column 10 entry would be $700,000, since "the amounts reported should be net of commissions payable" (NAIC *Instructions*).[4] The column 9 entry would be $0, since the treaty has no contingent commissions.

The other treaty has a sliding scale contingent commission of 30% minus one half of the difference between the actual loss ratio and 70%, or

30% – 0.5 x (actual loss ratio – 70%),

bounded between 10% (for a loss ratio of 110%) and 50% (for a loss ratio of 30%). At the reinsurer' last meeting with the ceding company, the loss ratio was estimated at 60%, so a 35% commission was paid. Since that time, additional reported losses indicate that the true loss ratio is 80%, so the final contingent commission should be 25%. The contingent commission payable is a negative 10% of $1,000,000, or –$100,000.

Funds Withheld and Letters of Credit

A reinsurer may provide funds or letters of credit to secure the balances payable to the ceding company.

- If the reinsurer is not authorized to transact reinsurance business in the ceding company's state of domicile, the ceding company must post a provision for reinsurance to offset the reinsurance recoverables. In common parlance, the reinsurance recoverables are not admitted to reduce the net loss liability unless the recoverables are secured; see the discussion below of Schedule F, Part 5.[5]

- If the reinsurer is authorized but triggers the "slow-paying" test in Schedule F, Part 4, it is classified as a slow paying reinsurer, and a provision for reinsurance equal to (at least) 20% of the reinsurance recoverables must be posted, unless the recoverables are secured; see the discussion below of Schedule F, Part 7.

- Even if the reinsurer is authorized and not slow-paying, the ceding company may request letters of credit to ensure that its losses will be reimbursed.

Part 1 of Schedule F shows these securing amounts as follows:

- Column 12 shows "funds held by or deposited with reinsured companies." These assets, owned by the reinsurer but held by the ceding company, are shown on line 11 of page 2 of the reinsurer's balance sheet (assets) and on line 13 of page 3 of the ceding company's balance sheet (liabilities).

- Column 13 shows "letters of credit posted." The letter of credit may be issued by a bank or other financial institution to secure recoverables from the reinsurer. The letter of credit does *not* affect the reinsurer's balance sheet, but it reduces the provision for reinsurance on the ceding company's balance sheet (if the reinsurer is unauthorized or slow-paying).

- Column 14 shows "amount of assets pledged or compensating balances to secure letters of credit." The commercial bank issuing the letter of credit may request that the reinsurer hold a compensating balance to secure the letter of credit.

Illustration: Suppose the reinsurer wants a letter of credit to secure its obligations. A bank might charge a high fee for the letter of credit. To reduce the fee, the reinsurer transfers cash from another bank to the bank issuing the letter of credit. The reinsurer is restricted from using these funds as long as the bank's obligation on the letter of credit remains outstanding.

Part 2: Portfolio Reinsurance

Part 2 of Schedule F shows "Premium portfolio reinsurance effected or cancelled during the current year." Reinsurance ceded by portfolio is shown on the top half of the page, and reinsurance assumed by portfolio is shown on the bottom half of the page.

The information in Part 2 of Schedule F relates to premiums only, shown separately by reinsuring or ceding company. The entries are

- Columns 1-3: Company identification (federal ID number, NAIC company code, name)
- Column 4: Date of Contract
- Column 5: Amount of Original Premium
- Column 6: Amount of Reinsurance Premiums

Portfolio reinsurance is defined in the *Annual Statement* Instructions as "the transfer of the entire liability of an insurer for in force policies as respects a described segment of the insurer's business." No further guidance is provided for the entries in columns 5 and 6.

Originally (in 1989), Part 2 of Schedule F dealt with premiums on loss portfolio transfers. In the early 1990's, the term "loss portfolio transfers" was changed to retroactive reinsurance, as was the title of Schedule F, Part 2. Retroactive reinsurance is defined in SSAP No. 62, paragraph 21, as "reinsurance in which a reinsurer agrees to reimburse a ceding entity for liabilities incurred as a result of past insurable events covered under contracts subject to the reinsurance." The NAIC *Instructions* to the Statement of Actuarial Opinion (section 11) provide a three-fold definition:

> For the purpose of this instruction, "retroactive reinsurance" refers to any agreement which increases the transferring insurer's Surplus to Policyholders as a result of the transferee undertaking any loss obligation already incurred and for which the consideration paid by the transferring insurer is derived from present value or discounting concepts.

The Schedule F *Instructions* says that portfolio reinsurance covers "in force" policies. SSAP No. 62, "Reinsurance," paragraph 29, defines portfolio reinsurance as "the transfer of an insurer's entire liability for in force policies *or outstanding losses*, or both, of a segment of the insurer's business" (emphasis added). This includes both prospective and retroactive reinsurance; the primary coverage need not be "in force."

The intention of columns 5 and 6 is unclear. Since column 6 refers to the reinsurance premium, column 5 seems to refer to the primary premium. One insurer, which ceded the *prospective* part of policies in force for a block of business, entered the primary premium for the *entire* block as the original premium in column 5 and the reinsurance premium in column 6.

The statutory accounting for loss portfolio transfers changed in the early 1990's, and regulators needed to ensure that proper accounting procedures were followed. The purpose of an exhibit showing the premium on portfolio reinsurance is unclear.[6]

Part 3: Ceded Reinsurance

Part 3 of Schedule F lists ceded reinsurance by reinsurer, subdivided by affiliated versus unaffiliated company, authorized versus unauthorized company, U.S. versus alien company, and type of company (mandatory pools versus voluntary pools versus other companies).

The reinsurer's authorized versus unauthorized status affects the provision for reinsurance. Both unaffiliated and affiliated reinsurers may be unauthorized. (Some domestic companies have unauthorized off-shore affiliates in the Bermudas.) The columns in Part 3 show the recoverables from reinsurers and the securing funds that affect the provision for reinsurance.

Fronting Companies

Column 5 identifies "insurance contracts ceding 75% or more of direct premiums written."[7] Reinsurance is costly; if a primary company cedes 75% or more of its premium, one might wonder why it wrote the business.

Regulators are often suspicious of such reinsurance arrangements. Some exposures may indeed be too large or too risky for the primary company. A small insurer may write a $50 million commercial plant and cede most of the exposure to larger reinsurers. But it is unusual for the ceded premium to be 75% or more of the primary premium. Excess of loss reinsurance premiums are rarely that large, and quota share reinsurance cessions of 75% or more are not common.

Fronting arrangements are used by insurers seeking to write business in states where they are not licensed, particularly if the state has extraterritorial regulations.

Illustration: Suppose ABC Insurance provides workers' compensation to a multi-state risk with exposures in New York, where ABC is not licensed. ABC may arrange for XYZ Insurance, a company licensed in New York, to write the business and cede it to ABC. XYZ Insurance gets a fronting fee for its services, and ABC provides the coverage without being licensed in New York.

Some regulators dislike fronting arrangements. Ideally, the regulator would like to monitor the accounts of ABC Insurance, but ABC is not licensed in its state and its books are not available to the regulator. Instead, the regulator regulates the licensed fronting company. Possible fronting arrangements can be ascertained from the column 5 entry.

This is the regulatory perspective in much of Schedule F. Ideally, the regulator would like to monitor the accounts of unauthorized reinsurers and of distressed authorized reinsurers with overdue accounts payable. But it does not have access to the accounts of unauthorized reinsurers, and distressed companies may not present a "full and true statement" of their accounts. Instead, regulators seek the information from companies licensed in their states.

Exceptions

Four types of reinsurance contracts are exempt from identification in this column.

(1) *Affiliated transactions:* Intercompany reinsurance transactions with affiliates are exempt from identification in this column. Affiliated companies A, B, and C may participate in an intercompany pooling agreement: companies A and C cede all their business to company B, and company B retrocedes one third of the pooled business to company A and one third to company C. These are not fronting arrangements. Insurers use fleets of companies for rating purposes: one company may have rates for preferred insureds and another company may have rates for substandard insureds.

(2) *Pools:* Insurers participate in various involuntary market pools and joint underwriting associations, particularly for workers' compensation and commercial automobile business. One or more servicing carriers write the involuntary business and cede it to the pool, keeping only an expense allowance for their acquisition and underwriting costs. These are not fronting arrangements, and they are exempt from identification in this column.[8]

(3) *Small Amounts:* A reinsurance transaction in which the annual gross premium ceded is less than 5% of policyholders' surplus is exempt from identification in this column. Small reinsurance transactions may result from ceding companies leaving a line of business or a geographic area; these are not fronting arrangements.

(4) *Captives:* Reinsurance transactions involving captive insurance companies are exempt from identification in this column. Whereas an insurer may deduct loss reserves from its taxable income, a non-insurance company may deduct only paid losses, not loss reserves. To gain the tax benefits of insurance while avoiding the expense of a commercial policy, a company may form an insurance subsidiary to insure its parent's exposures.

It is expensive for insurers to hold capital, partly because of double taxation costs.[9] To avoid holding capital, the captive may cede the business to the parent company, to other affiliates of the parent company, or to unaffiliated reinsurers.[10]

Loss and Loss Adjustment Expenses

Columns 7 and 8 of Schedule F, Part 3 show "reinsurance recoverable on paid losses and on paid LAE" (respectively). Reinsurance recoverables on paid losses and loss adjustment expenses are balance sheet assets on both statutory and GAAP financial statements; see SFAS 113 and SSAP No. 62, paragraph 19. The total of columns 7 plus 8 should equal the entry on page 2, column 3, line 14, "Reinsurance recoverables on loss and loss adjustment expense payments."

Reinsurance recoverables on unpaid losses and loss adjustment expenses (LAE) are divided into four groups:

- Column 9 – Recoverables on known case loss reserves
- Column 10 – Recoverables on known case LAE reserves
- Column 11 – Recoverables on IBNR loss reserves
- Column 12 – Recoverables on IBNR LAE reserves

Reinsurance recoverables on unpaid losses and LAE are contra-liabilities on the statutory balance sheet; they offset the direct loss and LAE reserves on page 3, lines 1, 2, and 3.[11] The Underwriting and Investment Exhibit, Part 2A, "Unpaid losses and loss adjustment expenses" shows ceded loss reserves divided between reported losses in column 3 (or "case reserves") and incurred but not reported losses in column 7. The totals for all lines of business combined in the Underwriting and Investment Exhibit, Part 2A, for columns 3 and 7 should equal the totals for all reinsurers combined in Part 3 of Schedule F, columns 9 and 11, respectively.

For loss adjustment expenses, the Underwriting and Investment Exhibit shows the net amount in column 9, but not the direct, assumed, and ceded pieces of the net amount. There is no formal cross-check for columns 10 and 12 of Schedule F, Part 3.[12]

Column 13 shows unearned premiums. The unearned premium reserves held by the assuming reinsurers are similar to the loss recoverables due from these reinsurers, since if the reinsurer cancels the contract or becomes insolvent, the unearned premiums are returned to the ceding company. For the provision for reinsurance from unauthorized and slow-paying reinsurers, the unearned premium reserves and contingent commissions are included with loss recoverables.[13]

Commissions

Column 14, which shows reinsurance recoverables from contingent commissions, may be positive or negative: positive if the reinsurance experience is favorable and the reporting company expects additional contingent commissions, and negative if the reporting company expects to return some of the contingent commissions already received.[14]

Regular commissions are netted with the ceded balances payable in column 16; that is, the ceded premium balances are net of regular commissions.

Illustration: Suppose the ceding company has a quota share reinsurance treaty with a 30% commission. If the gross premium balance is $1,000,000, the ceding company would show $700,000 in column 16.

Reinsurance may be used for surplus relief. This is acceptable practice, since reinsurance reduces underwriting risk. A company might structure the reinsurance agreement to provide more surplus relief than is warranted. State regulators frown on such practices, and the commission footnote to Part 3 of Schedule F seeks to uncover them. The footnote requests disclosure of the five largest provisional commission rates in reinsurance treaties.[15]

NOTE: Report the five largest provisional commission rates included in the cedent's reinsurance treaties. The commission rate to be reported by contract with ceded premium in excess of $50,000.

	(1) Name of Company	*(2) Commission Rate*	*(3) Ceded Premium*
(1)			
(2)			
(3)			
(4)			
(5)			

Reinsurance commissions from involuntary pools and joint underwriting associations are not included in the footnote disclosure.[16] The involuntary pools may provide a high commission allowance to servicing carriers because of the difficulty of servicing the small insureds who comprise much of the pool population. The commission allowance is set by state regulation or by an industry rating bureau; the servicing carrier is not using the pool for surplus relief.

Martin F. Carus explains the rationale of the footnote as follows:[17]

> The purpose of the footnote is to detail the five largest commission rates (or where contingent commission clauses exist, the provisional commission rates) for the cedent's treaties so that it can be discerned if any treaties have inordinately high rates. Examination and internal financial analyses have found that some insurers were masking their leverage ratios and true underwriting performance by increasing the ceded premium and commission levels in their ceded reinsurance agreements.[18]

Two illustrations clarify the purpose of this footnote.

Illustration 1: Excess-of-Loss Reinsurance Treaty

Excess of loss reinsurance is generally priced without a ceding commission. Suppose ABC Insurance has $100 million of direct written premium, and $30 million of policyholders' surplus. The 3.33 to 1 premium to surplus ratio is above the trigger of the NAIC IRIS test.

Suppose the rate for an excess-of-loss reinsurance treaty with a $250,000 retention is 6% of subject premium. For $100 million of premium, the reinsurance premium is $6 million, and the net premium is $94 million. The $6 million premium is offset by a reduction in unearned premium reserves of $6 million, and surplus remains $30 million. The premium to surplus ratio is $94 million to $30 million, or 3.13 to 1, which is still too high.

Suppose instead the excess-of-loss reinsurance treaty has a rate of 12% of subject premium and a 50% reinsurance commission. The net reinsurance premium is still $6 million, but the accounting presentation is different. The $12 million of reinsurance premium is offset by a $12 million reduction of the unearned premium reserves, and the $6 million of ceding commission is a revenue. The ceding company shows $88 million of net written premium and $36 million of surplus. The ratio of net premium to surplus is $88 million / $36 million = 2.44, which is below the IRIS trigger of 3.

Illustration 2: Surplus Share with Provisional Commission

Quota share reinsurance is priced with a ceding commission. Varying the ceding commission changes the effective reinsurance rate, so the accounting sleight-of-hand is more subtle. The reinsurance treaty sets the ceding commission as a contingent commission, with a high provisional commission rate to provide surplus relief.

Suppose ABC Insurance has $100 million of direct written premium and $20 million of surplus. The 5 to 1 premium to surplus ratio is too high. Reinsurers believe the business will have a loss ratio of about 90%, and they offer a 20% quota share treaty with a 10% provisional ceding commission with a 1 for 1 sliding scale. The 10% provisional ceding commission assumes a 90% loss ratio. If the actual loss ratio is higher, such as 95%, the ceding commission is reduced to 5%; if the actual loss ratio is lower, such as 80%, the ceding commission is increased to 20%. The reinsurer has little underwriting risk; the purpose of the reinsurance treaty is surplus relief.[19]

The net cash flow at inception of the treaty is \$20 million × (1 – 10%) = \$18 million. The net written premium is \$80 million and the adjusted surplus is \$22 million. The revised premium to surplus ratio is \$80 million / \$22 million, or 3.64. This is still too high.

To solve its surplus problem, ABC Insurance purchases a 40% quota share reinsurance treaty with a 55% provisional ceding commission. The cash flow at inception of the treaty is the same as in the previous scenario: \$40 million × (1 – 55%) = \$18 million. But the net written premium is \$60 million and the adjusted surplus is \$42 million. The revised premium to surplus ratio is \$60 million / \$42 million, or 1.43. This appears excellent.

This solution is misleading. The 55% ceding commission is an accounting fiction, since it will be revised 1 for 1 with the actual loss ratio. Yet the apparent premium to surplus ratio of 1.43 provides the relief which ABC Insurance needs.

These illustrations show how high (provisional) reinsurance commission rates can be used to circumvent statutory accounting intentions and portray higher premium to surplus ratios than warranted. The Part 3 footnote identifies instances of high reinsurance commission rates, so that the state regulator can examine the treaties.

Part 4: Aging of Ceded Reinsurance

SUMMARY: Before 1989, there was no statutory penalty for recoverables from authorized reinsurers, regardless of the presumed collectibility. In 1989, a statutory penalty for 20% of loss recoverables more than 90 days past due and for 20% of all recoverables from slow-paying authorized reinsurers was implemented, and a payment schedule was added.

The Due Date

A payment schedule requires a due date. Non-insurance contracts generally specify when payments are due. In contrast, many reinsurance treaties were traditionally *gentlemen's agreements*. They relied on the contracting parties to remit funds as the liabilities emerged, without specifying payment dates. The complexities of reinsurance agreements and the reliance on the *utmost good faith* of the contracting parties argued against specific payment schedules.

Ceding companies may not always bill their reinsurers immediately for small losses. They may wait until the recoverables accumulate above a certain level, such as \$50,000, and then bill the reinsurer for the total amount. To accommodate these reinsurance agreements, the *Annual Statement* Instructions say:

> For purposes of completing Columns 5 through 9, a paid loss and paid loss adjustment expense recoverable is due pursuant to original contract terms (as the contract stood on the date of execution).
>
> Where the reinsurance agreement specifies or provides for determination of a date at which claims are to be paid by the reinsurer, the aging period shall commence from that date.
>
> Where the reinsurance agreement does not specify a date for payment by the reinsurer, but does specify or provide for determination of a date at which claims are to be presented to the reinsurer for payment, the aging period shall commence from that date.
>
> Where the reinsurance agreement does not specify or provide for the determination of either of such dates, the aging period shall commence on the date on which the ceding company enters in its accounts a paid loss recoverable which, with respect to the particular reinsurer, exceeds $50,000. If the amount is less than $50,000 it should be reported as currently due.

The following scenarios illustrate the *Annual Statement* Instructions:

1. The reinsurance contract may specify a date when recoverables are due, such as "thirty days from the time of notice to the reinsurer." Suppose that

   - A loss occurs on March 15.
   - The loss is paid by the ceding company on August 15.
   - The ceding company bills the reinsurer on September 15 (the date of notice).
   - The treaty specifies that recoverables are due within thirty days of the time of notice.

   The recoverable is due on October 15. If it is not paid by December 31, the recoverable is 75 days (two and a half months) overdue.[20]

2. Suppose the occurrence, payment, and billing dates as the same, but the reinsurance contract does *not* specify a date when recoverables are due. Instead, the contract says that claims are to be presented to the reinsurer for payment within 30 days of the date the loss is paid by the ceding company. The recoverable is due on September 15. If it is not paid by December 31, the recoverable is 105 days (three and a half months) overdue.

3. Suppose the reinsurance contract specifies neither the due date nor the presentation date. Moreover, suppose the loss was for $100,000, and when the ceding company paid the claim, it entered on its books a paid loss recoverable of $100,000. The aging period

starts on August 15. If the recoverable is not paid by December 31, the recoverable is 135 days (four and a half months) overdue.

4. Suppose the loss in the previous example was$15,000, and it was the only loss recoverable from this reinsurer. To reduce expenses, the ceding company waits until several claims have accumulated before billing the reinsurer. The claim remains current through December 31.[21]

The ceding company's dealings may be with a broker or reinsurance intermediary, not with the reinsurance company. In such cases, notification of the claim or presentation of the claim to the broker or intermediary is equivalent to notification or presentation to the reinsurer.

The Aging Schedule

Part 4 of Schedule F shows the following numeric columns:

Column 5.	Currently due recoverables (i.e., not yet overdue)
Column 6 – 10.	Overdue recoverables
Column 6.	1 to 29 days
Column 7.	30 to 90 days
Column 8.	91 to 120 days
Column 9.	Over 120 days
Column 10.	Total overdue (cols. 6 + 7 + 8 + 9)
Column 11.	Total due (cols. 5 + 10)
Column 12.	Percentage overdue (col 10 ÷ col. 11)
Column 13.	Percentage more than 120 days overdue (col. 9 ÷ col. 11)

Columns 12 and 13 show the percentages of loss recoverables that are overdue (i.e., not current) and that are overdue more than 120 days. The relevant ratio for the statutory provision for reinsurance is the percentage more than 90 days overdue. Column 13 in Part 4, which shows the percentage more than 120 days overdue, is not used in the statutory calculations.[22]

The Statutory Provisions for Reinsurance

Statutory accounting imposes *provisions* (penalties) for certain reinsurance recoverables:

- unsecured recoverables from unauthorized reinsurers
- unsecured recoverables from slow-paying (authorized) reinsurers
- overdue recoverables from both authorized and unauthorized reinsurers
- recoverables in dispute from unauthorized reinsurers and non-slow-paying authorized reinsurers

The statutory provision for reinsurance appears on page 3, line 16, of the *Annual Statement*.

On the statutory balance sheet, reinsurance recoverable on paid losses and loss adjustment expense is an asset (line 14 of page 2). Reinsurance recoverable on unpaid losses and loss adjustment expense is a contra-liability to gross unpaid losses and loss adjustment expense (lines 1 and 3 of page 3). Ceded unearned premium reserves are contra-liabilities to gross unearned premium reserves (line 9 of page 3). The provision for reinsurance relates to all three items.

The provision for reinsurance does not affect the loss reserves on line 1 of page 3, which are net of all reinsurance. It does not affect the loss reserves in the Underwriting and Investment Exhibit or in Schedule P, where no distinctions are made between authorized and unauthorized reinsurers and between slow-paying and non-slow-paying authorized reinsurers.

The provision for reinsurance serves as a minimum bound for uncollectible reinsurance.[23] If the reporting company believes that the uncollectible reinsurance recoverables are greater than the Schedule F provision for reinsurance, it must hold the full estimated uncollectible amount as its provision for reinsurance.[24]

The year to year change in the provision for reinsurance is a direct charge or credit to surplus; it does not flow through the statutory income statement.[25] By reducing statutory surplus, the provision for reinsurance reduces risk-based capital adjusted surplus and lowers the risk-based capital ratio.[26]

GAAP financial statements have no provision for reinsurance. GAAP statements show all reinsurance recoverables as assets, not as contra-liabilities, and the assets are reduced for expected uncollectible amounts, just like other receivables. Similarly, the A. M. Best rating agency removes the provision for reinsurance from net liabilities when calculating its adjusted leverage ratios; see the introduction to Best's *Key Rating Guide*.

Note 22D to the financial statements, *Uncollectible Reinsurance*, discloses "uncollectible reinsurance written off during the year" by reinsurer, in four categories: (i) losses incurred, (ii) loss adjustment expenses incurred, (iii) premiums earned, and (iv) other. This write-off is not directly related to the provision for reinsurance, though it may serve as a check. A company with write-offs consistently greater than its provision for reinsurance may be underestimating its liabilities.

The company's Appointed Actuary must discuss reinsurance collectibility and its effect on loss reserve adequacy in the *Statement of Actuarial Opinion*. The Appointed Actuary should use the Schedule F exhibits as one source of information on potential collectibility problems. The NAIC *Instructions* to the *Statement of Actuarial Opinion*, section 11, say

> Before commenting on reinsurance collectibility, the actuary should solicit information from management on any actual collectibility problems, review ratings given to reinsurers by a recognized rating service, and examine Schedule F for the current year for indications of regulatory action or reinsurance recoverable on paid losses over 90 days past due.

An estimate of uncollectible reinsurance is distinct from the statutory provision for reinsurance. There may be a large provision for reinsurance despite no anticipated reinsurance collectibility problem.

Relationships

The relationships among the statutory liability, the contra-asset, and the disclosures are summarized below.

1. *Prospective vs. retrospective:*

   i. Note 22 to the financial statements is a retrospective disclosure, identifying the statutory write-off during the past year for uncollectible reinsurance recoverables.
   ii. The provision for reinsurance, the GAAP offset for expected uncollectible recoverables, and the actuary's disclosure in the Statement of Actuarial Opinion are prospective estimates.

2. Basis of Estimate:

   i. Note 22 is an objective accounting fact.
   ii. The Schedule F provision for reinsurance is formula driven.
   iii. The GAAP financial statements are management's best estimate of future reinsurance uncollectibility.
   iv. The Statement of Actuarial Opinion is the Appointed Actuary's estimate of future reinsurance uncollectibility. Although the Appointed Actuary may be a company officer and the Appointed Actuary should consider the views of company management, the actuary's opinion may differ from management's opinion.

SAP-GAAP Accounting Philosophies

The GAAP vs. statutory approach to measuring the potential uncollectibility of reinsurance recoverables reflects the underlying philosophies of these accounting systems.

GAAP

GAAP financial statements provide potential investors with information that can be used to estimate future income. The company's management is the source of most GAAP estimates; this is also true for estimates of uncollectible reinsurance recoverables.

The estimate is audited by an independent accountant.[27] Potential investors are sophisticated enough to evaluate management estimates. GAAP emphasizes going-concern enterprises, since these are of most interest to investors.

Statutory Accounting

Statutory financial statements seek to assure policyholders that the insurance obligations will be fulfilled. This is particularly important for policyholders of distressed companies. Since distressed companies may be reluctant to disclose uncollectible accounts or similar financial problems, statutory accounting relies on formulas, not on management estimates alone. The formulas are conservative; they are not best estimates.

Most policyholders are unable to evaluate management disclosures. Regulators serve as the policyholders' agents to monitor the financial statements of potentially distressed companies. Statutory accounting emphasizes run-off accounting, since the danger to policyholders comes from expiring companies, not from continuing companies.

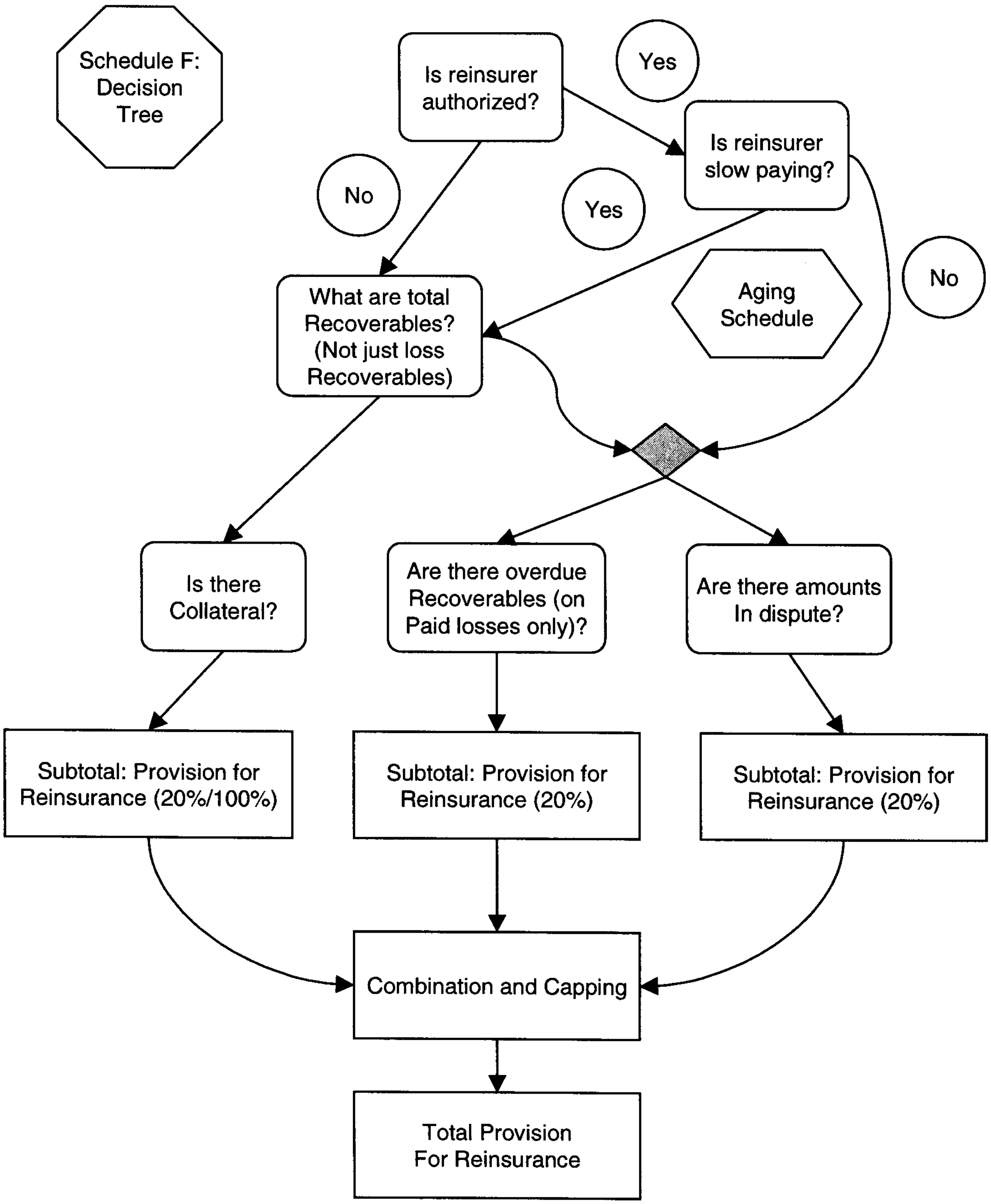
The chart below summarizes the differing objectives of GAAP and statutory accounting.

Table 1: GAAP vs Statutory Accounting Objectives

	GAAP	*Statutory Accounting*
Audience Served	investors	policyholders
Focus (Topic)	future profitability	current obligations
Focus (Financial Statement)	income statement	balance sheet
Nature of Estimate	unbiased	conservative
Basis of Estimate	company management	statutory formula
Users	sophisticated	unsophisticated
Companies Targeted	going concern companies	distressed companies

Decision Tree

The decision tree below shows the elements that affect the provision for reinsurance:



1. If the reinsurer is not authorized, we follow the left hand side of the decision tree graphic. The provision for reinsurance is the sum of three parts:

- 100% of the unsecured (total) recoverables
- 20% of the loss recoverables more than 90 days past due

- 20% of the amounts in dispute

Security has no effect on the provision for loss recoverables more than 90 days past due and amounts in dispute. The provision for reinsurance is capped by the total recoverables.

2. If the reinsurer is authorized, we test for speed of payment. A slow-paying authorized reinsurer is like an unauthorized reinsurer, except that the provision for reinsurance is the *greater* of (i) 20% of the unsecured total recoverables (including amounts in dispute) and (ii) 20% of the loss recoverables more than 90 days past due. No capping is needed.

3. If the authorized reinsurer is not slow-paying, the provision for reinsurance is the sum of:

- 20% of the loss recoverables more than 90 days past due, and
- 20% of the amounts in dispute.

Part 5: Unauthorized Reinsurers

Part 5 of Schedule F calculates the provision for reinsurance with unauthorized companies, consisting of three parts: (i) 100% of unsecured (total) recoverables, (ii) 20% of overdue loss recoverables, and (ii) 20% of amounts in dispute.

Before 1989, the statutory provision for reinsurance applied only to unsecured recoverables from *unauthorized* companies. In 1991, a provision for overdue recoverables from *authorized* reinsurers was added. Security, such as funds withheld and letters of credit, reduces the provision for total recoverables from unauthorized reinsurers but not for overdue recoverables from authorized reinsurers. Some authorized reinsurers contended that they were penalized more harshly than unauthorized reinsurers if all recoverables were secured. To avoid any disincentive to using authorized reinsurance, the provision for recoverables more than 90 days past due was applied to unauthorized reinsurers as well.

Recoverables in dispute are not overdue, since the cause for non-payment is uncertainty about the reinsurer's liability, not tardiness. Regulators noted that a ceding company could avoid the penalty for overdue recoverables by classifying them as "in dispute."[28] A provision of 20% of amounts in dispute was added in 1993.

Penalty for Unsecured Recoverables

Part 5 shows the following figures for unauthorized reinsurers.

- Column 5 shows total recoverables: net unearned premiums, loss recoverables, and commissions. This figure should agree with the entry in Schedule F, Part 3, column 15, for unauthorized reinsurers.

Columns 6 through 10 show the funds securing the recoverables, consisting of

- funds held by the company under reinsurance treaties (column 6),
- letters of credit (column 7),
- ceded balances payable (column 8),
- miscellaneous balances (column 9), and
- other allowed offset items (column 10).

Column 11 is the sum of columns 6 through 10. The securing funds are capped by the total recoverables; that is, column 11 may not exceed column 5. Column 5 minus column 11, shown in column 12, is the unsecured recoverables from unauthorized reinsurers.

Securing agreements are not fail-safe. The subdivision by type of security allows the reader to judge its reliability.[29] Funds withheld are better security than letters of credit.

- A letter of credit may not be renewed if the reinsurer's financial condition deteriorates.

  Illustration: A financially sound unauthorized reinsurer obtains a one-year letter of credit on July 1, 20X4, for its workers' compensation obligations. A September hurricane produces severe losses that impair the reinsurer's financial condition. The workers' compensation recoverables are secured by the letter of credit; no provision for reinsurance is imposed on the 20X4 *Annual Statements* of ceding companies. On July 1, 20X5, the bank does not renew the letter of credit, leaving the ceding companies exposed to collectibility problems.

  Statutory accounting requires that the letter of credit be *evergreen* for it to offset the provision for reinsurance. That is, the letter of credit must stipulate that the issuing bank must renew it as long as the recoverables are outstanding.

- A bank that issued a letter of credit for an insolvent reinsurer may say that it is invalidated by misrepresentations made by the reinsurer. The ceding company should verify that the letter of credit is not contingent upon the accuracy of representations made by the reinsurance company.

Overdue Recoverables

Overdue recoverables *not in dispute* are shown in column 13 of Part 5. Twenty percent of recoverables more than 90 days past due (according to the Part 4 aging schedule) are subject to a provision for reinsurance, whether or not they are secured.

The total provision for reinsurance may not exceed the total reinsurance recoverables. Equivalently, the provision for recoverables more than 90 days past due may not exceed the funds securing the total recoverables. Column 14 shows 20% of the recoverables more than 90 days past due. Column 15 shows the "smaller of column 11 (= total security) or column 14."

Illustration: Suppose total recoverables from an unauthorized reinsurer are $100 million, of which $50 million are more than 90 days past due, and there are letters of credit for $5 million. The unsecured recoverables are $100 million – $5 million = $95 million, and twenty percent of the overdue amount is 20% × $50 million = $10 million. Without the cap, the provision for reinsurance would be $105 million; this is unreasonable since the total recoverables are only $100 million. Instead, the penalty for overdue recoverables is limited to the securing funds. The total penalty in this illustration is $100 million (= $95 million + $5 million).[30]

Amounts in Dispute

Amounts in dispute are included in column 5 (the total recoverables) but not in column 13 (the recoverables more than 90 days past due). "Dispute" is litigation, arbitration, or notification; notification is a formal written communication from a reinsurer denying the validity of coverage (NAIC *Annual Statement* Instructions and SSAP No. 62). Amounts in dispute are treated like recoverables more than 90 days past due: 20% is included in the provision for reinsurance.

The provision for amounts in dispute is limited by the securing funds, as shown in column 16: *Smaller of column 11 (= total security) or 20% of amount in dispute included in column 5.*

Security does not affect the provisions for amounts in dispute or recoverables more than 90 days past due. Security guarantees that the reinsurer's insolvency will not prevent payment.

- The security does no apply to a claim for which the reinsurer does not admit liability.
- A recoverable more than 90 days past due suggests that the reinsurer may deny liability for the claim, rendering the security worthless.

Column 17 shows the sum of unsecured total recoverables, 20% of recoverables more than 90 days past due, and 20% of amounts in dispute, limited by the total recoverables.[31]

This penalty is carried to footnote (6) of Part 7: "Provision for unauthorized reinsurance: Schedule F – Part 5, column 17, × 1000." (Part 5 is in thousands of dollars whereas the provision for reinsurance is in dollars, so Part 5, column 17, is multiplied by a factor of 1000.)

Illustrations

The table below shows examples of the provision for reinsurance (figures in $000's).

Table 2 : Provision for Reinsurance

Reinsurer:	A	B	C
1. Total Recoverables	$1,000	$1,000	$1,000
2. Securing Funds	$0	$1,200	$600
3. Provision for reinsurance (#1)	$1,000	$0	$400
4. Recoverables > 90 days due	$200	$200	$200
5. Provision for reinsurance (#2)	$40	$40	$40
6. Amounts in dispute	$100	$100	$100
7. Provision for reinsurance (#3)	$20	$20	$20
8. Total provision for reinsurance	$1,060	$60	$460
9. Provision for reinsurance (capped)	$1,000	$60	$460

- Line 1 includes unearned premium reserves, contingent commissions, and recoverables on both paid and unpaid losses.
- Line 2 includes all securing funds limited to the total recoverables from that reinsurer. Securing funds from one reinsurer can not offset the provision for another reinsurer.
- Line 3: The first provision for reinsurance is the unsecured total recoverables, bounded below by $0.
- Line 4 shows loss recoverables more than 90 days past due.
- Line 5: The second provision for reinsurance is 20% of the loss recoverables more than 90 days past due. Part 5 of Schedule F applies the capping procedure three times, beginning with this line; the table applies the capping procedure a single time at the end.
- Line 6 shows the amounts in dispute, which are also included in the total recoverables (line 1). The recoverables on line 1 are offset by securing funds. The amounts in dispute on line 6, like loss recoverables more than 90 days past due, are not offset by securing funds.
- Line 7: The third provision for reinsurance is 20% of the amounts in dispute.
- Line 8: The total provision for reinsurance is the sum of the three pieces on lines 3, 5, & 7.
- Line 9: The total provision for reinsurance is capped by the amount of total recoverables.

Part 6: Overdue Authorized Reinsurance

Part 6 of Schedule F calculates the statutory provision for recoverables more than 90 days past due from authorized reinsurers that are *not* classified as slow-paying.[32] [33]

The treatment of recoverables more than 90 days past due is the same for all reinsurers, whether authorized or unauthorized and whether slow-paying or not slow-paying. The provision for reinsurance is 20%, and security has no effect. For other recoverables, slow-paying authorized reinsurers are like unauthorized reinsurers, though their provision for reinsurance is 20% of the total unsecured recoverables, not 100%.

Column 7 shows, by reinsurer, the *test ratio* of

- loss recoverables more than 90 days overdue to
- all recoverables on paid losses and loss adjustment expenses plus amounts received in the last 90 days of the statement year.

The reinsurer is slow-paying if the ratio is 20% or greater.

Columns 4, 5, and 6 provide the data for this ratio. Column 4 shows recoverables on paid losses and LAE more than 90 days past due, and column 5 shows total recoverables on paid losses and LAE; amounts in dispute are excluded from both columns.[34] Payments received in the last 90 days of the statement year (column 6) are not shown elsewhere in the *Annual Statement*.

ILLUSTRATION: Suppose the reporting company received $15 million in loss and LAE from a reinsurer in the fourth quarter of 20X4. The remaining recoverables on paid losses and LAE at year end are $75 million, of which $25 million are more than 90 days past due. The test ratio is $25 million ÷ ($75 million + $15 million) = 27.78%. The reinsurer is slow-paying.

Incentives

"Amounts received in the prior 90 days" are included in the denominator of the test ratio to avoid discouraging reinsurance claim settlements. Suppose that on December 15, a company has $10 million of recoverables on paid losses from a reinsurer. Half ($5 million) are for routine claims, none of which is more than 90 days overdue, and half are for complex claims, of which $1.5 million are more than 90 days overdue.

On December 15, only 15% of the recoverables are more than 90 days overdue, and the reinsurer would not be slow-paying. Many companies settle routine accounts by year end. If the reinsurer pays $5 million to the primary company to settle the routine claims in the last two weeks of December, it leaves $5 million of recoverables of which $1.5 million are more than 90 days past due, for a 30% test ratio. By speeding up claims payments, the reinsurer moved from a 15% test ratio to a 30% test ratio. The ceding company may delay the settlement of these claims to avoid the provision for reinsurance and the reduction in surplus.

To encourage companies to settle reinsurance accounts, the NAIC included the "amounts received in the prior 90 days" in the denominator of the test ratio. Payment of claims during the final quarter of the statement year may lower the test ratio if some of these claims would have been more than 90 days past due by year end. Payment of claims in the fourth quarter of the statement year can not increase the test ratio.

Illustration: The reporting company has $10 million of recoverables on paid losses and LAE from a reinsurer on December 15, of which $2.5 million are more than 90 days past due. The reinsurer would be slow-paying on December 15. In the last two weeks of December, the reinsurer pays $5 million to settle claims, including $1 million of claims that are more than 90 days past due. The test ratio on December 31 is $1.5 million / $10 million or 15%, and the reinsurer is no longer slow-paying.

For reinsurers that are *not* slow-paying, the provision for reinsurance is 20% of the recoverables that are more than 90 days past due including amounts in dispute.[35] There is no provision for reinsurance for amounts in dispute that are not yet 90 days past due.[36] For non-slow-paying authorized reinsurers, there is no provision for unsecured total recoverables. Security is not relevant, and there no need for a capping procedure.

Part 7: Slow-Paying Authorized Reinsurers

Reinsurers that are slow-paying are treated like unauthorized reinsurers, except that the provision is the *greater* (not the sum) of 20% of the unsecured recoverables and 20% of the recoverables more than 90 days past due.

For unauthorized reinsurers and for non-slow-paying authorized reinsurers, security does not offset the provision for reinsurance for amounts in dispute. For slow-paying authorized reinsurers, security has the same effect on amounts in dispute as on other recoverables, since all recoverable are treated together.[37]

Part 7 of Schedule F shows the calculations. Columns 4 through 11 have the same format as columns 5 through 12 of Part 5, which computes the provision for unauthorized reinsurers. Just as column 12 of Part 5 shows the unsecured total recoverables for unauthorized reinsurers, column 11 of Part 7 shows the unsecured total recoverables for slow-paying authorized reinsurers, of which 20% is the provision for reinsurance. (The 20% factor is applied in footnote 2, not in the column entries.)

Column 11 of Part 7 is the total unsecured recoverables and column 12 is the "greater of column 11 or Schedule F, Part 4, columns 8 and 9" (i.e., the loss recoverables more than 90 days past due). The column 12 total is carried to footnote (1), 20% of which is carried to footnote (2), which is the provision for slow-paying authorized reinsurers.

The Provision for Reinsurance

The footnotes in Part 7 show the provisions for reinsurance.

- Footnote 2 shows the provision for slow-paying authorized reinsurers.
- Footnote 3 shows the provision for authorized reinsurers that are not slow-paying [= Part 6, Column 11]
- Footnote 4 shows the total provision for authorized reinsurers [= footnotes 2 + 3].

- Footnote 5 shows the provision for unauthorized reinsurers [= Part 5, Column 17 × 1,000]
- Footnote 6 shows the total provision for reinsurance [= footnotes 4 + 5], which is carried to page 3, line 16.

Other Estimates

The statutory penalty is a minimum. The company should hold the greater of the estimated uncollectible recoverables and the statutory provision for reinsurance.

The change in the provision for reinsurance is a direct charge or credit to surplus on line 27 of page 4; it does not flow through the income statement. If the estimated uncollectible recoverables exceed the statutory provision for reinsurance, the excess amount flows through the statutory income statement. See page 22 for a complete discussion of this topic.

Residual Markets

The NAIC *Instructions* regarding Schedule F, Part 4, say "all recoverables from mandatory pools should be reported . . . as being current." Servicing carriers for residual market pools, which are used primarily for workers' compensation and commercial automobile, cede the written premium to the pool. Some pools make only quarterly transactions with servicing carriers and pool members. If recoverables more than 90 days past due led to a provision for reinsurance, insurers may not wish to be servicing carriers. To avoid this scenario, the NAIC imposes no provision for business ceded to residual market pools.

Part 8: Restatement of Balance Sheet

Part 8 of Schedule F, added in 1992, is the statutory counterpart to the SFAS 113 accounting structure. The liability entries on the statutory balance sheet (page 3 of the *Annual Statement*) are net of reinsurance. For example, the loss reserves on line 1 are net of reinsurance recoverable on unpaid losses and the unearned premium reserves on line 9 are net of unearned premiums for ceded reinsurance.[38]

Before 1992, GAAP used the same gross accounting format, offsetting ceded reserves against direct reserves (SFAS 60). SFAS 113 now requires separate entries for the direct reserves and the reinsurance recoverables, unless a legal right of offset exists.[39]

Illustration: Suppose direct loss reserves of $10 million are reinsured with a 40% quota share treaty. The statutory balance sheet shows a $6 million net loss reserve. The GAAP balance sheet shows a $10 million direct unpaid loss liability and a $4 million reinsurance recoverable.

The statutory balance sheet remains net of reinsurance.[40] Part 8 of Schedule F restates the balance sheet to be gross of reinsurance, with a single net amount due from reinsurers.[41]

Illustration A

A policy issued on December 31, 20X1, with a $10,000 premium, is reinsured under a 40% quota share treaty with a non-affiliated authorized reinsurer. The insurer incurs one loss for $5,000 on October 1, 20X2, which it pays on July 1, 20X3. It collects the recoverable from its reinsurer on March 1, 20X4. The premium is paid on the policy effective date, the primary company incurs no expenses, and there is no reinsurance commission.

FIRST YEAR (20X1) – UNEARNED PREMIUMS: On December 31, 20X1, the insurer collects the $10,000 premium and pays $4,000 to the reinsurer. The unearned premium reserve is $10,000 gross of reinsurance and $6,000 net of reinsurance.[42]

SECOND YEAR (20X2) – LOSS RESERVES: By December 31, 20X2, the premium is fully earned; both the gross and net unearned premium reserves are zero. The $5,000 loss incurred on October 1, 20X2, remains unpaid at year end, and the gross loss reserve is $5,000. The reinsurance recoverable from the 40% quota share treaty is $2,000, and the net of reinsurance loss reserve is $3,000.[43]

THIRD YEAR (20X3) – PAID LOSSES: By December 31, 20X3, the primary company has paid $5,000 to the claimant, and the direct loss reserve is zero. No money has yet been recovered from the reinsurer, but since the direct loss reserve is zero, the ceded loss reserve is also zero. The reinsurance recoverable is moved from a contra-liability in 20X2 to an asset. [44]

The reinsurance *recovered* entry is the *recoverable*, even though there has been no cash transaction. The occurrence of a loss is the income statement debit, not the payment of the loss; the income statement debit is the *net of reinsurance* loss. When the direct loss is paid to the claimant, the loss reserve becomes a paid loss and the offsetting contra-liability called *reinsurance recoverable on unpaid losses* becomes a reinsurance recovered. When the recoverable is collected, the asset called *reinsurance recoverable on paid losses* becomes cash; there is no effect on the income statement.[45]

FOURTH YEAR (20X4) – REINSURANCE RECOVERIES: By December 31, 20X4, the primary company has received payment from the reinsurer. The r*einsurance recoverable on loss and loss adjustment expense payments* asset is replaced by cash.

Schedule F, Part 8, *restates* the balance sheet to identify the *net credit* for reinsurance; the reinsurance recoverables net of the provision for reinsurance and the funds withheld.

Illustration B: On January 1, a company pays $10 million for a quota share reinsurance treaty. By December 31, the reinsurer has paid $2 million; recoverables are $1.5 million on paid losses and $4.5 million on unpaid losses. Suppose surplus is $20 million.

The net effect of this treaty on the primary company's surplus is a reduction of $2 million; this is not relevant to Part 8. Rather, Part 8 shows how much of the December 31 surplus consists of recoverables – or $6.0 million in this illustration.

Illustration C: If the reinsurer is unauthorized and has not provided any security for the recoverables, the provision for reinsurance is $6.0 million. Surplus is $14.0 million, none of the which stems from reinsurance recoverables.

Illustration D: If the unauthorized reinsurer has provided a $3.5 million letter of credit to secure the recoverables, the provision for reinsurance is $2.5 million. Surplus is $17.5 million, of which $3.5 million arises from reinsurance recoverables.

Illustration E: If the security is funds withheld instead of a letter of credit, the provision for reinsurance is again $2.5 million. Surplus is $17.5 million, of which $3.5 million stems from reinsurance. One may conceive of the fund withheld as an offset either to the reinsurance recoverable or to the cash held by the ceding company that is owned by the reinsurers.[46]

Cessions to an involuntary pool or a joint underwriting association are not shown in Part 8. The involuntary pools provide workers' compensation or commercial auto insurance for risks unable to obtain coverage in the voluntary market. The uncollectibility risk is remote, since the pools' reserves are backed by state assessments on the insurers writing business in the state.

The involuntary pools have been large in some years. In 1992–1993, when Part 8 of Schedule F was formed, the workers' compensation reinsurance pools covered nearly one quarter of the country's business. Including the involuntary cessions in Part 8 would have masked the effects of voluntary ceded reinsurance, which is the more important disclosure.

Schedule F, Part 8, has the entries shown below. The *Item* numbers are the line numbers on pages 2 and 3 of the *Annual Statement* (the statutory balance sheet).

Restatement of Balance Sheet to Identify Net Credit for Reinsurance

ASSETS (Page 2, column 3)[47]

1. Cash and invested assets (Item 9)
2. Agents' balances or uncollected premiums (Item 10)
3. Funds held by or deposited with reinsured companies (Item 11)
4. Reinsurance recoverables on loss and LAE payments (Item 14)
5. Other assets (Items 11 and 12 and 15 through 24)
6. Net amount recoverable from reinsurers
7. Totals (Item 27)

LIABILITIES (Page 3)

8. Losses and loss adjustment expenses (Items 1 through 3)
9. Taxes, expenses, and other obligations (Items 4 through 8)
10. Unearned premiums (Item 9)
11. Advance premiums (Item 10)
12. Dividends declared and unpaid (Items 11.1 and 11.2)
13. Ceded reinsurance premiums payable (net of reinsurance commissions) (item 12)
14. Funds held by company under reinsurance treaties (Item 13)
15. Amounts withheld or retained by company for account of others (Item 14)
16. Provision for reinsurance (Item 16)
17. Other liabilities (Items 12, 14, 15 and 17 through 23)
18. Total Liabilities excluding Protected Cell (Item 24)
19. Protected Cell liabilities (Item 25)
20. Total Liabilities (Item 26)
21. Surplus as regards policyholders (Item 35)
22. Totals (Item 36)

Restatement of Liabilities

For each entry, there are three columns:

- Column 1 is the net of reinsurance entry from the balance sheet.
- Column 2 is the needed adjustment to restate the balance sheet.
- Column 3 is the restated gross of reinsurance entries.

The Part 8 exhibit makes two types of adjustments:

- All reinsurance recoverables, whether on paid or unpaid losses or on unearned premiums, are grouped as the *net amount recoverable from reinsurers.*[48]
- The provision for reinsurance and funds held by the company under reinsurance treaties are *offsets* to the *net amount recoverable from reinsurers.*

We begin with the liabilities section.

Line 8, "losses and loss adjustment expenses": Using Illustration A with the 20X2 statement, column 1 is the net unpaid loss of $3,000; column 2 is the ceded unpaid loss of $2,000; and column 3 is the gross unpaid loss of $5,000. We are eliminating a contra-liability, so the adjustment in column 2 is positive.

Line 10 (item 9), "Unearned premiums": Using Illustration A with the 20X1 statement, column 1 shows the net unearned premium reserve of $6,000; column 2 shows the ceded reserve of $4,000; and column 3 shows the gross reserve of $10,000. Line 11 (Item 10), "Advance premiums," is similar. Before the policy effective date, advance premiums are fully unearned. The balance sheet is net of reinsurance; Part 8 adjusts for ceded advance premiums.

Line 13 (item 12), "Ceded reinsurance premiums payable (net of reinsurance commissions)," are premiums owed to reinsurers but not yet paid, less any reinsurance commissions embedded in these premiums. The table below summarizes these entries.

Table 3: Reinsurance Premiums

	payment status	who holds cash	who owns funds	liability vs contra-liab	sign of adjustment
ceded unearned premiums	already paid	reinsurer	ceding co.	contra-liab	positive
ceded advance premiums	already paid	reinsurer	company ceding co.	contra-liab	positive
reins. premiums payable	not yet paid	ceding co.	company reinsurer	liability	negative

Line 14 (item 13), "Funds held by company under reinsurance treaties," and line 16 (item 16), "Provision for reinsurance," are liabilities. When the reinsurance recoverables are grouped as a single asset, these liabilities become offsets to that asset.[49]

Line 14 is a liability for both GAAP and statutory statements. The funds held by the ceding company are owned by the reinsurers. The provision for reinsurance is not owed to a third party; it is a statutory entry to offset reinsurance recoverable assets or contra-liabilities. Part 8 makes these liabilities into offsets to the net credit from reinsurance.

Line 15 (item 14), "amounts withheld or retained by company for account of others," are funds that the company owes to other parties, not to reinsurers; examples are FICA taxes unpaid at year end and uncashed checks to claimants.[50] These funds are unrelated to reinsurance.

Other liabilities are used when needed. For example, policyholder dividends declared and unpaid may be adjusted if the reinsurer contributes part of the dividend.

Line 19 (item 25), "protected cell liabilities," relate to securitization of insurance liabilities, which might be one used as an alternative to reinsurance; no adjustment is used here.

Illustration: A Homeowners insurer wishes to purchase a $90 million excess of $10 million catastrophe cover, but reinsurance prices are high. Instead, the company issues a $90 million bond whose indenture stipulates that the bond need not be repaid if a hurricane loss occurs with more than $500 million of industry-wide insured damages. To reward investors for the additional risk, the bond's coupon rate is higher than would be expected for its asset class.

The $90 million of funds received from bondholders is *protected* in that they are not available for payment of other claims (besides catastrophic hurricane claims).

For line 19, "surplus as regards policyholders," the adjustment in column 2 is "X-ed out." On page 3, surplus is the balancing item; it is the difference between reported assets and reported liabilities. In Schedule F, Part 8, line 6, "net amount recoverable from reinsurers," is the balancing item; policyholders' surplus does not change. Part 8 changes the accounting *presentation* of the company's balance sheet, not the *substance* of the balance sheet.

Restatement of Assets

Line 4, "reinsurance recoverable on loss and loss adjustment expense payments" is fully offset in column 2, leaving a zero in column 3. Part 8 transfers the asset from a recoverable on paid losses to the net recoverable from reinsurers.

Line 3, "funds held by or deposited with reinsured companies" are owned by the reporting company but held by its reinsured companies. This entry relates to assumed reinsurance, not ceded reinsurance. The reporting company show a zero in column 2.

Line 2, "agents' balances or uncollected premiums" is a carry-over from the pre-codification *Annual Statement*. Before 2001, agents' balances were net of reinsurance premiums payable.

Illustration: If agents' balances are $15 million and premium balances owed to assuming reinsurers are $5 million, the agents' balances entry on the balance sheet is $10 million.[51] Codification of statutory accounting in 2001 prohibited the netting of premiums receivable with premiums payable, though it retained net accounting loss and unearned premium reserves.[52]

Line 1, "cash and invested assets," and line 5, "other assets," are used by some companies; other companies show zeros in column 2 for these lines.

Illustration: One company balances the adjustment to *funds held under reinsurance treaties* with an adjustment to line 1. The funds held liability is an offset to the cash given to the reporting company; if the funds held are eliminated, the cash should be reduced as well.

Line 6, "net amount recoverable from reinsurers," is a balancing item so that total assets on line 7 equal total liabilities on line 20, representing the "assets plus the contra-liabilities minus the liabilities" on the statutory balance sheet relating to ceded reinsurance.

I. Illustrations: Restatement of Balance Sheet

The column 1 entries in Table 1 below are taken from the balance sheet. The recoverables on Schedule F, Part 3, are $160,000,000 on paid and unpaid losses and $20,000,000 on unearned premium reserves. We determine the entries A, B, C, and D in the restated column.

Table 4: Schedule F, Part 8: Initial Exhibit

Schedule F, Part 8:
Restatement of Balance Sheet to Identify Net Credit for Ceded Reinsurance ($000,000's)

ASSETS (page 2, column 3)	As Reported	Adjustment	Restated
1. Cash and invested assets	200		
2. Agents' balances or uncollected premiums	10		
3. Funds held by or deposited with reinsured companies	30		
4. Reinsurance recoverable on loss and LAE payments	40		
5. Other assets	20		
6. Net amount recoverable from reinsurers			A
7. Total Assets	300		B
LIABILITIES (page 3)			
8. Losses and loss adjustment expenses	100		
9. Taxes and other expenses	3		
10. Unearned premiums	40		
11. Advance premiums	0		
12. Dividends declared and unpaid	2		
13. Ceded reinsurance premiums payable	5		
14. Funds held by company under reinsurance treaties	20		
15. Amounts withheld or retained for account of others	1		
16. Provision for reinsurance	15		
17. Other liabilities	9		
18. Total liabilities	190		C
19. Surplus as regards policyholders	110		D
20. Total liabilities plus surplus	300		

Assets

Line 1, *Cash and invested assets*, generally has no adjustment (but see discussion above).

Line 2, *Agents' balances or uncollected premiums*, is a carry-over from post-codification statutory accounting; it should have no adjustment; see the discussion above.

Line 3, *Funds held by or deposited with reinsured companies*, relates to assumed reinsurance, not ceded reinsurance; it should have no adjustment.

Line 4, *Reinsurance recoverable on loss payments*, is reversed by an adjustment of –$40,000,000, yielding a zero in the restated column; an offsetting amount will be added to line 6, *Net amount recoverable from reinsurers*, by the mechanics of this exhibit.

Line 5, *Other assets*, generally has no adjustment.

Line 6, *Net amount recoverable from reinsurers*, is the balancing item, determined as total restated liabilities minus total restated assets; it is determined at the end of this exercise.

Line 7, Total Assets, which is the sum of lines 1 through 6, is determined at the end as well.

Liabilities

Line 8, *Losses and loss adjustment expenses*, are increased by the ceded reserves (that is, the contra-liability is removed). The total recoverables on paid and unpaid losses are $160 million; the recoverables on paid losses are $40 million, so the recoverables on unpaid losses are $120 million. The adjustment is $120 million, and the restated amount is $220 million.

Line 9, *Taxes and other expenses*, are generally not affected by reinsurance transactions. For instance, line 6 on page 3, *taxes, licenses, and fees*, is based on direct premium written, not on net premium written. Income taxes, borrowed money, and interest (lines 7, 8, and 9 on page 3) are not related to the accounting presentation for reinsurance.[53] Contingent commissions (in line 3 on page 3) may be affected by reinsurance; this depends on the types of treaties or facultative placements. For this exercise, we assume no adjustment is needed.

Line 10, *Unearned premiums*, is net of $20 million ceded on the balance sheet; the restated amount in column 3 of the Part 8 exhibit is $60 million. This exercise assumes there are no *advance premiums* on line 11.

Line 12, *Dividends declared and unpaid*, generally relates to direct business, not to net business. The adjustment for this line is zero, and the restated amount is $2,000,000.[54]

Line 13, Ceded reinsurance premiums payable, are fully offset in column 2. The ceded losses are a contra-liability, so they become part of the *net recoverable from reinsurers* asset. The ceded reinsurance premiums payable are a liability; they become offsets to the *net recoverable from reinsurers.*

Line 14, *Funds held under reinsurance treaties*, are owned by reinsurers but held by the primary company; they become offsets to the net recoverable from reinsurers. The entry is reversed by an adjustment of –$20,000,000, leaving a zero in the restated column.

Line 15, *Amounts withheld for account of others*, is not related to reinsurance transactions. The adjustment is zero, leaving 1 million in the restated column.

Line 16, *Provision for reinsurance*, like funds held under reinsurance treaties, becomes an offset to the net recoverable from reinsurers. The entry is reversed by an adjustment of –$150,000,000, leaving a zero in the restated column.

Line 17, *Other liabilities*, generally do not relate to reinsurance transactions.[55]

Line 19, *surplus as regards policyholders*, is not affected by the accounting presentation. The adjustment in column 2 is X-ed out, and the restated amount is the reported amount.

Balancing Items

We return to the last two lines in the asset section. The total asset adjustment on line 7 is the same as the total liability adjustment, or $100 million. The total asset adjustment is the sum of the individual asset adjustments. The one asset adjustment already made is –$40,000,000 on line 4, *reinsurance recoverable on loss payments*. Line 6, *net amount recoverable from reinsurers*, has a balancing adjustment of $100,000,000 – (–$40,000,000) = $140,000,000.

The entries in cells A, B, C, and D are

A. Line 6, *net recoverable from reinsurers*, is *$0 + $140,000,000 = $140,000,000.*
B. Line 7, *total assets*, is *$300,000,000 + $100,000,000 = $400,000,000.*
C. Line 18, *total liabilities*, is *$190,000,000 + $100,000,000 = $290,000,000.*
D. Line 19, *surplus as regards policyholders*, the adjustment is always $0 and he restated amount equals the *as reported* amount.

The completed Part 8 exhibit is shown in the following exhibit.

Table 5: Schedule F, Part 8: Completed Exhibit

Schedule F, Part 8:
Restatement of Balance Sheet to Identify Net Credit for Ceded Reinsurance ($000,000's)

ASSETS (page 2, column 3)	As Reported	Adjustment	Restated
1. Cash and invested assets	200		200
2. Agents' balances or uncollected premiums	10	0	10
3. Funds held by or deposited with reinsured companies	30		30
4. Reinsurance recoverable on loss and LAE payments	40	(40)	0
5. Other assets	20		20
6. Net amount recoverable from reinsurers		140	140
7. Total Assets	300	100	400
LIABILITIES (page 3)			
8. Losses and loss adjustment expenses	100	120	220
9. Taxes and other expenses	3		3
10. Unearned premiums	40	20	60
11. Advance premiums	0		0
12. Dividends declared and unpaid	2		2
13. Ceded reinsurance premiums payable	5	(5)	0
14. Funds held by company under reinsurance treaties	20	(20)	0
15. Amounts withheld or retained for account of others	1	—	1
16. Provision for reinsurance	15	(15)	0
17. Other liabilities	4	—	4
18. Total liabilities	190	100	290
19. Surplus as regards policyholders	110	xxx	110
20. Total liabilities plus surplus	300	100	400

Illustration: Provision for Unauthorized Reinsurance

We show illustrations of the provision for reinsurance, unsecured recoverables from an unauthorized reinsurer, payment schedules, and overdue loss recoverables.

ABC reinsures its business under a 100% quota share treaty with XYZ Insurance, which is not licensed or authorized in ABC's domiciliary state. Written premium during the year is $50 million, earned premium is $40 million, and the unearned premium reserve at the end of the year is $20 million. Case reserves are $25 million for losses and $6 million for allocated loss adjustment expenses. IBNR reserves are $10 million for losses and $4 million for ALAE.

This past year, $35 million was paid to claimants and $10 million was paid for allocated loss adjustment expenses. For these claims, only $20 million for losses and $5 million for ALAE has been recovered from XYZ. Because of a management dispute, several claims are overdue or in dispute. Loss recoverables more than 90 days past due are $12 million for losses and $3 million for ALAE, including $5 million for which liability has been denied. ABC expects a full recovery, and the matter is in litigation.

XYZ has not secured any of its obligations to ABC. ABC assumes no reinsurance from other primary writers, and it cedes no business to other reinsurers. We compute the following entries for ABC's balance sheet:

P. 2:	Line 11	Funds held by or deposited with reinsured companies
	Line 14	Reinsurance recoverables on loss and loss adjustment expense payments
P. 3:	Line 1	Losses
	Line 2	Reinsurance payable on paid loss and loss adjustment expenses
	Line 3	Loss adjustment expenses
	Line 9	Unearned premiums
	Line 13	Funds held by company under reinsurance treaties
	Line 16	Provision for reinsurance

ABC is fronting for XYZ, as would be disclosed in Schedule F, Part 3, column 5. XYZ wishes to operate in ABC's domiciliary state without being subject to its insurance regulations. ABC may not have the needed capital to write business on its own. ABC's only risk-based capital requirement is the credit risk charge of 10% on the loss recoverables. It could operate with about 60% of this requirement, since it need not demonstrate financial strength to rating agencies or agents. With $5 million in surplus, it may even pass all the IRIS tests.[56]

Since XYZ is not authorized and provides no securing funds, all the recoverables are included in the provision for reinsurance. No payment schedule is needed, as there is no additional provision for overdue recoverables or amounts in dispute (see below).

All balance sheet items are net of reinsurance, even from unauthorized reinsurers. ABC is 100% reinsured, so it has no net liabilities. The provision for reinsurance applies to recoverables on paid and unpaid losses, unearned premium, and commissions.

- Page 2, line 11, *Funds held by or deposited with reinsured companies*: Since ABC does not assume reinsurance, it has no funds held by ceding companies, and this amount is $0.
- Page 2, line 14, *Reinsurance recoverables, on loss and loss adjustment expense payments*, are $15 million (loss) + $5 million (ALAE) = $20 million.[57]
- Page 3, line 1, *Loss reserves*, are net of reinsurance, even if authorized; this is zero. The same is true for lines 3 (loss adjustment expenses) and 9 (unearned premiums).
- Page 3, line 2, *Reinsurance payable on paid losses*, are liabilities for assumed losses. Since ABC assumes no business from other primary carriers, this entry is zero.
- Page 3, line 13, *Funds held by company under reinsurance treaties*, is zero, since XYZ has provided no security for its obligations to ABC.
- Page 3, line 16, *Provision for reinsurance*, includes all the recoverables:

• the unearned premium reserve	$20 million
• paid losses	15 million
• paid allocated loss adjustment expenses	5 million
• unpaid reported losses	25 million
• unpaid IBNR losses	10 million
• unpaid loss adjustment expenses	10 million
Total	$85 million

Since the provision for reinsurance is limited by the total recoverables, no additional provision is needed for loss recoverables more than 90 days past due or amounts in dispute.

III. Overdue Reinsurance

Stable Insurance writes property coverage for large risks over high self-insured retentions. It has a 100% quota share reinsurance treaty with Secure Reinsurance, which is licensed in Stable's domiciliary state. During the past year, Secure has denied liability for two large claims and has been slow in responding to several other claims. Stable has asked Secure for a letter of credit of $40 million, which Secure provided on November 15. The letter of credit applies to recoverables on paid and unpaid losses and unearned premiums, but not to the two claims for which Secure has denied liability.

Secure's payment history on the past year's claims is shown below. Claims are in thousands of dollars. For instance, the second claim occurred on January 12; Stable paid the claimant $1.6 million on March 3; and it received reimbursement from Secure on July 17.

Stable has filed suit to recover the $12 million relating to the January 4 claim, and the case is in litigation. Stable is discussing the March 10 claim with Secure, but no suit has been filed. Stable also has $8 million of unearned premium reserves ceded to Secure.

Stable's reinsurance treaty with Secure does not specify due dates or dates when claims must be presented for payment. Stable enters a paid loss recoverable when the primary loss is paid. We compute the provision for reinsurance.

Table 6: Reinsurance Payment Schedule
(figures in thousands of dollars)

Amount of Claim	Accident Date	Payment Date (Stable to Claimant)	Payment Date (Secure to Stable)
12,000	Jan 4	Feb 5	(unpaid; Secure denies liability)
1,600	Jan 12	Mar 3	July 17
1,500	Feb 26	July 20	(unpaid)
4,400	Mar 9	June 2	Aug 1
6,500	Mar 10	Apr 14	(unpaid; Secure denies liability)
3,000	Apr 16	May 17	Oct 29
3,500	May 8	June 13	Sept 29
2,500	June 3	July 19	(unpaid)
1,000	June 8	June 28	Dec 12
4,000	Aug 22	Nov 4	(unpaid)
6,000	Aug 9	(unpaid)	(unpaid)
10,000	Sept 2	Oct 21	(unpaid)
11,200	Nov 18	(unpaid)	(unpaid)
3,800	Dec 5	(unpaid)	(unpaid)

Aging Schedule

If an authorized reinsurer is *not* slow-paying, the provision for reinsurance is 20% of the recoverables more than 90 days past due plus 20% of the amounts in dispute, with no offset for funds withheld or letters of credit. If the reinsurer is slow-paying, the provision is 20% of the larger of (i) the total unsecured recoverables and (ii) recoverables more than 90 days past due. To determine whether Secure is slow-paying, we divide the claims into six categories:

A. Reinsurance recoveries received more than 90 days prior to the statement date
B. Reinsurance recoveries received within the 90 days preceding the statement date
C. Paid loss recoverables not more than 90 days overdue
D. Paid loss recoverables more than 90 days overdue and not in dispute
E. Claims in dispute
F. Claims still unpaid by Stable.

The test ratio to determine if a reinsurer is slow-paying is $D \div (B + C + D)$, or (i) paid loss recoverables more than 90 days overdue divided by (ii) total paid loss recoverables plus the amounts received in the past 90 days. The reinsurer is slow-paying if this ratio exceeds 20%.

The payment history above gives

A. \$1.6 million + \$4.4 million + \$3.5 million = \$9.5 million (Jan 12, March 9, & May 8 claims).
B. \$3 million + \$1 million = \$4 million (April 16 and June 8 claims).
C. \$4 million + \$10 million = \$14 million (August 22 and September 2 claims).
D. \$1.5 million + \$2.5 million = \$4 million (February 26 and June 3 claims).
E. \$12 million + \$6.5 million = \$18.5 million (January 4 and March 10 claims).
F. \$6 million + \$11.2 million + \$3.8 million = \$21 million (August 9, Nov 18, & Dec 5 claims).

The ratio D / (B + C + D) = \$4 million ÷ (\$4 million + \$14 million + \$4 million) = 18.2%. Since this ratio is less than 20%, Secure is not slow-paying.

The provision for reinsurance is 20% of the overdue recoverables plus 20% of the amounts in dispute or 20% × \$4 million + 20% × \$18.5 million = \$800,000 + \$3.7 million = \$4.5 million. The letter of credit does not reduce the provision for recoverables more than 90 days past due or amounts in dispute. However, if the expected uncollectible for amounts in dispute exceeds the statutory provision for reinsurance, it replaces the provision for reinsurance.

Even if the amounts in dispute are not liabilities, they are loss contingencies; a possible adverse outcome – so long as it is not remote – should be disclosed in the Notes to the Financial Statements on both statutory and GAAP statements.[58]

IV. Slow-Paying Reinsurers

The Schedule F, Part 4 entries for Standard Reinsurance, which is licensed in the domiciliary state of the reporting company, are shown below.

Table 7: Part 4 and Part 3 Entries

Column 5	Current	\$40 million
Column 6	1-29 days overdue	\$25 million
Column 7	30-90 days overdue	\$50 million
Column 8	91-120 days overdue	\$20 million
Column 9	over 120 days overdue	\$55 million

The Schedule F, Part 3, entries for Standard Reinsurance are as follows:

Column 6, "Reinsurance premium ceded,"	\$210 million
Column 7, "Recoverables on paid losses,"	\$175 million
Column 8, "Recoverables on paid LAE,"	\$15 million
Column 9, "Recoverables on known case loss reserves,"	\$160 million
Column 10, "Recoverables on known case LAE reserves,"	\$20 million
Column 11, "Recoverables on IBNR loss reserves,"	\$100 million
Column 12, "Recoverables on IBNR LAE reserves,"	\$10 million
Column 13, "Unearned premiums,"	\$75 million
Column 14, "Commissions,"	\$5 million

In the past 90 days, Standard has paid $75 million for losses and loss adjustment expenses. Standard has provided a $200 million letter of credit to secure its recoverables. We compute the provision for reinsurance for the Standard Reinsurance.

Since Standard is authorized, we determine if it is slow-paying. The test ratio is the loss recoverables more than 90 days past due to divided by the total loss recoverables plus the amounts received in the past 90 days, after eliminating amounts in dispute. We have

- Total loss recoverables are $190 million (the sum of columns 4 through 9 of Part 4 or column 7 plus column 8 of Part 3).
- Recoverables more than 90 days overdue are $75 million (columns 8 + 9 of Part 4).
- Payments in the past 90 days are $75 million.

The test ratio is $75 million ÷ ($190 million + $75 million) = 28.3% > 20%, so Standard is slow-paying. The total recoverables are $560, which is the sum of

- $190 million of recoverables on paid losses and loss adjustment expenses;
- $180 million of recoverables on unpaid "case basis" losses and LAE;
- $110 million of recoverables on unpaid IBNR losses and LAE;
- $75 million of ceded unearned premium reserves; and
- $5 million of commissions.

Standard's letter of credit secures $200 million, so the unsecured recoverables are $360 million. The provision for reinsurance is the greater of 20% of the unsecured recoverables and 20% of the loss recoverables more than 90 days past due:

max(20% × $360 million, 20% × $75 million) = max($72 million, $15 million) = $72 million.

V. Provision for Reinsurance by Type of Reinsurer

We calculate the provision for reinsurance for the reinsurers listed below (dollars in millions).

Table 8: Provision for Reinsurance

	Reinsurer A	Reinsurer B	Reinsurer C
Authorized status	Unauthorized	Authorized	Authorized
Reinsurance recoverable (all items)	\$100	\$100	\$100
Funds held by reporting company under reinsurance treaties	10	10	10
Letters of credit	75	0	0
Recoverables on paid loss & LAE over 90 days due, not in dispute	20	5	5
Recoverables on paid loss & LAE over 120 days due, not in dispute	10	2	2
Recoverables on paid loss & LAE, total	50	32	32
Amount in dispute included above	25	10	10
Amounts company received from reinsurer in last 90 days of statement year	5	5	0

Reinsurer A is not authorized. The total unsecured recoverables are total recoverables minus collateral (letters of credit + funds withheld) = \$100 million – (\$75 million + \$10 million) = \$15.

Collateral does not apply to overdue recoverables or amounts in dispute. The loss recoverables more than 90 days past due are \$20 million and amounts in dispute are \$25 million. (Amounts in dispute are part of total recoverables but not of overdue recoverables.)

The total provision for reinsurance, using the formula in the Schedule F exhibits, is

total recoverables – collateral
\+ lesser of (a) 20% of overdue recoverables + 20% of amounts in dispute and
(b) the amount of collateral

or \$100 – \$85 + min(20% × \$20 + 20% × \$25, \$85) = \$15 + \$4 + \$5 = \$24.

We may also phrase the capping rule to limit the provision for reinsurance to the total reinsurance recoverables.

Reinsurer B is authorized, so we determine whether it is slow-paying. The test ratio is the loss recoverables more than 90 days past due divided by the total loss recoverables (on claims *not* in dispute) plus the payments received in the past 90 days. The figures are

recoverables more than 90 days past due	= \$5
total recoverables on paid loss and LAE	= \$32
amount in dispute	= \$10
recoverables received in the past 90 days	= \$5

The test ratio is *$5 ÷ ($32 – $10 + $5) = $5 ÷ $27 = 18.5%* < 20%, so the insurer is not slow-paying. The provision for reinsurance is 20% of overdue recoverables + 20% of amounts in dispute, or 20% × $5 + 20% × $10 = $1 + $2 = $3 million.

Reinsurer C has the same recoverables as Reinsurer B, but it paid no claims in the last 90 days of the statement year. This affects the test ratio, not the recoverables. The test ratio is $5 ÷ ($32 – $10 + $0) = $5 ÷ $22 = 22.73% > 20%, so the reinsurer is slow-paying.

The provision for reinsurance the greater of 20% of the unsecured recoverables and 20% of the loss recoverables more than 90 days past due, or

max (20% × ($100 – $10), 20% × $5) = max ($18, $1) = $18 million.

The total provision for reinsurance for all three reinsurers is $24 + $3 + $18 = $45.

Schedule F: Objectives and Evaluation

Schedule F significantly affects policyholders' surplus, and it influences both domestic and international reinsurance practices. This section evaluates the benefits and costs of Schedule F in light of the objectives of state insurance regulation.

The primary objective of state insurance regulation is enunciated in the *Statutory Accounting Principles Statement of Concepts*, "objectives of statutory financial reporting," paragraph 27:

> The primary responsibility of each state insurance department is to regulate insurance companies in accordance with state laws with an emphasis on solvency for the protection of policyholders.... The cornerstone of solvency measurement is financial reporting. The regulator's ability to effectively determine relative financial condition using financial statements is of paramount importance to the protection of policyholders.

We examine the financial reporting in Schedule F in light of this regulatory responsibility.

- What are the objectives of Schedule F, and how well does Schedule F meet them?
- Are there alternative means of meeting these objectives?
- Are these objectives aligned with regulatory responsibilities to the insuring public?
- How might the regulatory responsibilities best be met?

Insurance is highly regulated. Much regulation is beneficial to consumers and performed effectively by the states; some regulation may be unduly burdensome or inefficient. The task for regulators and industry professionals is to strengthen the efficient regulation and to revise or eliminate the wasteful regulation.

Accounting Philosophies

Parts 4 through 7 of Schedule F determine the provision for reinsurance, which serves as a "minimum reserve for uncollectible reinsurance."[59]

On GAAP financial statements, management's best estimate of uncollectible amounts (or "bad debts") are offsets to receivables, such as premiums receivable, agents' balances, collateral loans, and reinsurance recoverables. Statutory accounting uses fixed formulas instead of relying on management disclosure. Non-admitted assets are shown on the balance sheet and flow through the income statement. The non-admitted portions are separately marked in column 3 of the statutory balance sheet, and the year-to-year change in non-admitted assets is a direct charge or credit to policyholders' surplus.[60]

Illustration A: The estimated uncollectible portion of agents' balances is a "bad debt" offset to premiums receivable in GAAP financial statements. On statutory statements, agents' balances more than 90 days past due are not admitted.[61]

Illustration B: On GAAP financial statements, the accrued retrospective premium asset is offset by management's estimate of the uncollectible amount. On statutory statements, 10% of the unsecured accrued retrospective premiums are not admitted.[62]

These illustrations reflect the differing perspectives of GAAP and statutory accounting.

- GAAP financial statements are geared to current and potential investors in going-concern enterprises who seek information about the future profitability of the firm. Investors want unbiased estimates (not conservative estimates or optimistic estimates) which the firm's management is best qualified to provide. The fixed statutory formulas do not always provide unbiased estimates, and they might be misleading in a GAAP context.

- Statutory financial statements are geared to regulators, who are most concerned with the potential insolvency of weak firms – who have an incentive to overstate their assets or understate their liabilities. Regulators would not be fulfilling their responsibilities if they relied solely on the opinions of company management. Instead, they use fixed formulas.

The U.S. capital markets constrain a firm from issuing misleading financial statements.

- Publicly traded firms depend on financial analysts to report on their stock prices, and financial analysts carefully review their financial statements. Misleading entries in past financial statements may cause analysts to distrust management entries in current financial statements and ultimately depress the firm's stock price.[63]
- A firm that misstates its GAAP financial statements is exposed to SEC penalties and shareholder lawsuits.[64]

- General purpose financial statements are audited by independent public accountants, who may be employees of multi-national accounting firms, whose assets and reputations may also be exposed to shareholder lawsuits from misleading statements.

These constraints generally suffice for the financial statements of financially healthy firms. Distressed firms are less likely to feel constrained by the capital markets are more willing to risk potential lawsuits.

Supplement vs Replacement

The statutory provision for reinsurance does not just supplement management's estimate of uncollectible reinsurance recoverables; it *replaces* management's estimate. Because the provision for reinsurance is conservative and its calculation may seem arbitrary, financial statement users sometimes add back the provision for reinsurance to policyholders' surplus as a more realistic value for the firm.

Illustration: Two insurers, A and B, have $100 million provisions for reinsurance. Company A's estimate of the uncollectible recoverable is $10 million, and company B's estimate is $90 million.

GAAP financial statements reflect this difference in the estimated uncollectibles. On statutory financial statements, both companies show the same $100 million provision for reinsurance. Neither company shows any offset to statutory income, and neither company discloses its estimate of uncollectible reinsurance recoverables.

Readers of the statutory financial statements – including state insurance regulators – are interested in the true estimates of uncollectibility. The Schedule F formula sometimes hides the more relevant estimates of uncollectibility.

Changing the provision for reinsurance into a supplement to – instead of a replacement for – management's estimate of uncollectible recoverables is not favored by some regulators. A supplemental format might add to the perception that the GAAP procedure is correct and the statutory procedure is an arbitrary addition. A wide difference between management's estimate and the provision for reinsurance may encourage readers of the Annual Statement to ignore the provision when evaluating company financial stability.

Unintended Consequences

The provision for reinsurance has three intended incentives.

- It encourages ceding companies to prefer authorized over unauthorized reinsurers, particularly if the latter do not collateralize their recoverables.[65]
- It encourages ceding companies to seek collateral from unauthorized reinsurers and slow-paying authorized reinsurers.

- It encourages ceding companies to demand timely payment of recoverables.

These incentives are favorably viewed by many regulators. Some of the effects, such as more timely payment of reinsurance recoverables, are also desired by primary insurers.

The provision for reinsurance has unintended consequences as well. Reinsurance is an effective way for an insurer to manage its underwriting risk. Unauthorized reinsurers sometimes provide better or less expensive reinsurance arrangements than authorized reinsurers do. If the provision for reinsurance hampers a ceding company's reinsurance arrangements, the provision may harm insurance consumers.[66]

Securing reinsurance recoverables with letters of credit may be expensive, particularly if the reinsurer's financial condition in an adverse scenario can not be foreseen. The increased cost may raise the price for the primary policy; this is not in the public interest.[67]

Accuracy

The Schedule F provision for reinsurance is a generic formula, and it may not always be a reasonable proxy for uncollectible reinsurance recoverables. The sharp demarcations (i) between authorized and unauthorized reinsurers and (ii) between slow-paying and non slow-paying reinsurers does not seem justified by complex reinsurance markets.

Illustration: Reinsurers A and B have similar capital structures and mixes of business, both reinsurers settle their claims promptly, and neither one provides any security. Reinsurer A is authorized in the primary company's domiciliary state and Reinsurer B is not. The provision for the recoverables from Reinsurer A is negligible, whereas the provision for the recoverables from Reinsurer B is large.

The trigger for classification as a slow-paying reinsurer is sometimes viewed as an arbitrary dividing line amidst a spectrum of reinsurers. A reinsurer with a test ratio of 21% is slow-paying, whereas a reinsurer with a test ratio of 19% is not. The difference in the provision for reinsurance is hard to justify.

The parameters for the aging schedule and the overdue ratio are not based on statistical or actuarial analysis. The use of 90 days past due instead of 120 days past due, the trigger of a 20% overdue ratio, and the 20% factor for the provision for reinsurance are subjective choices. This contributes to the perception that the provision for reinsurance may not properly measure the potential reinsurance uncollectibility exposure.

Indicators of Uncollectibility

Were the provision for reinsurance merely an dubious proxy for uncollectibility problems, the provision might not concern us. But the complex Schedule F calculations foster a misleading aura of precision while ignoring other indicators of potential uncollectibility. In the long run, Schedule F may hinder regulators from effectively monitoring reinsurance uncollectibility.

Two indicators of potential uncollectibility problems are (i) the extent of the reinsurer's potential liabilities in an adverse scenario and (ii) the capital structure of the reinsurer:

- Reinsurers with exposure to an event through multiple channels are more likely to default.
- Reinsurers with high ratios of capital to insurance in force are less likely to default.

Multi-Channel: A reinsurer may have prudently limited its exposures to windstorm claims from its own reinsureds. But if the reinsurer has accepted retrocessions from other reinsurers, or if it has participated in layers of coverage written by other reinsurers, its total exposure in an adverse scenario may not be manageable.[68]

Capital Structure: Mortgage lenders and bond rating organizations use financial ratios to estimate probabilities of default. Mortgage lenders consider (i) the ratio of equity in the home to the debt on the home and (ii) the ratio of the homeowner's monthly income to the monthly mortgage payment. Mortgage insurers use these ratios (along with other information) to price mortgage guarantee insurance contracts.

Bond rating organizations use several quantitative and qualitative factors to assign credit ratings. The interest of creditors in commercial bond ratings parallels the interest of insurance regulators in estimates of reinsurance recoverables. Creditors (bondholders) adjust the bond coupon rate to offset default risks, just as insurers hold capital to guard against potential reinsurance uncollectibility problems.

Although not perfect, bond ratings correlate reasonably well with empirical defaults. Arbitrage opportunities in efficient capital markets force this outcome. To the extent that bond ratings deviate from the expected probabilities of default, market credit spreads widen or narrow.[69]

The aging schedule of the reinsurer is simple to compute, but it may be less relevant to future uncollectibility problems than the capital structure of the reinsurer and its potential exposures in an adverse scenario. The NAIC, along with reinsurers and other industry professionals, should explore better predictors of uncollectibility problems.[70]

The Reach of Regulation

Experienced regulators are aware of these issues. The problem is not the accuracy of the formula but the reach of regulation.

To estimate reinsurance collectibility, regulators would prefer to examine the reinsurers, not the reinsureds. But reinsurance is a global market, and most large reinsurers are domiciled abroad. U.S. regulators lack authority to examine the capital structures of these reinsurers or to estimate their potential liabilities after a major catastrophe.

U.S. regulators can examine the operations of reinsurers licensed in their states, and they do this when a reinsurer seems financially troubled. But aggressive regulation of domestic reinsurers may hamper the reinsurers' ability to compete with their European peers.[71]

Instead, state regulators regulate the reinsureds, not the reinsurers. A provision for unsecured recoverables from unauthorized reinsurers encourages alien companies to become authorized or at least to secure their obligations. This is a round-about means of regulation, but – we are told – it may be the best that state regulators can do.

Securities regulation suggests that insurance regulators can do better. Firms open their books to rating agencies, such as Moody's or Standard & Poor's, because they benefit from the ratings. Many unauthorized reinsurers may do the same, if the insurance examination is efficient and non-intrusive, limited to verifying financial strength. Regulars would do well to seek the optimal methods to ensure financially sound reinsurance arrangements.[72]

Prospective vs Retrospective Risks

The major drawback of the provision for reinsurance is its misplaced focus. The most serious and controllable solvency risk for insurance companies is inadequate reinsurance. This risk is a prospective one; it is the risk that the primary company has not adequately hedged its exposures to natural catastrophes or unforeseen perils.[73]

Adequate reinsurance arrangements are the bedrock of insurance risk management. Many insurance company failures can be traced to poor handling of reinsurance, such as excessive retentions, inadequate limits, and failure to cover significant exposures. These are pre-loss issues; once the loss has occurred, regulators can do little to salvage a distressed company.

The NAIC Annual Statement blank and the NAIC risk-based capital formula do not measure the risks of poor reinsurance arrangements.[74] Techniques for evaluating insurance company risk exposures are used in private insurance and brokerage markets, though they are not always easy to apply. For example, solvency supervision might emphasize over-concentration of property exposures (a) in catastrophe prone areas, such as the Gulf Coast states of Florida, Taxes, and Louisiana, (b) along known earthquake fault lines, or (c) within major urban areas. Excessive retentions and insufficient limits in excess-of-loss reinsurance treaties may reflect the ceding company's acceptance of undue risk. Overuse or underuse of facultative reinsurance placements may reflect underwriting inexperience, timidity, or overconfidence.

Once the loss has occurred and the Annual Statement has been filed, the damage has been done. Most losses from a September hurricane will have been settled by the end of the year. If the reinsurance protection was not adequate, the primary company may already be impaired; further monitoring of reinsurance recoverables has little benefit.

The zealous quantification of aging schedules and overdue amounts may distract regulators from the risks of improper reinsurance arrangements. The Schedule F exhibits emphasize recoverables, when the risk lies in reinsurance arrangements. Regulators would be better served by exhibits showing the terms of reinsurance treaties and facultative placements. Such exhibits require considerable underwriting skill to interpret, but they contain the information needed to ensure sound reinsurance arrangements.

Some companies may argue that a listing of reinsurance treaties and facultative placements without information about concentrations of risk by line of business and by geographic region is not sufficient to judge the adequacy of the reinsurance program. This argument has some truth, but it misses the role of regulation. Accounting entries by themselves are rarely sufficient to monitor insurance risks; their purpose is to highlight areas for further investigation.

- A primary company with low policy limits in its reinsurance treaties or with restrictive policy provisions may have exposures that reinsurers are reluctant to accept.
- A primary company with reinsurance ceded predominantly to off-shore reinsurers or weakly capitalized reinsurers may have been unable to find domestic companies or financially stronger companies to accept the exposures.
- A primary company with reinsurance cessions lower than the industry average for the size of its direct business may be retaining too much of its exposure.
- A primary company with its reinsurance concentrated in facultative placements instead of general treaties may have inadvertent gaps in its coverage.

Financially distressed companies sometimes have their reinsurance treaties canceled, and reinsurers may not provide coverage at affordable prices. Reinsurance programs of financially distressed companies may exhibit several of the characteristics listed above.

Some industry personnel dislike public filings that reveal corporate underwriting strategies, treaty pricing, and reinsurance contract provisions. In particular, distressed companies have little incentive to publicize their distress. This is a valid concern. Public filings should include only aggregate data of limited use to competitors. More revealing information is suitable only for non-public financial examinations.[75]

This type of reinsurance schedule is appropriate for statutory statements, not for GAAP statements.

1. Reinsurance is peculiar to the insurance industry. GAAP statements are geared to general accounting, not to industry specific schedules.
2. A listing of reinsurance treaties and facultative placements requires considerable expertise to understand. It is valuable to insurance regulators and their staffs; it is of limited value to security analysts. A security analyst with expertise in reinsurance contract terms can turn to the statutory blank.
3. The purchase of reinsurance is a trade-off between risk and return. Reinsurance reduces solvency risk, but it also reduces expected return. Equity investors are not necessarily displeased by companies pursuing aggressive and potentially risky strategies that generate high expected returns at the expense of higher default risk. Efficient diversification is done

by the equity investor, not by company management. Investors often seek firms that pursue their strengths, not firms that diversify away from their core competencies. In contrast, policyholders are more concerned with insolvency risk than with expected returns. Insurance regulators serve the interests of policyholders, not the interests of investors.

Conclusion

Reinsurance is the primary company tool for managing insurance risk, and reinsurance regulation is the core of solvency regulation. The importance that state regulators place on reinsurance is reflected in the comprehensive exhibits of Schedule F.

Yet Schedule F is not perfect, and its exhibits are not necessarily the most effective means of reinsurance regulation. Better tools for solvency regulation are already available in actuarial models and in the underwriting practices of many companies. The insuring public would gain from joint industry-regulatory efforts to enhance the statutory reinsurance schedules.

Appendix A: Federal Income Taxes

The provision for reinsurance is a *statutory* liability. It appears on the statutory balance sheet, but the change in the provision for reinsurance does not flow through the income statement. The change is a direct charge or credit to surplus on page 4, line 26. An increase in the provision for reinsurance since the previous year decreases surplus, and a decrease in the provision for reinsurance increases surplus.

A change in the provision for reinsurance does not affect taxable income, just as it does not affect statutory income or GAAP income. Thus, a change in the provision for reinsurance causes a timing (temporary) difference between taxable income and the income implied by the statutory balance sheet.[76]

Increases in non-admitted assets increase the statutory deferred tax asset. The illustrations below show the difference between the provision for reinsurance and non-admitted assets.

We illustrate with examples. In all scenarios,

1. *Revenue Offset:* Suppose an insurer writes a policy on July 1, 20XX, for a premium of \$1,000 with a \$200 commission. Statutory income for 20XX is earned premium minus commission expense, or \$500 – \$200 = \$300. Taxable income adds revenue offset

   or 20% × the change in unearned premium reserve = 20% × \$500 = \$100,

   so taxable income = \$400. The deferred tax asset is the tax rate times the difference between taxable income and the income implied by the statutory balance sheet, or 35% × (\$400 – \$300) = \$35.

2. *Agents' Balances:* Suppose the net premium or \$1,000 – \$200 = \$800 was due on July 1, 20XX, but the agent remitted only \$650. By year end, the remaining \$150 is more than 90 days past due and is not admitted on the statutory balance sheet. The taxable income for 20XX remains \$400. The income implied by the statutory balance sheet is:

   Cash received = \$650
   – Unearned premium reserve = \$500
   = Income implied by statutory balance sheet = \$650 – \$500 = \$150.

   The difference between taxable income and income implied by the statutory balance sheet is \$400 – \$150 = \$250. The deferred tax asset is 35% × \$250 = \$87.50.

3. *Provision for Reinsurance:* Suppose the policy is reinsured under 60% quota share treaty. A loss of \$100 occurs on July 15, which the primary company pays on August 1. It bills the reinsurer on that date, but the recoverable is not paid until the next year. By year end, the recoverable is more than 90 days past due. The provision for reinsurance is 20% × \$60 = \$12. The taxable income from this loss is –\$100 + \$60 = –\$40. The income implied by the statutory balance sheet is:

   – Cash paid (loss paid) = \$100
   + Reinsurance recovered (asset) = \$60
   – Provision for reinsurance (statutory liability) = \$12
   = Income implied by the statutory balance sheet = –\$100 + \$60 – \$12 = –\$52.

Normal accounting practice would show a deferred tax asset equal to the tax rate times the difference between taxable income and the income implied by the statutory balance sheet, or –\$40 – (–\$52) = \$12. But this is *not* the procedure used by statutory accounting. SSAP No. 10, "Income Taxes," section 6B, excludes the provision for reinsurance (the Schedule F penalty) from deferred tax assets and liabilities:

> *Temporary differences include unrealized gains and losses and nonadmitted assets but do not include asset valuation reserve (AVR), interest maintenance reserve (IMR), Schedule F penalties . . .*

The (apparent) rationale is that the provision for reinsurance – like the asset valuation reserve and the interest maintenance reserve – is a policyholder safeguard, not a timing difference. It may be necessary for companies in financial distress, but it is unduly conservative for most companies. The deferred tax asset would dilute the conservatism.

Similarly, the asset valuation reserve and the interest maintenance reserve do not reflect a different statutory perspective on the value of financial assets. Rather, they safeguard the company's ability to pay claims even in adverse financial scenarios. For all three items, a deferred tax asset would reduce the conservatism of the statutory balance sheet.[77]

Appendix B: Risk-Based Capital Requirements

The NAIC's risk-based capital requirements are based on the risks faced by the insurer. To guard against uncollectibility of reinsurance recoverables, the RBC formula includes a credit risk charge equal to 10% of reinsurance recoverables "subject to RBC." Reinsurance recoverables subject to RBC equal the total loss recoverables minus the associated provision for reinsurance *before adjustment for security held.*

Reinsurance recoverables increase surplus; the provision for reinsurance reduces surplus. If surplus has been reduced by the provision for reinsurance, no further capital is needed.

- A $1 million loss recoverable from a quick-paying authorized reinsurer that is *not* 90 days or more past due offsets the direct loss reserve and increases surplus. The RBC formula imposes a credit risk charge of $100,000 to guard against potential uncollectibility. This risk charge is *not* the expected uncollectible amount; it is the potential uncollectible amount in an adverse scenario.
- A $1 million unsecured loss recoverable from an unauthorized reinsurer is offset by a $1 million provision for reinsurance. The net amount does not increase surplus, and no credit risk charge is needed.

Security held for reinsurance recoverables reduces the provision for reinsurance but it does not reduce the RBC charge. A fully secured $1 million loss recoverable from an unauthorized reinsurer reduces the net loss reserve and increases surplus. Even if the primary company holds $1 million as security from the reinsurer, it must hold an additional $100,000 of capital for the RBC charge.[78]

The covariance adjustment in the risk-based capital formula reduces the capital charge for reinsurance recoverables. The risk charges are grouped into six categories, R_0 through R_5, and the covariance adjustment is a function of these risk categories. Half of the credit risk charge for reinsurance recoverables is included in the R_3 (credit risk) category, and the other half is included in the R_4 (reserving risk) category.

The covariance adjustment reduces the risk charges in inverse proportion to the size of the risk category that includes the charge. Alternatively stated, the post-covariance marginal effect of the risk charges is in direct proportion to the size of the risk category.

Illustration: If the R_4 charge is $100 million and the R_3 charge is $20 million, each dollar of R_4 charge has five times the effect on overall capital requirements as each dollar of R_3 charge. If $1 is added to the R_4 risk charge, the effect on overall capital requirements is 5 times the effect of adding $1 to the R_3 risk charge.[79]

For most companies, the reserving risk charge (R_4) is large, while the credit risk charge (R_3) is small. The average reduction is about 90 to 95% for the credit risk charge and about 30% for the reserving risk charge, giving an overall reduction to the charge for reinsurance recoverables of about 60%. The marginal risk-based capital charge for reinsurance recoverables is about 10% × (1 – 60%) = 4% of the recoverables subject to RBC.

References

Daykin, Pentikäinen, and Pesonen [1994]. (Daykin, Chris D., Teivo Pentikäinen, and M. Pesonen, *Practical Risk Theory for Actuaries*, First Edition (Chapman and Hall, 1994).)

Feldblum, Sholom, "Completing and Using Schedule P," Fourth Edition, *CAS Forum*, Fall 2002, pages 353-590.

Feldblum, Sholom, "Direct Charges and Credits to Surplus" (CAS Part 7 Examination Study Note, 1995).

Feldblum, Sholom, "The Pricing of Commutations," *CAS Forum* [2003]

Feldblum, Sholom, "Risk-Based Capital Requirements" *Proceedings of the Casualty Actuarial Society*, Volume 83 (1996).

Feldblum, Sholom, and Thandi, Neeza, "Modeling the Equity Flows" CAS Forum [2003]

Greene, Howard W., "Retrospectively-Rated Workers Compensation Policies and Bankrupt Insureds," *Journal of Risk and Insurance*, Volume 7, No. 1 (September 1988), pages 52-58.

Schirmacher, Doris, and Feldblum, Sholom, "Reinsurance Pricing" *CAS Forum* [2003]

Thandi, Neeza, and Feldblum, Sholom, "Federal Income Taxes and the Cost of Holding Capital," *CAS Forum* [2003]

[1] A *domestic* company is one domiciled in the state under consideration. A U.S. company domiciled in another state is a *foreign* company. A company domiciled outside the U.S. is an *alien* company.

[2] SSAP No. 62, "Reinsurance," paragraph 28, says with regard to retroactive reinsurance agreements:

a. *The ceding entity shall record, without recognition of the retroactive reinsurance, loss and loss expense reserves on a gross basis on the balance sheet and in all schedules and exhibits.*
b. *The assuming entity shall exclude the retroactive reinsurance from loss and loss expense reserves and from all schedules and exhibits.*

Retroactive reinsurance does not reduce the ceding company's *Annual Statement* loss reserves. It affects statutory income just as prospective reinsurance does, except that it is booked as *other income* on the statement of earnings. It has a full effect on policyholders' surplus, though not on the unassigned portion of surplus. It fully affects GAAP income, GAAP equity, and taxable income.

Coding reinsurance as retroactive instead of prospective slightly reduces the risk-based capital (RBC) ratio. The RBC ratio, which determines the RBC action level, is RBC adjusted surplus divided by RBC requirements.

- RBC adjusted surplus includes special surplus funds just as it includes unassigned surplus funds. Adjusted surplus does not depend on whether the reinsurance is prospective or retroactive.
- The RBC reserving risk charge is greater than the charge for reinsurance recoverables, particularly after the

covariance adjustment. Prospective reinsurance reduces RBC requirements, decreasing the denominator of the RBC ratio and increasing the ratio itself. Retroactive reinsurance does not have this effect. See Feldblum [1996: RBC], Feldblum [2003: CommPrg], and Schirmacher and Feldblum [2003: ReinsPrg].

[3] Schedule F, Part 3, shows reinsurance recoverables subdivided between loss and LAE and between recoverables on case reserves and those on IBNR reserves. The ceding company estimates IBNR recoverables by reinsurer to calculate the provision for reinsurance. It estimates the recoverable separately for losses and for loss adjustment expenses, so that it may offset its unpaid losses and LAE on lines 1 and 3 of page 3. The assuming company has no need for these separate estimates.

[4] SSAP No. 62, "Reinsurance," ¶ 50, explains: *Commissions payable on reinsurance assumed business shall be included as an offset to Agents' Balances or Uncollected Premiums. Commissions receivable on reinsurance ceded business shall be included as an offset to Ceded Reinsurance Balances Payable.*

[5] In more exact accounting terms, the reinsurance recoverables are always admitted, since they reduce the statement reserves of the ceding company, whether on the balance sheet (page 3, line 1), the Underwriting and Investment Exhibit, or Schedule P, whether or not the reinsurer is authorized or slow-paying. SSAP No. 62, paragraph 19, says: "Reinsurance recoverable on loss payments is an admitted asset. . . . Unauthorized reinsurance is included in this asset and reflected separately as a liability to the extent required." Unsecured recoverables from unauthorized reinsurers, 20% of unsecured recoverables from slow-paying authorized reinsurers, 20% of loss recoverables more than 90 days overdue from all reinsurers, and 20% of amounts in dispute from unauthorized reinsurers and from non-slow paying authorized reinsurers must be reported as a statutory provision for reinsurance (page 3, line 15).

[6] The NAIC accounting staff, who assisted me on several topics, did not know the purpose of this exhibit.

[7] The *Annual Statement* Instructions say: "Each individual contract, except those listed below, which provides for the cession of 75% or more of direct premiums written under such cession during the year, should be identified by inserting a 2 in this column. The reinsurance transactions so identified shall include both treaty and facultative cessions of direct business written by the company."

[8] The Annual Statement *Instructions* say *Exclude: Reinsurance transactions involving any group, association, pool, or organization of insurers which engage in joint underwriting activities and which are subject to examination by any state regulatory authority or which operate pursuant to any state or federal statutory or administrative authorization.*

[9] On the costs of holding capital, see Feldblum [2000: DCCS], Feldblum and Thandi [2003], "Modeling the Equity Flows," and Thandi and Feldblum [2003], "Federal Income Taxes and the Cost of Holding Capital."

[10] Actual tax regulations for captive insurance companies are more complex than described here.

[11] See SSAP No. 62, paragraph 26: "Reinsurance recoverables on unpaid case-basis and incurred but not reported losses and loss adjustment expenses shall be netted against the liability for gross losses and loss adjustment expenses."

[12] Schedule P shows both loss and loss adjustment expense liabilities for ceded business. However, Schedule P uses a different allocation of reinsurance to direct, assumed, and ceded categories than Schedule F does, so the figures may differ between the schedules. See footnote 40 below, Feldblum [2002: SchP], and the letter from Martin F. Carus of the New York Insurance Department to Robert Solitro of October 28, 1991 regarding Part 1A of Schedule F (*Proceedings of the NAIC*, 1992, Volume IA, page 351).

[13] When Schedule F was revised in 1993, a simplified estimation procedure was permitted for the unearned premium reserves in Part 3 (NAIC *Proceedings*, 1991, Vol 1A, p 368). The current *Annual Statement* Instructions do not mention this approximation. We explain the approximation below, without judging whether it is still allowed.

For unauthorized reinsurers, the actual unearned premium must be calculated, since this contra-liability is offset by a provision for reinsurance unless the funds are secured. When there are many authorized reinsurers involved, the unearned premium reserves associated with each company may be estimated as follows:

A. Calculate the total unearned premium reserve (UEPR) for all reinsurers combined.
B. Calculate the unearned premiums for each unauthorized reinsurer; the sum is the aggregate UEPR for unauthorized reinsurers. *A* minus B is the unearned premiums for authorized reinsurers.
C. Spread the aggregate unearned premium reserve for authorized reinsurers to reinsurance company in proportion to premium in force.

If $UEPR_{com}$ is the unearned premium reserve for a given authorized reinsurer,
$UEPR_{tot}$ is the aggregate unearned premium reserve for all authorized reinsurers,
PIF_{com} is the premium in force for this authorized reinsurer, and
PIF_{tot} is the aggregate premium in force for all authorized reinsurers,

then $UEPR_{com}$ is estimated as $UEPR_{com} = UEPR_{tot} \times PIF_{com} \div PIF_{tot}$.

[14] The total reinsurance recoverables for contingent commissions, whether positive or negative, should agree with Note 22 to the Financial Statements, section C.2: "Report the additional or return commissions, predicated on loss experience or on any other form of profit sharing arrangements in this annual statement as a result of existing contractual arrangements."

[15] The provisional commission rate is the commission rate before application of loss sensitive contract features, such as sliding scale commissions and retrospective rating; see the second illustration below.

[16] The *Instructions* say: *Disclosure of the five largest provisional commission rates should exclude mandatory pools and joint underwriting associations.*

[17] Martin Carus was a member of the NAIC Reinsurance Study Group that developed the current Schedule F; the quotation is from a letter of January 25, 1994, which also contains the two illustrations used here.

[18] The disclosure in Note 22 to the Financial Statements, section C.1 quantifies the total surplus relief provided by reinsurance commissions. SSAP No. 62, "Reinsurance," paragraph 70(a), "Reinsurance Assumed and Ceded" explains that *the financial statements shall disclose the maximum amount of return commission which would have been due reinsurers if all reinsurance were canceled with the return of the unearned premium reserve.* In general, this surplus relief is proper accounting, though an inordinate amount of surplus relief may arouse regulatory suspicion of financial weakness. The purpose of the commission footnote in Part 3 of Schedule F is to identify possibly *improper* reinsurance commission arrangements.

[19] Some insurance risk must be transferred to pass the risk transfer tests in SFAS 113 and SSAP No. 62.

[20] For simplicity, we use 30 day months; in practice, an exact day count should be used.

[21] Although small claims remain current as long as the total for the reinsurer is below $50,000, no claim may remain current more than one year. The *Annual Statement* Instructions say: "Any such amounts so reported [i.e., as currently due] in a prior year's annual statement and is still outstanding as of the date of this annual statement must be reported under Column 9 and included in Column 10. Any item listed as a loss recoverable

in the 20XX Annual Statement – whether as currently due or as overdue – and still unpaid by the reinsurance company at December 31, 20XX+1 must be reported as overdue more than 120 days (i.e., Column 9 of Part 4) in the 20XX+1 Annual Statement."

[22] An earlier draft of this rule set the due date as *30 days after* the specified presentation date. The industry advisory committee to the NAIC reinsurance study group recommended that the cutoff date for the statutory provision be increased from 90 days to 120 days. The NAIC study group kept the cutoff date at 90 days, but it provided columns to monitor the difference between a 90 day and a 120 day cutoff date (column 13).

[23] SSAP No. 62, "Reinsurance," paragraph 52, makes this explicit: "The . . . Provision for Overdue Reinsurance provides for a minimum reserve for uncollectible reinsurance with an additional reserve required if an entity's experience indicates that a higher amount should be provided."

[24] The *Annual Statement* Instructions say that "if the company's experience indicates that a higher amount should be provided, such higher amount should be entered."

[25] SSAP No. 62, "Reinsurance," paragraph 52, says: "The minimum reserve Provision for Reinsurance is recorded as a liability and the change between years is recorded as a gain or loss directly to unassigned funds (surplus)." Statutory accounting is more complex if the company holds an additional reserve. The SSAP says that "any reserve over the minimum amount shall be recorded on the statement of income by reversing the accounts previously utilized to establish the reinsurance recoverable." The provision for reinsurance remains a direct charge or credit to surplus, but the excess of the estimated uncollectible amount over the statutory provision for reinsurance flows through the income statement. For example, if the statutory provision for reinsurance is $10 million but the reporting company holds a $15 million liability, the excess $5 million flows through the income statement as a part of underwriting income, since it "reverses the accounts previously utilized to establish the reinsurance recoverable."

Glenda Channel, Finance Reporting Manager of the NAIC, has pointed out to me that the instructions for Schedule F - Part 7 do not follow the SSAP. The *excess portion* flows through the income statement, but the entire estimated uncollectible amount replaces the provision for reinsurance on line 15 of page 3. The change in the amount recorded on line 15 of page 3 from the previous year to the current year is a direct charge or credit to surplus. The excess portion is counted twice: once as an income statement flow and once as a direct charge. Ms. Channel notes that "the *Annual Statement* Instructions (or cross references) might need to be modified" (email, 26 November 2001). In the meantime, companies should avoid this double charge to surplus by choosing whether to treat the excess amount as a charge to income or a direct charge to surplus.

[26] The provision for reinsurance slightly reduces the risk-based capital requirements as well, since only reinsurance recoverables that are not offset by the provision for reinsurance are "subject to RBC." This effect is minor; it does not change the statement in the text. See the appendix for a complete discussion of the risk-based capital effects of the provision for reinsurance.

[27] Misrepresentations by management are also constrained by the potential lawsuits they might cause.

[28] Written notification by the reinsurer that it disputed the claim is sufficient to classify the recoverable as an amount in dispute; actual litigation or arbitration proceedings are not necessary.

[29] For an example of potential problems with letters of credit, see Greene [1988].

[30] By limiting the provision for reinsurance for overdue amounts to the amount of security, the total provision for reinsurance is limited to the total recoverables.

[31] Column 17 says: Total provision for unauthorized reinsurance: smaller of column 5 (= total recoverables) or columns 12 + 15 + 16 (= the sum of the three provisions for reinsurance). The limitation in column 17 makes the limitations in columns 15 and 16 redundant. Schedule F grew incrementally, with different provisions being added one by one. Sometimes the final calculation makes an intermediate step unnecessary.

[32] The *Annual Statement* has no term for slow-paying authorized reinsurers. Robert Graham noted to me that the industry advisory committee to the NAIC reinsurance study group used the term "triggering company" for a company that exceeds the 20% test and *triggers* an additional statutory provision for reinsurance.

[33] The Part 6 subtitle is "provision for overdue authorized reinsurance," and the Part 7 subtitle is "provision for overdue reinsurance." The column captions show that slow-paying reinsurers are in Part 7 and non slow-paying reinsurers are in Part 6.

[34] The recoverables more than 90 days past due in column 4 of Part 6 equal the sum of the entries in Part 4, column 8 ["91 to 120 days overdue"] and Part 4, column 9 ["Over 120 days overdue"] minus the amounts in dispute [see footnote (a) in Part 6]. The total recoverables in column 5 of Part 6 equal the sum of the entries in Part 3, column 7 ["Recoverables on paid losses"] and Part 3, column 8 ["Recoverables on paid LAE"] minus the amounts in dispute [see footnote (b) in Part 6].

[35] The column entries in Part 6 of Schedule F are as follows. For reinsurer that are *not* slow-paying, the amounts in column 4 are carried to column 8. The amounts in dispute that are not included in the column 4 total recoverables are shown in column 9. Twenty percent of the column 9 amount is reported in column 10. To this figure is added 20% of the amount in column 8, and the sum is reported in column 11. This penalty is carried to footnote (3) on Part 7.

[36] It is not clear if the regulators who designed Schedule F intended any provision for amounts in dispute that are not yet 90 days past due. The comments in the text follow the wording of the Schedule F exhibits.

[37] We offer no rationale for this; it may be an oversight in the format of Schedule F.

[38] Before 2001, "agents' balances," on line 10 of page 2, were net of ceded premium balances due to reinsurers. The 2001 codification changes separated the asset for direct agents' balances from the liability for reinsurance balances payable, which are now shown separately on line 11 of page 3.

[39] SFAS 113, paragraph 3, citing APB Opinion No. 10, Omnibus Opinion –1966, paragraph 7 states, "It is a general principle of accounting that the offsetting of assets and liabilities in the balance sheet is improper except where a right of setoff exists." The criteria for offsetting are specified in FASB Interpretation No. 39, "Offsetting of Amounts Related to Certain Contracts." SFAS 113 notes that "those criteria include the requirement that the reporting party have the legal right to set off the amount owed to one party with an amount receivable from that same party." Paragraph 14, explains that "reinsurance contracts in which a ceding enterprise is not relieved of the legal liability to its policyholder do not result in removal of the related assets and liabilities from the ceding enterprise's financial statements. Ceding enterprises shall report estimated reinsurance receivables arising from those contracts separately as assets. Amounts paid to the reinsurer relating to the unexpired portion of reinsured contracts (prepaid reinsurance premiums) also shall be reported separately as assets."

[40] NAIC Statement of Statutory Accounting Principles 62, Property & Casualty Reinsurance, section on "Accounting for Prospective Reinsurance Agreements," paragraph 26 says: "Reinsurance recoverables on paid losses shall be reported as an asset, reinsurance recoverables on loss and loss adjustment expense payments, in the balance sheet. Reinsurance recoverables on unpaid case-basis and incurred but not reported losses and loss adjustment expenses shall be netted against the liability for gross losses and loss adjustment

expenses." Since the insurer's obligation to the claimant is independent of the reinsurance transaction, the GAAP format seems proper. The justification for retaining the net accounting procedures was to avoid a major change in statutory balance sheets. Schedule F, Part 8, shows the statutory balance sheet as it would look if offsetting were not permitted.

[41] This exhibit changes the format of the balance sheet, not its content. Contra-liabilities become assets, and the statutory provision for reinsurance becomes a contra-asset.

[42] The Underwriting and Investment Exhibit, Part 2B, shows the following entries:

- Column 1, premiums written: $10,000
- Column 5, ceded premium: $4,000
- Column 6, net premium written: $6,000

The net unearned premium reserve is carried to page 7, Part 1A, "Recapitulation of all Premiums," columns 1 and 5, and to page 3, line 9, "unearned premiums."

[43] The Underwriting and Investment Exhibit, Part 2A, "Unpaid losses and loss adjustment expenses," (page 10) shows the direct loss reserve of $5,000 in column 1, the ceded loss reserve of $2,000 in column 3, and the net loss reserve of $3,000 in column 4. The net loss reserve is carried to Part 2, "Losses paid and incurred," (page 9) column 5, "net losses unpaid current year," and to the balance sheet on page 3, line 1. The premium and loss figures also disclosed in Schedule P, Part 1: column 2 shows $10,000 of direct earned premium; column 3 shows $4,000 of ceded earned premium; column 4 shows $6,000 of net earned premium; column 13 shows $5,000 of direct case basis losses unpaid; column 14 shows $2,000 of ceded case basis losses unpaid; and column 24 shows $3000 of net losses unpaid.

[44] These figures are shown in the Underwriting and Investment Exhibit, Part 2A, page 10, columns 1 and 3. Part 2 of the "Underwriting and Investment Exhibit," shows a direct loss paid of $5,000 in column 1, "reinsurance recovered" of $2,000 in column 3, and net losses paid of $3,000 in column 4.

[45] I am indebted to James Anastasio, Vice President and Treasurer at the American Re-Insurance Company, for guidance on the statutory accounting treatment.

[46] An alternative method of accounting for funds withheld is to deduct an equal amount of cash in Part 8. The result is the same surplus but lower cash and a higher net credit for reinsurance. Either method is acceptable.

[47] Column 3 of page 2 shows the net admitted assets, or the total assets minus the non-admitted assets.

[48] Recoverables on paid losses are assets; recoverables on unpaid losses are contra-liabilities.

[49] The NAIC *Annual Statement* Instructions say that "these liabilities become offsets to the overall asset "'net amount recoverable from reinsurers.'" In other words, the full amount in column 1 is reversed in column 2. Since line 6, *net amount recoverable from reinsurers*, is a balancing item, they are offsets to line 6.

[50] (A) An employer pays FICA taxes to the U.S. Treasury on the earnings of its employees. The FICA taxes are deposited within 15 days of the end of the month in a commercial bank or other depository institution to cover the payroll of that month. At the end of December, the reporting company holds the cash, but it owes the money to the Treasury. The balance sheet liability is for December FICA taxes. (B) When an insurer writes a claims check, the case reserve is eliminated. The corresponding cash assets are not reduced until the check is cashed. The balance sheet liability is for checks written but not yet cashed.

[51] The pre-2001 line label for agents' balances on the statutory balance sheet was "Premiums and agents' balances in course of collection (after deducting ceded reinsurance balances payable of ______)."

[52] Statutory issue paper No. 75, "Property and Casualty Reinsurance," paragraph 5 says that "ceded reinsurance premiums payable (net of ceding commission) shall be classified as a liability." The current line 10.1 on page 2 reads "Premiums and agents' balances in course of collection," and line 12 on page 3 reads "ceded reinsurance balances payable (net of ceding commissions)."

[53] One might suppose that federal income taxes depend on reinsurance transactions, since if the reinsurer indemnifies an incurred loss, the tax liability should increase. This is not relevant to the Part 8 exhibit. When we restate the accounting *presentation* of the statutory balance sheet, the tax liability does not change.

[54] In some instances, particularly on quota share treaties, the reinsurer may pay a part of the policyholders' dividend. In other treaties, there is no policyholders' dividend liability incurred by the reinsurer. Rather, the expected policyholder dividend may be included in the ceding commission, it may be paid to the primary company (not to the policyholders), or it may be included in a sliding scale commission arrangement. For simplicity, this illustration assumes that there is no ceded portion of the policyholders' dividend liability.

[55] This entry is comprised of the following items from page 3:

- Remittances and items not allocated;
- Net adjustments to assets and liabilities due to foreign exchange rates;
- Drafts outstanding;
- Payable to parent, subsidiaries, or affiliates;
- Payable for securities;
- Liability for amounts held under uninsured accident and health plans;
- Capital notes and interest thereon; and
- Aggregate write-ins for liabilities. The aggregate write-ins may include a contra-liability for recoverables on retroactive reinsurance; see SSAP No. 62, "Reinsurance," paragraph 28.

[56] The $5 million is needed for IRIS test 1A, the direct premium to surplus leverage ratio.

[57] XYZ's unauthorized status does not affect this asset. Insurance personnel sometimes speak of unauthorized reinsurance recoverables as non-admitted assets, but there is no "non-admitted" adjustment to this asset. Even XYZ's denial of liability does not affect this asset, as long as ABC expects to receive the money. The asset is offset by the provision for reinsurance, not by a non-admitted entry. In GAAP statements, which do not include a provision for reinsurance, ABC would disclose the disputed amount in a footnote.

[58] See SSAP No. 5, "Liabilities, Contingencies and Impairments of Assets," paragraph 14 (copied from SFAS 5): *If a loss contingency or impairment of an asset is not recorded . . . or if exposure to a loss exists in excess of the amount accrued pursuant to the provisions described above, disclosure of the loss contingency or impairment of the asset shall be made in the financial statements when there is at least a reasonable possibility that a loss or an additional loss may have been incurred. The disclosure shall indicate the nature of the contingency and shall give an estimate of the possible loss or range of loss or state that such an estimate cannot be made.*

[59] See the NAIC *Practices and Procedures Manual* (SSAP No. 62, "Reinsurance," paragraph 52): "Schedule F—Provision for Overdue Reinsurance: provide for a minimum reserve for uncollectible reinsurance with an additional reserve required if an entity's experience indicates that a higher amount should be provided. The minimum reserve Provision for Reinsurance is recorded as a liability and the change between years is recorded as a gain or loss directly to unassigned funds (surplus). Any reserve over the minimum amount shall be recorded on the statement of income by reversing the accounts previously utilized to establish the reinsurance recoverable."

[60] They are shown on page 4, line 25, of the *Annual Statement* (carried from line 6, column 3, of Exhibit 1).

[61] If the company uses direct billing to the insured, only the premium balances more than 90 days past due in excess of the unearned premium reserve are not admitted.

[62] Statutory accounting provides for an alternative quantification of the non-admitted portion of the accrued retrospective premium asset, based on the credit ratings of the insureds; see SSAP No. 66, "Retrospectively Rate Contracts," paragraph 9, subsection "d."

[63] A comparison of Note 22 to the Financial Statements with past provisions for reinsurance provides a retrospective test of the accuracy of uncollectible offsets.

[64] Even the personal assets of the firm's officers, which are not exposed to company losses, may be exposed to shareholder suits.

[65] Bryan J. Fuller, NAIC Senior Reinsurance Manager, has pointed out to me that the NAIC Reinsurance (G) Task Force has received considerable research on this issue; empirical data fail to support this assertion. The RAA study, *Alien Reinsurance in the U.S. Market 2001*, shows that the market share of unaffiliated non-U.S. reinsurers has increased from 38.4% in 1997 to 48% in 2001. If U.S. companies owned by non-U.S. parents are included, the market share of non-U.S. reinsurers increases to about 70%. A similar study by S&P (requested by the NAIC) also showed an increasing alien market share. Mr. Fuller notes that some U. S. insurers who have had difficulties collecting reinsurance recoverables from U.S. authorized insurers prefer to go to non-U.S. reinsurers who secure their liabilities.

[66] Unauthorized reinsurers domiciled in countries with less stringent insurance regulation are likely to offer less expensive reinsurance coverage, though U.S. regulators generally frown on their activities. Mr. Bryon Fuller notes that it is expensive to be licensed in the United States and state regulation may seem onerous to some reinsurers. Evan global reinsurers now domiciled in the U.S. may be tempted to move to an off-shore domicile for economic reasons.

[67] The letters of credit may create inefficiencies in the reinsurance marketplace. Reinsurance agreements sometimes required U.S. ceding insurers to pay for the letters of credit; the U.S. ceding companies consider that this is a small price to pay for "cash in hand." Reducing collateral requirements may increase reinsurance capacity and lower costs for U.S. ceding companies and their policyholders. I am indebted to Mr. Bryon Fuller for these observations.

[68] On multi-channel effects, see Daykin, Pentikäinen, and Pesonen [1994].

[69] Some deviations from empirical default costs are externally imposed. For instance, many pension funds and other institutional fiduciaries do not hold bonds below investment grade. These institutional investors may bid up the price of BBB bonds (the lowest investment grade rating) and bid down the price of BB bonds (the highest non-investment grade rating). This is particularly true when a BBB bond is downgraded to BB or when a BB bond is upgraded to BBB. As a result, BB bonds have slightly higher net returns (i.e., default adjusted returns) than do BBB bonds. In most financial markets, these effects are small.

[70] Mr. Byron Fuller has pointed out to me that regardless of the aging schedule, a ceding company must still consider if an asset is impaired according to SSAP No. 5. "Loss Contingencies."

[71] Aggressive regulation may also impel domestic reinsurers to flee to the Bahamas, the Cayman Islands, and similar sanctuaries.

[72] Byron Fuller notes that although state regulars perform independent financial analysis of reinsurers, the standard credit ratings are not ignored; minimum ratings may be necessary to sell a certain insurance products. Moreover, since companies pay for their own ratings, some regulators are concerned with a possible conflict

of interest between the company and the rating agency.

[73] Byron Fuller notes that risk modeling, as is done for natural catastrophes, is sensitive to the modeling assumptions, leading financially weak companies to be overly optimistic. Moreover, gathering the data needed for catastrophe risk models is complex, particularly for reinsurers writing multiple lines of business.

[74] The American Academy of Actuaries risk-based capital task force spent a year and a half discussing natural catastrophes and reinsurance without devising a feasible RBC charge.

[75] Some reinsurers may object to supplying proprietary data even if it is reported only on an aggregate basis. Mr. Byron Fuller relates that the NAIC is involved in a joint project with the Financial Stability Forum (a group of 42 financial supervisory authorities concerned with global financial markets), the International Association of Insurance Supervisors, the International Monetary Fund, and the World Bank. International banking regulators are trying to compile a voluntary database populated by the S&P Top 50 global reinsurers. Gathering the needed data has been difficult, even though it would be reported only in aggregate. For example, some reinsurers will not disclose their treaty vs. facultative data even for an internal market aggregate report.

[76] The calculation of the deferred tax asset relies on the income *implied* by the statutory balance sheet, not the income shown on the statutory income statement; see FASB xx.

[77] The text gives the statutory justification, but this logic is dubious. Reinsurance recoverables are pre-tax cash flows; surplus is an after-tax stock item. A one dollar decrease in a pre-tax cash flow is equivalent to a \$0.65 decrease in after-tax surplus. The provision for reinsurance for unauthorized companies overstates the proper charge is \$1.00 / \$0.65 = 1.538, or 53.8%. The deferred tax asset keeps the conservatism but avoids the overstatement.

[78] The ceding company is holding double security: the funds withheld from the reinsurer and the risk-based capital charge. This is excessive, since the security is greater than the total recoverable. The NAIC justifies this double charge by the disincentive that might otherwise occur to using authorized reinsurers. If secured receivables from unauthorized reinsurers had no risk-based capital charge, ceding companies might be tempted to reinsure their business with unauthorized reinsurers who provided full security instead of authorized reinsurers who did not provide security; see Feldblum [RBC: 1996].

[79] See Feldblum [RBC: 1996] for a more complete analysis of the covariance adjustment.