

Reconciliation and The Actuarial Opinion

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Abstract

The opining actuary is required by ASOP 36 and the NAIC Property/Casualty Annual Statement Instructions to reconcile the data used in his or her analysis of the loss and loss adjustment reserves with Schedule P Part 1 in the Annual Statement.

This paper reviews the importance of a reconciliation, what data to include in a reconciliation, a description of the reconciliation process (including illustrative examples), and discussions of applicable Actuarial Standards of Practice.

While the emphasis here is on Schedule P, it is no less true for GAAP or for ratemaking exercises.

The authors gratefully acknowledge the help of Nicole Elliott, who has participated in the editing of this document. In addition we want to thank those regulatory actuaries who recognize the problems associated with reconciliations and encouraged us to produce this document. We hope it will bring some illumination to an area that we believe is critical to the credibility of the stated actuarial opinion.

CAVEAT: This paper is intended only as an aid and does not supercede the actuary's professional judgment, any Actuarial Standards of Practice or NAIC instructions.

The Importance of a Detailed Reconciliation

The actuarial opinion has become an increasingly important supplement to the Annual Statement since becoming a requirement in 1990. Even though the insurer is not committed to booking the reserves developed by the actuary, management has been under a growing pressure to book actuarially sound reserves. That pressure will likely continue to grow in years to come. As it does, actuarial integrity will be questioned and challenges will surface, be it from management, regulators, or actuarial peers.

Opinions will vary, but what should not vary is the underlying data used to determine the ultimate losses and the relationship that data has to the financial results of the company. A portion of the opining actuary's work product, which does not appear to be fully understood, is the reconciliation requirement.

The opiner states in the formal opinion that:

“In forming my opinion on the loss and loss adjustment expense reserves, I relied upon data prepared by the responsible officers or employees of the company or group to which it belongs.”¹

¹ NAIC Annual Statement Instructions for Property/Casualty, 2003, p38

With these words, the actuary places a major caveat on the opinion being rendered. In this statement of reliance, the actuary is saying the opinion is only as good as the information given by company management. However, when things go wrong at a company, in one way or another, management has been responsible. So this statement, while perhaps making the opining actuary feel better, may detract from the credibility of the opinion itself.

Adding credibility back into the opinion, the opining actuary continues:

“I evaluated that data for reasonableness and consistency. I also reconciled that data to Schedule P, Part 1 of the company's current Annual Statement.”²

This language is very important to the integrity of the opinion. This paper is written to suggest ways to help the opining actuary take the necessary steps to demonstrate that the data used to form the opinion, relates to the data presented in Schedule P of the Annual Statement. This in turn relates to the financial pages of the Statement which reflect the statutory financial well-being of the company.

In general, the actuarial workpapers are very good at presenting the analysis performed by the actuary, but are less effective when attempting to substantiate that the data is reliable. When a reconciliation is included, it is frequently done on a total case reserves basis. This is often not enough to give the reviewer a

² IBID

comfort level that all losses have been considered and/or that the data is in the appropriate cells.

In one major case, an actuary used these words, but failed to reconcile the data. As a result, incorrect data was used to find the company's reserves so inadequate as to make it insolvent, placing the company in receivership. At a subsequent trial, it was found that the actuary used incorrect data. The company was not insolvent, and a jury made an \$11 million malpractice damage award against the actuaries.³ This example demonstrates why the actuary needs to do more than just rely on the data given.

More frequently the example works the other way. If one were to review the insolvencies in recent history, more often than not, inadequate reserves would be involved. The reserve inadequacy is usually not due to actuarial incompetence, but to data quality issues. Therefore, the actuary when reviewing the data for reasonableness and consistency should consider every possible aspect of the data. The cases in this paper not only relate the reconciliation to the bottom line, but also to the detail.

³ Dailey, Joseph and Selznick, Loren, "Navigating The Litigation Minefield: A Guide To Actuarial Malpractice Claims", Mealey's Litigation Report; Insurance Insolvency, Vol. 14 #5

When considering the detail necessary, the actuary should be guided by ASOP

#9:

“Documentation should be sufficient for another actuary practicing in the same field to evaluate the work. The documentation should describe clearly the sources of data, the material assumptions, and methods.”⁴

The greater the detail in the reconciliation, the more credibility can be placed on the words “reasonable” and “consistent” used by the opining actuary.

Relationship to Accounting

As opining actuaries complete their analysis, they generally turn their results over to accountants to complete the financial reporting. The accountants may then allocate the IBNR reserves to the various lines of business and/or companies based on a predefined allocation process. The greatest difficulty usually occurs when the two disciplines within the company have an undefined dual responsibility which is not mutually understood. Communication between the two disciplines is vital to the reconciliation process.

⁴ Actuarial Standards Board of the American Academy of Actuaries, “Actuarial Standard of Practice No. 9, Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations, Paragraph 5.2

Two links should be established with regard to Schedule P. The first link is between Schedule P and the reserves on Page 3 (Liabilities.) This tie is rarely violated and is well understood by the accountant and the opining actuary.

The second link is the tie between the actuarial reserves and the Schedule P reserves. The reconciliation provides that link. In addition to increasing the credibility of the opinion, a good reconciliation provides the reviewing actuary with a better understanding how the actuarial workpapers relate to Schedule P.

As the actuary states reliance on other officers of the company for data quality, the actuary should assume or share responsibility for how the actuarial work product is reflected or relates to the financial statements of the company. The financial statements, of course, contain the numbers on which the actuary states the opinion. The opining actuary, while not responsible for the audit of Schedule P, needs to be sure the work product is represented correctly in Schedule P, and/or that Schedule P correctly reflects the opinion. The actuary does not have to personally do the reconciliation, but is responsible for the work product and the level of detail in the reconciliation.

As an additional check, in 2004 the NAIC has added an instruction to the auditor to subject the data used by the appointed actuary to testing procedures.

“The auditor is required to determine what historical data and methods have been used by management in developing the loss reserve estimate and whether the auditor will rely on the same data or different statistical data in evaluating the reasonableness of the loss reserve estimate... Through inquiry of the Appointed Actuary, the auditor should obtain an understanding of the data identified by the Appointed Actuary as significant.”⁵

These instructions point to a need for the auditor to better understand the actuarial database on which the reserve estimate is based. While the construction of a good reconciliation may be an arduous task, the benefits are worthwhile. If the actuary and the accountant have an understanding up front that the reconciliation is an important part of his work product, then they can make the construction of the reconciliation a joint project. In this instance the auditors will also derive an extra benefit in their review of the company.

The reconciliation should be thorough enough to demonstrate the actuary has considered all loss information from the actuarial database, as well as loss information not included in the actuarial analysis, but is reflected in Schedule P.

⁵ 2004 NIAC Annual Statement Instructions Property & Casualty, 11/2003 Nonsubstantive Revisions, Page 48: Annual Audited Financial Reports- Item 9.

Data To Reconcile

The P&C Practice Note⁶ gives a good synopsis of what is required. Data elements from Schedule P, Part 1 (by line) to be reconciled to the actuarial database are:

"A. each of the following types of data, if relied upon significantly in forming the actuarial opinion...

- paid losses;
- incurred (case basis) losses;
- paid defense and cost containment expenses;
- incurred (case basis) defense and cost containment expense;
- paid adjusting and other expenses, and
- earned premiums.

B. the reconciliation consisted of comparing the changes from the prior year-end values (e.g., current calendar year paid losses and changes in case basis loss reserves), in detail by line of business and year in which losses were incurred to the extent that such detail was relied upon significantly and is provided in Schedule P...."

This language suggests that incremental reconciliations may be acceptable.

⁶ Property and Casualty Practice Note, December 2003, Statements of Actuarial Opinion on P & C Loss Reserves as of December 31, 2003, Appendix I

Notice IBNR is not included in this list. The company is not obligated to book the opining actuary's indicated IBNR. An exhibit of the IBNR as computed in the actuarial workpapers versus the booked IBNR by line and accident year is recommended. It would assist the reviewer in the analysis of the opining actuary's workpapers.

Organization of Data

Schedule P has very precise definitions regarding its data elements. The actuary seeks data that fits the characteristics of the risk. The actuarial data and Schedule P data frequently differ in groupings or amounts. The actuary uses different groupings because of homogeneity issues, such as claims handling and underwriting characteristics, and unique coverage applications such as excess and deductible coverages. Examples are:

- The company may write a commercial risk(s) on a program basis since this is the way internal underwriting is structured. The data can be grouped with similar programs or even stand on its own, or data can be assembled by other than an accident year basis.
- Workers compensation laws vary by state, to the point one may want to combine only certain states for actuarial analysis.
- Workers comp data may allow analysis by medical verses indemnity, or deductible options.

- The multi-perils lines may cause problems where property and liability coverages are combined under one Schedule P line of business (LOB.) In such instances, the experience may be split into separate components for actuarial review.
- Policy or report year data is often used because of the better fit for the coverage under evaluation. If policy year or report year data is used the actuary should know how these losses are sorted back into accident year components.
- With personal lines, data may be grouped by state to reflect differing tort laws, different coverages such as uninsured motorist or PIP, or different hazard conditions, (e.g., exposure to mold.)
- A common situation occurs when the actuary performs detailed analysis based on nine month data. This gives the actuary a head start toward producing year-end ultimate losses. The idea is to use nine month triangles for the analysis, then make a projection of year-end ultimates, including a projection of fourth quarter paid losses and reserves for the current year.

These are all legitimate reasons to perform reserve analysis on other than a Schedule P basis. Regardless of how the actuarial database is constructed, at the end of the process:

- the actuary should have a good working knowledge of how his data is brought into Schedule P,

- what additional data may be in Schedule P that was not part of the actuarial database or analysis, and
- what assumptions have been made to get the data into accident year and line of business format.

The opining actuary should demonstrate, in exhibit form, how Schedule P reflects the actuarial database, including explanations for any differences.

Without the reconciliation, the reviewer, can not establish that the actuary's work product is related to the company's financial statement.

How to Reconcile

A reconciliation should be made of any data relied on significantly in evaluating the reserves of a company. According to the CAS "Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves":

"Whatever data are used in analysis of reserves, they must reconcile to the insurer's financial records."

If the actuary opines on gross as well as net reserves, the reconciliation should be done on each basis. The reconciliation should also be done by accident year, usually for the current ten years.

For paid data it is best to reconcile cumulative paid loss, defense and cost containment expenses (DCCE) and/or adjusting and other expenses (A&OE). Reconciliations on a cumulative paid basis may be difficult to do if the company has data from assigned risk pools or other external sources. If a reconciliation is done every year, as should be the case, it is acceptable to have a reconciliation done for the incremental paid amounts. The actuary needs to state in the Actuarial Report that a reconciliation has been done this way for x years and to make the reconciliations available for x years (most likely in an appendix).

If the reserve analysis is done before paid salvage and subrogation with a separate analysis of salvage and subrogation, the reconciliation should also include the salvage and subrogation data.

If earned premium is used to apply the Bornhuetter-Ferguson method or other methods which rely on earned premium, the earned premium also needs to be reconciled. If the Schedule P Part 1 earned premium reconciliation was made the previous year, only the current accident year earned premium needs to be reconciled. If there has been a change in the premium data due to errors in the data or reflections of the effects of pooling, then earned premiums for all accident years need to be reconciled.

Claim counts are frequently used for a variety of purposes including: (1) a check for reasonableness of severities; (2) methods such as Fisher-Lange and

Berquist-Sherman; or (3) evaluating asbestos reserves. If the actuary has placed significant reliance on the claim counts (reported and/or outstanding), then they should be reconciled to the data in Schedule P Part 5.

Schedule P Part 1 includes data after tabular discounting, while Part 2 is before tabular discounting. Analysis done using Part 2 should include the adjustments made for tabular discounting to reconcile the data to Part 1.

Given some of the circumstances discussed above, several types of reconciliations are presented at the end of the paper. The data may be divided into several subgroups for a particular line of business, such as medical and indemnity for Workers Comp (Case 1); or several affiliated companies may pool their data and the actuary looks at the combined data for all companies (Case 2); or the actuary may group data across several lines of business, such as bodily injury data for Other Liability Occurrence and Products Occurrence (Case 3).

Normally in a reserve analysis, there are groups of data or adjustments which the actuary does not evaluate. This includes data from assigned risk pools, residual markets, or adjustments for reinsurance treaties which affect several lines of business at once. This data should be shown in the reconciliation in separate columns. (Cases 1 and 2)

If the data and/or Schedule P data needs to be aggregated; this should be minimized to the extent possible, i.e. maintain as much detail as possible. For example, the data used for analysis may be subdivided by the line of business in order to be reconciled back to the Schedule P line of business. (Case 3)

Loss adjustment expense reserves are a particular problem observed in many workpapers. Most often, the opining actuary has continued to collect data according to the pre-1998 definitions of allocated (ALAE) and unallocated loss adjustment expense (ULAE). However, the actuary should try to have the underlying data in accordance with the new definition. This may not be possible due to the way the company collects and/or records the expenses. The reconciliation should reflect this fact and indicate what has been done to allocate the data to the expense components as currently defined. The data should still be reconciled by accident year to the appropriate columns in Schedule P, showing the amounts reclassified as DCCE or A&OE. (Case 4)

Another problem occurs when A&OE data are grouped by payment year. If the analysis is done this way, the reconciliation should include the incremental paid amounts for all accident years by line of business, or an explanation of how the payment year data has been allocated to accident year.

If the analysis is done on a policy year or report year basis, the actuary should try to get the data refined to an accident year/policy year basis; e.g. accident year 2000 policy year 1999, 2000. The data by policy year can then be reconciled to the actuary's data and the total for each accident year can be reconciled to Schedule P. If this is not possible, then only total case reserves and incremental paid can be reconciled to Schedule P by line of business. An explanation should then be included of how Schedule P was constructed. (Case 5)

Often the actuary's analysis is based on some date prior to the calendar year end. At year end, the actuary normally compares expected year-end values (as calculated in the analysis at 9 months) with actual year-end results. The reconciliation would then be based on a comparison of the actual year-end results as shown in the workpapers with the Schedule P data. (Case 6)

When IBNR becomes part of the reconciliation process then diligence is necessary to be sure it is allocated to the appropriate accident years and lines of business. (Case 7)

Examples

The following cases are examples of how reconciliations might be done.

Different formats may certainly be used but the key points are to show how the

actuarial data relates to the Annual Statement line of business and accident year detail and to document/ discuss any differences. The exhibits underlying each of the cases are included in the Appendix.

Case 1

XYZ Insurance Company writes Workers Compensation coverage. The opining actuary has chosen to evaluate Medical and Indemnity losses separately due to their different development patterns. The company also has experience from its share of the NCCI Workers Comp Pool and it books the reserves as reported by the pool. Exhibit 1 illustrates a reconciliation of the net case loss reserves. It shows Schedule P data in the first column, followed by the case reserves for medical and indemnity used by the actuary (columns 2 and 3.) Columns 2 and 3 should reference the exhibits used in the Actuarial Report as shown in the footnotes in Exhibit 1. Column 5 shows NCCI Pool data as provided by the Company. Column 7 shows the unreconciled differences which on an accident year basis show larger differences than for the total for all years combined.

Case 2

Exhibits 2 and 3 show a reconciliation for paid loss and DCCE on an incremental paid basis and on a cumulative paid basis. ABC and XYZ Insurance Companies are affiliated companies and their homeowners policies are covered by a single Stop Loss Treaty. The actuary combines the data for the two companies for his/her analysis excluding the effects of the Stop Loss Treaty.

Exhibit 2 shows the reconciliation on an incremental paid basis. Using cumulative paid amounts from the current year and prior year Schedule P Part 1, the incremental paid amount is calculated in Column 5. Columns 6, 7, and 8 are from the actuarial triangles of paid data. Column 9 shows the paid amounts from the Stop Loss Treaty. To adjust the actuarial data, the Stop Loss Treaty data is subtracted as shown in Column 10.

A comparison of the difference in adjusted actuarial data and Schedule P data for all accident years combined shows a difference of less than 1%, while individual accident years have a difference of as high as 28%. It is probable that some stop loss information was put in the wrong accident year, but this difference needs to be explored and either corrected or explained by the actuary in the Actuarial Report.

Exhibit 3 shows the reconciliation on a cumulative basis. Accident year 1998 now has a large difference, which did not show up in the incremental comparison. Again, there are large differences for individual accident years, but overall the difference for all years combined is less than 1%. If the actuarial data is wrong, a large difference for an individual accident year could influence the choice of development factors. Note the paid development factor for accident year 1998, based on Schedule P data in Exhibit 2, is $1.19 = ((236+92)/(207+69))$, while the paid development factor base on the actuarial data is $1.34 = (369/276)$.

Case 3

In Case 3, the experience for Other Liability and Products Liability is combined for analysis and then divided into Bodily Injury and Property Damage. A reconciliation of the underlying data to the actuarial data should be made (see Exhibit 4) as well as a separate reconciliation to Schedule P data (see Exhibit 5). There are some differences in the reconciliation of the underlying data to Schedule P data. This may lead to incorrect allocations of IBNR back to the individual Schedule P lines of business.

Case 4

In this analysis of loss adjustment expenses, the company has provided the actuary data based on the old definitions of ALAE and ULAE. The actuary's analysis is done on this basis and the actuary gives a point estimate for ultimate values for ALAE and ULAE. The Company then allocates IBNR to the appropriate categories of DCCE and A&OE. The reconciliation should include the amounts transferred from ALAE to A&OE and the amount transferred back from ULAE to DCCE. This information should be available from the company. Exhibit 6 illustrates an example of this type of reconciliation for Workers Compensation net paid amounts.

Case 5

In this case of Workers Compensation for Casualty Insurance Company, the actuary prefers to use policy year data (see Exhibit 7.) The actuarial data is first reconciled to the policy year information. For example policy year 2002, (Exhibit 7 Column 5), total case reserves of 36,000 are used as the latest evaluation point to compare with the data used for the actuarial analysis. Then the total amounts in column 7 are reconciled to Schedule P. This example shows unreconciled data points by policy year and by accident year with the overall unreconciled difference less than 1%. The actuary needs to determine whether or not the differences by individual year are material.

Case 6

In this case, the actuary does the analysis of Commercial Auto experience based on third quarter data. The actuary makes projections of expected year-end results for paid loss and DCCE and case reserves, and compares them to the year-end data for reasonableness. Exhibit 8 has a reconciliation for the paid losses and DCCE. Column 3 reflects the expected paid losses based on the third quarter analysis. Column 4 contains the actual paid losses from the actuarial data as supplied by the company at year end. The differences between the actual actuarial data and Schedule P for accident year 2003 (Column 5) probably should be investigated and discussed.

CASE 7

As mentioned earlier, it is sometimes helpful to include a reconciliation of IBNR. Exhibit 9 shows such a reconciliation. Case reserves and IBNR reserves are both reconciled. The case reserves are reasonably close, but the IBNR has moved around to different accident years. The current accident year is carried at a much lower ultimate value. The opining actuary might want to investigate this further.

What To Do If Data Does Not Reconcile

Frequently, differences between the actuarial data and schedule P data occur as illustrated in the examples. When does this become a problem? If the differences are due to voluntary or involuntary pools such as workers compensation pools which are reviewed by another actuary, the opining actuary can accept the review and include appropriate documentation in the reconciliation.

Other times, the discrepancy is due to inaccurate or incomplete data. ASOP No. 23 – “Data Quality” states:

“The actuary may be aware that the data are incomplete, inaccurate, or not as appropriate as desired. In such cases, the actuary should consider whether the use of such imperfect data may produce material biases in the results of

the study, or whether the data are so inadequate that the data cannot be used to satisfy the purpose of the study.”⁷

If this is the case and the material difference cannot be reconciled, the opining actuary should so state in the Opinion, with more detail in the Actuarial Report.

Conclusion

In order to achieve the maximum level of credibility for the Actuarial Opinion, the reconciliation of the actuarial database to Schedule P is of utmost importance. While bottom line reconciliations are important, the actuary should also make sure there is a documented relationship between Schedule P and the data underlying the opinion.

Schedule P is usually constructed by non-actuaries and it is possible that Schedule P integrity can be compromised even if bottom line results are not. The actuary needs to take co-responsibility in the development of the Schedule. In doing so , the reconciliations discussed are easier and more meaningful.

Several examples of detailed reconciliations have been presented here.

Although guidance on reconciliations is limited, the COPFLR Practice Note contains further useful information in Appendix 1.

⁷ Actuarial Standards Board of the American Academy of Actuaries, “Actuarial Standard of Practice No. 23, Data Quality”, Section 5.2

When the opining actuary makes the statement "I have reconciled the data...", the opiner can be satisfied that a detailed reconciliation will provide a high level of confidence that the actuary's reserve analysis is correctly recognized in Schedule P.

This paper is written not only to encourage better reconciliations from actuaries, but to help any preparer of Schedule P better understand the importance of including the actuary in the process.

References

- [1.] Actuarial Standards Board of the American Academy of Actuaries, "Actuarial Standard of Practice, No. 9, "Documentation and Disclosure in Property and Casualty Insurance Ratemaking, Loss Reserving, and Valuations"
- [2.] Actuarial Standards Board of the American Academy of Actuaries, "Actuarial Standard of Practice No. 23, Data Quality"
- [3.] Actuarial Standards Board of the American Academy of Actuaries, "Actuarial Standard of Practice, No. 36, Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves."
- [4.] CAS, "Statement of Principles Regarding Property and Casualty Loss and Loss Adjustment Expense Reserves." (Adopted by the Board of Directors of the CAS, May 1988)
- [5.] CAS Valuation, Finance, and Investments Committee, "Materiality and ASOP No. 36: Considerations for the Practicing Actuary."
- [6.] Committee on Property and Liability Financial Reporting, (COPLFR), American Academy of Actuaries, "Property and Casualty Practice Note, Statements of Actuarial Opinion on P&C loss Reserves as of December 31, 2002."
- [7.] National Association of Insurance Commissioners, "Annual Statement Instructions, Property and Casualty, 2003"
- [8.] National Association of Insurance Commissioners, "Official 2003 NAIC Annual Statement Blanks, Property and Casualty."
- [9.] National Association of Insurance Commissioners, Accounting Practices and Procedures Manual, 2003, Preamble
- [10.] Quigley, Robert C., "Underlying Data the Actuary's Achilles' Heel," Mealey's Litigation Report: Insurance Insolvency, 2001

Appendix

Seven Case Examples Of Reconciliations

Case 1
Reconciliation to Schedule P
Workers Compensation
For XYZ Insurance Company

Reconciliation of Net Case Loss Reserves

Evaluation as of 12/31/2003

Accident Year	Schedule P	Actuarial Data			Work Comp Pool Case Reserves	Adjusted Actuarial Case Reserves	Unreconciled Difference \$	Unreconciled Difference as % of Carried Case Loss Reserves
	Case Loss Reserves	Case Reserves Medical	Case Reserves Indemnity	Total Case Reserves				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Prior	42,663	8,168	33,751	41,919	600	42,519	144	0.3%
1994	13,270	2,553	10,547	13,100	42	13,142	128	1.0%
1995	14,744	2,725	11,719	14,444	300	14,744	-	0.0%
1996	21,378	5,245	13,636	18,881	2,598	21,479	(101)	-0.5%
1997	20,622	6,233	10,389	16,622	4,000	20,622	-	0.0%
1998	20,528	7,212	10,303	17,515	3,000	20,515	13	0.1%
1999	13,358	4,838	7,928	12,766	580	13,346	12	0.1%
2000	20,497	8,233	10,703	18,936	1,500	20,436	61	0.3%
2001	29,235	12,775	13,646	26,421	3,164	29,585	(350)	-1.2%
2002	49,525	22,354	22,354	44,708	4,500	49,208	317	0.6%
2003	72,774	36,612	25,628	62,240	10,500	72,740	34	0.0%
Total	318,593	116,948	170,604	287,551	30,784	318,335	258	0.1%

Notes:

(1) = Col 13 - 14 from Schedule P Part 1D

(2) See Actuarial Data (eg. EX 3, Col 2)

(3) See Actuarial Data (eg. Ex. 4 Col 2)

(4) = (2) + (3)

(5) From Company Data

(6) = (4) + (5)

(7) = (1) - (6)

(8) = (7) / (1)

Case 2
Reconciliation to Schedule P
Homeowners
For ABC Insurance Company and XYZ Insurance Company on a Combined Basis

Reconciliation of Net Incremental Paid Losses and DCCE
('000's omitted)

Year	Schedule P Data				Incremental Paid Loss & DCCE in 2003	Actuarial Data			Excess Stop Loss Treaty	Total Adjusted Actuarial Data	Difference	
	ABC Insurance Cum. Paid Loss & DCCE as of 12/31/2002	ABC Insurance Cum. Paid Loss & DCCE as of 12/31/2003	XYZ Insurance Cum. Paid Loss & DCCE as of 12/31/2002	XYZ Insurance Cum. Paid Loss & DCCE as of 12/31/2003		Cum. Paid Loss and DCCE as of 12/31/2002	Cum. Paid Loss and DCCE as of 12/31/2003	Incremental Paid Loss & DCCE in 2003			Total Difference \$ %	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1994	14	14	5	5	-	19	19	-	-	-	-	
1995	180	190	60	63	13	240	253	13	-	13	-	0.00%
1996	233	291	78	97	77	310	388	78	-	78	(1)	-1.30%
1997	209	246	153	132	16	462	529	67	50	17	(1)	-6.25%
1998	207	236	69	92	52	276	369	93	40	53	(1)	-1.92%
1999	126	180	52	70	72	207	280	73	-	73	(1)	-1.39%
2000	183	262	61	87	105	244	349	105	-	105	-	0.00%
2001	271	327	90	113	79	362	452	90	-	90	(11)	-13.92%
2002	596	643	199	210	58	795	837	42	-	42	16	27.59%
2003	-	608	-	207	815	-	827	827	12	815	-	0.00%
Total	2,019	2,997	767	1,076	1,287	2,915	4,303	1,388	102	1,286	1	0.08%

Notes:

- (1), (2), (3), (4) = Col 4 - 5 + 6 - 7 from Schedule P Part 1A
- (5) = (1) - (2) + (3) - (4)
- (6) See Actuarial Data (eg. Ex. 1 Col 4)
- (7) See Actuarial Data (eg.Ex. 1 Col. 3)
- (8) = (7) - (6)

- (9) From Company
- (10) = (8) - (9)
- (11) = (5) - (10)
- (12) = (11) / (5)

Case 2
Reconciliation to Schedule P
Homeowners
For ABC Insurance Company and XYZ Insurance Company on a Combined Basis
Reconciliation of Net Cumulative Paid Losses and DCCE
('000's omitted)

Year	Schedule P Data			Actuarial Data			Difference	
	ABC Insurance Cum. Paid Loss & DCCE as of 12/31/2003	XYZ Insurance Cum. Paid Loss & DCCE as of 12/31/2003	Cummulative Paid Loss & DCCE	Cum. Paid Loss and DCCE as of 12/31/2003	Paid Excess Stop Loss Treaty	Adjusted Actuarial Paid	\$	%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1994	14	5	19	19	-	19	-	0.00%
1995	190	63	253	253	-	253	-	0.00%
1996	291	97	388	388	-	388	-	0.00%
1997	246	132	378	529	150	379	(1)	-0.26%
1998	236	92	328	369	40	329	(1)	-0.30%
1999	180	70	250	280	-	280	(30)	-12.00%
2000	262	87	349	349	-	349	-	0.00%
2001	327	113	440	452	-	452	(12)	-2.73%
2002	643	210	853	837	-	837	16	1.88%
2003	608	207	815	827	12	815	-	0.00%
Total	2,997	1,076	4,073	4,303	202	4,101	(28)	-0.69%

Notes:

- (1), (2) = Col 4 - 5 + 6 - 7 from Schedule P Part 1A
- (3) = (1) + (2)
- (4) See Actuarial Data (eg. Ex. 1 Col 4)
- (5) From Company

- (6) = (4) - (5)
- (7) = (5) - (6)
- (8) = (7) / (3)

**Case 3
Reconciliation to Schedule P
Other Liability & Products Liability
For XYZ Insurance Company**

Reconciliation of Net Case Loss Reserves Underlying Data and Actuarial Data
Evaluation as of 12/31/2003

Year	<u>Underlying Data</u>			<u>Actuarial</u>	Difference Underlying Data - Actuarial Data	<u>Underlying Data</u>			<u>Actuarial</u>	Difference Underlying Data - Actuarial Data
	Case Reserves BI Other Liability	Case Reserves BI Products Liability	Total BI Case Reserves	BI Case Reserves		Case Reserves	Case Reserves PD Products Liability	PD Case Reserves	PD Case Reserves	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1994	71	594	665	665	-	-	-	-	-	-
1995	725	3,719	4,444	4,444	-	-	-	-	-	-
1996	5,245	13,636	18,881	18,881	-	100	200	300	300	-
1997	6,233	10,389	16,622	16,622	-	550	350	900	900	-
1998	7,212	10,303	17,515	17,515	-	1,050	2,000	3,050	3,050	-
1999	4,838	7,928	12,766	12,766	-	5,200	1,500	6,700	6,700	-
2000	8,233	10,703	18,936	18,937	(1)	2,500	1,500	4,000	4,000	-
2001	12,775	13,646	26,421	26,421	-	8,700	6,500	15,200	15,200	-
2002	22,354	22,354	44,708	44,708	-	15,000	8,000	23,000	23,000	-
2003	36,612	25,628	62,240	62,239	1	23,000	21,000	44,000	44,000	-
Total	104,297	118,898	223,198	223,198	-	56,094	41,043	97,150	97,150	-

Notes

- (1), (2), (6), (7) From Underlying Data
- (3) = (1) + (2)
- (4) See Actuarial Data (eg. Ex 3, Col 2)
- (5) = (3) - (4)

- (8) = (6) + (7)
- (9) See Actuarial Data (eg Ex 6 Col 2)
- (10) = (8) - (9)

Case 3
Reconciliation to Schedule P
Other Liability & Products Liability
For XYZ Insurance Company

Reconciliation of Net Case Loss Reserves Underlying Data and Actuarial Data
Evaluation as of 12/31/2003

	<u>Schedule P</u> Other Liability Case Reserves	<u>Actuarial</u> Case Reserves	Unreconciled Difference	Difference as % of Reserves	<u>Schedule P</u> Products Liability Case Reserves	<u>Actuarial</u> Case Reserves	Unreconciled Difference	Difference as % of Reserves
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1994	71	71	-		594	594	-	
1995	725	725	-	0.0%	3,719	3,719	-	0.0%
1996	5,095	5,345	(250)	-4.9%	13,836	13,836	-	0.0%
1997	6,783	6,783	-	0.0%	10,989	10,739	250	2.3%
1998	8,262	8,262	-	0.0%	12,303	12,303	-	0.0%
1999	10,163	10,038	125	1.2%	9,303	9,428	(125)	-1.3%
2000	10,733	10,733	-	0.0%	12,203	12,203	-	0.0%
2001	21,475	21,475	-	0.0%	20,146	20,146	-	0.0%
2002	37,354	37,354	-	0.0%	30,354	30,354	-	0.0%
2003	59,312	59,612	(300)	-0.5%	47,078	46,628	450	1.0%
Total	159,973	160,398	(425)	-0.3%	160,525	159,950	575	0.4%

Notes:

(1) From Schedule P Part 1H1 (Col 13 - 14)

(2) = Ex 4 col 1 + Ex 4 Col 6

(3) = (1) - (2)

(4) = (3) / (1)

(5) From Schedule P Part 1 R1 (Col 13 - Col 14)

(6) = Ex 4 Col 2 + Ex 4 Col 7

(7) = (5) - (6)

(8) = (7) / (5)

Case 4
Reconciliation to Schedule P
Workers Compensation
For XYZ Insurance Company

Reconciliation of Net Paid DCCE and A & OE

Evaluation as of 12/31/2003

Year	<u>Schedule P</u>		<u>Actuarial Data</u>		<u>Adjusted Actuarial Data</u>		Paid DCCE	Paid A & OE	Unreconciled Difference DCCE	Unreconciled Difference A & OE
	Paid DCCE	Paid A & OE	Paid ALAE per analysis	Paid ULAE per analysis	Transferred from ALAE to A & OE	Transferred from ULAE To DCCE				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1994	1,451	5,563	1,185	5,829	290	556	1,451	5,563	-	-
1995	5,529	18,277	4,807	18,999	1,106	1,828	5,529	18,277	-	-
1996	11,619	34,350	11,148	34,921	2,424	3,395	12,119	33,950	(500)	400
1997	11,267	37,447	9,776	38,938	2,253	3,745	11,267	37,447	-	-
1998	8,877	31,053	7,547	32,383	1,775	3,105	8,877	31,053	-	-
1999	6,025	20,712	4,819	21,418	1,145	2,051	5,725	20,512	300	200
2000	8,705	14,070	8,989	14,286	1,741	1,457	8,705	14,570	-	(500)
2001	10,761	15,627	11,351	15,038	2,152	1,563	10,761	15,627	-	-
2002	6,474	15,357	6,233	15,598	1,295	1,536	6,474	15,357	-	-
2003	2,514	11,109	1,906	11,717	503	1,111	2,514	11,109	-	-
Total	73,222	203,565	67,760	209,127	14,684	20,347	73,422	203,465	(200)	100

Notes:

(1) = Col 6-7 from Schedule P Part 1 D

(2) = Col 8 - 9 From Schedule P Part 1 D

(3) See Actuarial Data (eg. Ex. 1 Col 4)

(4) See Actuarial Data (eg. Ex. 2 Col. 4)

(5), (6) From Company Data (or from accounting)

(7) = (3) - (5) + (6)

(8) = (4) + (5) - (6)

(9) = (1) - (7)

(10) = (2) - (8)

Case 5
Data is Analyzed on a Report Year Basis
Reconciliation to Schedule P
Workers Compensation
For Casualty Insurance Company

Reconciliation of Case Loss Reserves
 Evaluation as of 12/31/2003

Data from Accounting							
	Policy Year	Policy Year	Policy Year	Policy Year	Policy Year	Policy Year	Total
	1998	1999	2000	2001	2002	2003	
Accident							
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1998	10,400	9,050	8,560	7,500	6,500	5,000	47,010
1999		4,388	7,928	9,500	8,400	6,000	36,216
2000			8,233	10,703	12,543	10,000	41,479
2001				12,775	13,646	43,000	69,421
2002					22,354	54,200	76,554
2003						36,612	36,612
Total	10,400	13,438	24,721	40,478	63,443	154,812	307,292

Reconciliation with Actuarial Data

Reconciliation with Schedule P Data

	Data From Accounting	Actuarial Data	Difference	Difference as % of Reserves	Schedule P Case Reserves	Case Reserves From Underlying Data	Unreconciled Difference	Difference as % of Reserves	
Policy Year	(8)	(9)	(10)	(11)	Accident Year	(12)	(13)	(14)	(15)
1998	10,400	9,988	412	4.0%	1998	47,422	47,010	412	0.9%
1999	13,438	13,400	38	0.3%	1999	36,216	36,216	-	0.0%
2000	24,721	24,021	700	2.8%	2000	40,455	41,479	(1,024)	-2.5%
2001	40,478	41,502	(1,024)	-2.5%	2001	69,421	69,421	-	0.0%
2002	63,443	63,444	(1)	0.0%	2002	77,254	76,554	700	0.9%
2003	154,812	154,800	12	0.0%	2003	36,612	36,612	-	0.0%
Total	307,292	307,155	137	0.0%	Total	307,380	307,292	88	0.0%

Notes:

- | | |
|---|-------------------------------------|
| (1), (2), (3), (4), (5), (6) From Company | (11) = (10) / (8) |
| (7) = Sum of (1) thru (6) | (12) Schedule P Part 1D Col 13 - 14 |
| (8) Column Totals from (1) - (6) | (13) Col (7) |
| (9) From Actuarial Analysis (eg Ex. 2, Col 3) | (14) = (12) - (13) |
| (10) = (8) - (9) | (15) = (14) / (12) |

Case 6
Reconciliation to Schedule P
Commercial Auto Liability
For Auto Insurance Company

Exhibit 8

Reconciliation of Net Cummulative Paid Loss and DCCE
Evaluation as of 12/31/2003

	<u>Schedule P</u>	<u>Actuarial</u>	<u>Actuarial</u>	<u>Actuarial</u>		
	Paid Loss & DCCE as of 12/31/2003	Paid Loss & DCCE at 9/30/2003	Paid Loss & DCCE 4th Qt 2003	Paid Loss & DCCE as of 12/31/2003	Difference Schedule P - Actuarial Data	Difference as %
Year	(1)	(2)	(3)	(4)	(5)	(6)
1994	10,700	10,700	-	10,700	-	-
1995	9,010	9,005	5	9,010	-	-
1996	8,920	8,913	7	8,920	-	-
1997	10,248	10,217	31	10,248	-	-
1998	21,425	21,345	80	21,425	-	-
1999	29,200	29,148	352	29,500	(300)	(0)
2000	44,900	43,106	1,619	44,725	175	0
2001	41,500	39,054	2,696	41,750	(250)	(0)
2002	32,500	29,993	2,758	32,751	(251)	(0)
2003	13,988	12,219	2,431	14,650	(662)	(0)
Total	222,390	213,698	9,976	223,675	(1,285)	(0)

Notes:

- (1) = Col 4 - 5 +6 -7 from Schedule P Part 1C
(2) See Actuarial Data (eg. Ex 3, Col 2)
(3) See Actuarial Data (eg. Ex. 4 Col 2)
(4) = (2) + (3)

- (5) = (1) - (4)
(6) = (5) / (4)

Case 7
Reconciliation to Schedule P
Commercial Auto Liability
For Auto Insurance Company

Reconciliation of Net Reserves for Losses
Evaluation as of 12/31/2003

Year	<u>Schedule P</u>			<u>Actuarial</u>			<u>Difference Carried - Indicated</u>			Difference as %
	Net Case Reserves	Net Carried IBNR	Total Carried Reserves	Net Case Reserves	Net Indicated IBNR	Total Indicated Reserves	Net Case Reserves	Net IBNR	Net Reserves	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1994	1,736	260	1,996	1,736	271	2,007	-	(10)	(10)	-0.6%
1995	2,906	523	3,429	2,906	513	3,419	-	10	10	0.4%
1996	4,243	849	5,092	4,243	840	5,083	-	8	8	0.2%
1997	3,372	1,012	4,384	3,372	996	4,368	-	15	15	0.5%
1998	6,612	2,645	9,257	6,612	2,650	9,262	-	(5)	(5)	-0.1%
1999	43,050	24,108	67,158	43,050	24,180	67,230	-	(72)	(72)	-0.2%
2000	107,459	64,475	171,934	107,459	64,153	171,612	-	322	322	0.3%
2001	224,853	157,397	382,250	224,555	158,184	382,739	298	(787)	(489)	-0.2%
2002	414,462	331,570	746,032	414,526	324,938	739,464	(64)	6,631	6,567	1.6%
2003	560,724	1,121,448	1,682,172	560,851	1,143,877	1,704,728	(127)	(22,429)	(22,556)	-4.0%
Total	1,369,416	1,704,285	3,073,701	1,369,306	1,720,598	3,089,907	100	(16,324)	(16,209)	-1.2%

Notes:

(1) = Col 13 - 14 from Schedule P Part 1C

(2) = Col 15 - 16 From Part 1C

(3) = (1) + (2)

(4) See Actuarial Data (eg. Ex 1 Col 2)

(5) See Actuarial Data (eg Ex 1 Col1)

(6) = (4) + (5)

(7) = (1) - (4)

(8) = (2) - (5)

(9) = (3) - (6)

(10) = (9) / (3)

