Response to Invitation to Comment on
Bifurcation of Insurance and Reinsurance Contracts for Financial Reporting

It is my pleasure to provide this response to the Financial Accounting Standards Board's (FASB) Invitation to Comment (ITC). My name is Spencer M. Gluck, FCAS. I am the author of the paper, "Reinsurance Involving Partial Risk Transfer – Addressing the Accounting Difficulties" [1,2] The paper develops the "Proportional Method" in detail.

The views expressed here are my own and are not necessarily in accord with the views of my employer, Guy Carpenter & Company, Inc., its parent company, Marsh and McLennan Companies ("MMC"), its affiliated companies within MMC, or any of their clients or employees.

INTRODUCTION

The ITC's summary of the Proportional Method is accurate but not very detailed. It is unlikely that many readers of the ITC will understand how it works.

Most readers will probably also not realize that the Proportional Method is completely different from the other methods, and not consistent with the thrust of most of the ITC. Some important contrasts:

- The Proportional Method does not bifurcate a contract into financing and risk components, which is the basis of the other methods.

- The Proportional Method is limited in scope, and would only affect accounting for contracts with risk-limiting features that have significant impact.

- The Proportional Method is based on applying existing principles of insurance/reinsurance accounting. Premiums and losses will mean what they do now. In contrast, the other approaches involve a radical redefinition of insurance and reinsurance accounting that would have profound and far-reaching implications.

The Historical Context

Historical concerns have been with reinsurance contracts and some corporate insurance contracts ("finite" and/or having "risk-limiting features") that are believed to distort financial reporting by transferring less risk than their accounting would imply. Within this historical context, only the Proportional Method is on point. The Expected Payout and Cash Flow Yield methods (1) apply far beyond what is needed to address this

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[1] Gluck, Spencer M., "Reinsurance Involving Partial Risk Transfer– Addressing the Accounting Difficulties," Casualty Actuarial Society Forum, Volume: Winter 2006.

[2] An earlier draft was included in: American Academy of Actuaries, Committee on Property and Liability Financial Reporting, "Risk Transfer in P&C Reinsurance: Report to the Casualty Actuarial Task Force of the NAIC," August, 2005.

historical concern, and (2) are generally inefficient and ineffective in addressing the historical concern.

The Need for Consistent Principles

Clear definitions and consistent application of principles are necessary to avoid contradictions. Accounting discontinuities occur when nearly identical contracts receive significantly different accounting treatment. Such discontinuities are usually contradictions arising from contradictory principles being applied. Papering over contradictions with exceptions does not eliminate the contradictory principles.

SUMMARY

An outline of the remainder of the response:

A. **Some Key Principles**
 1. *Independence of Aggregation*
 2. *Unequivocal Risk Transfer*
 3. *Risk-Limiting Features*
 4. Defining Risk
B. **Discussion of the Expected Payout Method**
C. **Discussion of the Cash Flow Yield Method**
D. **Discussion of the Proportional Method**
 1. Limited Application
 2. Practicality
 3. Summary of the Method
E. **International Accounting Standards and Fair Value**

Section A provides the basis for much of what follows. Sections B and C are brief, unfavorable critiques of the methods, drawing heavily on the principles in Section A. Section D is (unsurprisingly) more favorable, and is intended to more fully explain the method and its application.

A. SOME KEY PRINCIPLES

1. *Independence of Aggregation*

We will say that accounting for premiums is *independent of aggregation* if the following holds in general:

[Premium for risk A] + [Premium for risk B] = [Premium for (risk A + risk B)].

This equation is not about market pricing. We are saying only that the accounting does not cause the premiums to be different.

Premiums in financial statements are frequently the sums or differences of other premiums (e.g., the sums of premiums from different transactions, the differences of direct and ceded premiums). Unless the principle of *independence of aggregation* is maintained, these sums and differences will not have consistent meaning. The same is true for losses and expenses.

2. *Unequivocal Risk Transfer*

   Unequivocal risk transfer as proposed in the ITC is a useful concept that can embody what we regard as fairly obvious cases of insurance/reinsurance. The properties that make it "unequivocal" are identified in items (d), (e) and (f) of paragraph 58. My simplified version hits the main themes, maintaining the labeling:

   > (d) Premium is small relative to policy limit.
   > (e) Premium rates and other contract terms are fixed.[3]
   > (f) It is likely that there will be no recoveries under the contract.

   These properties should be enough to establish *unequivocal risk transfer*. If the properties still exist at the level of a portfolio transaction, then that portfolio transaction looks "unequivocally" like risk transfer. The "type of contract" restrictions of items (a), (b), and (c) are unnecessary.

   This simple expansion of the concept can handle obvious cases of risk transfer reinsurance, like catastrophe reinsurance.

3. *Risk-Limiting Features*

   The Proportional Method requires the identification of *risk-limiting features*, as does the ITC's approach B regardless of method. But what are *risk-limiting features*? All insurance policies have limits. A list is of features is useful, but a principles-based definition would be preferable. This can be done, and a proposal for doing so follows.

   Combining the principles of *unequivocal risk transfer* and *independence of aggregation,* leads to the view that a contract should be considered a 100% risk transfer contract if one of the following criteria hold:

   > a) It is an *unequivocal risk transfer*; or
   > b) It can be characterized as a portfolio of *unequivocal risk transfers.*

   A *risk-limiting feature* would be one that interferes with a contract meeting criterion (b). For example, a feature that adjusts premium based on losses violates

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[3] The word "rates" clarifies that some kinds of premium adjustments (e.g., due to payroll audit) do not interfere with unequivocal risk transfer.

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the unequivocal definition. Restrictive aggregate features, like aggregate limits, corridors, etc., prevent the contract from being characterized as simply a portfolio of unequivocal risks. On the other hand, features defining a per-claim excess layer can be applied at the individual risk level and are thus consistent with criterion (b).

Note that a contract could have an aggregate limit but still be an unequivocal risk transfer under criterion (a) – like the catastrophe reinsurance example.

4. Defining Risk

To judge or measure risk transfer requires a clear definition of risk. The most important distinction is whether risk refers only to adverse results ("downside risk") or to all variability ("two-sided risk"). One and only one meaning needs to be settled on, and downside is by far the more sensible choice. The decision is not theoretical, but should be based on how the definition will be used.

The financial strength or capital adequacy of an insurer or reinsurer relates to its exposure to downside risk. Ratings, leverage ratios, risk-based capital, etc. are all about downside risk. To the extent that a premium contains an implicit risk charge, that charge is primarily for downside risk. FAS 113, paragraph 9, is based exclusively on downside.

On the other hand, FAS 113, paragraph 11, is unspecific, and is frequently interpreted as a test of two-sided risk. When this is done, an insurer can be denied reinsurance accounting for ceded reinsurance due to a profit-sharing feature, which in turn causes that insurer's capital to be reported as less adequate, which is untrue. This illustrates the importance of the definition of risk being consistent with how it will be used.

B.   DISCUSSION OF THE EXPECTED PAYOUT METHOD

The "expected payout" in the name of the method would be more accurately described as the "highly probable payout." Expected payout has a different meaning in statistics (the statistical mean or average).

In any case, the highly probable payout is not *independent of aggregation*. As a result, the method does not produce premiums and losses for a portfolio that have any consistent interpretation. An insurer's portfolio assembled in individual transactions and the identical reinsurer's portfolio assumed in a single transaction look dramatically different. An insurer's net premiums and losses can be distorted to the point of meaninglessness.

C. DISCUSSION OF THE CASH FLOW YIELD METHOD

I did not find the ITC very clear in defining this method. It is possible that the reference to expected losses here actually refers to the statistical mean. If so, the statistical mean is *independent of aggregation*, and thus the accounting can be also. But if so, it contradicts the principal of *unequivocal risk transfer*, since the statistical mean exists at the individual risk level. If *unequivocal risk transfer* is applied at the individual risk level and the Cash Flow Yield method at the portfolio level, the same types of severe distortions discussed for the Expected Payout method will still occur.

The alternative would be to apply bifurcation at the individual risk level, which would create *independence of aggregation* and avoid the related problems. But there are serious drawbacks:
- I need not comment on the practical difficulties.
- The number reported as premium is just an estimate of the profit margin. Under current accounting, an insurer's premium is its revenue, analogous to revenue in many other industries. Revenue is not normally reported net of costs. If it were, a tremendous amount of information would be lost. Insurance accounting would be less consistent with accounting for other industries.
- An insurer's costs (losses and expenses) are estimated and subject to estimation error. Consider the following example:
  - An insurer's revenue is $100, its estimated costs $90, and its profit margin $10.
  - The estimation error (standard deviation) of the costs is $15.

  If the entire revenue is reported as premium, the estimation error is 15% of premium. If only the profit margin is premium, the estimation error is 150% of premium. The accuracy of the insurer's total income is unchanged, but its reported revenue is so unstable that it is no longer a useful indicator of the volume of business done.

D. DISCUSSION OF THE PROPORTIONAL METHOD

This section provides a bit more detailed explanation of the application of the Proportional Method.

1. Limited Application

>   The method applies only to *risk-limiting features*; in the absence of such features, existing insurance/reinsurance accounting applies. Furthermore, the calculations measure only the transfer of downside risk; if a *risk-limiting feature* affects only better than average results, it will have no impact on the outcome.

>   If a *risk-limiting feature* doesn't have much effect on ceded losses, then it doesn't have much effect on the accounting.

In my paper, I further recommend that insurance/reinsurance accounting apply whenever the estimated Percentage of Risk Transferred ("*PRT*") is over 80%. This exception would prevent unnecessary accounting complication when the impact is minor, and would likely apply in the case of many *risk-limiting features* in traditional reinsurance contracts.

2.   Practicality

The application of the method is detailed in the next section. Although the calculation of the *PRT* is somewhat complex, it is entirely mechanical after the first step, and can be easily programmed.

The non-mechanical first step is the estimation of a probability distribution of cash flows. This same first step would be required for either of the other methods. This same first step is required to evaluate risk transfer under FAS 113, even to apply the simple (and ill-advised) "10-10 rule."

The estimation of a probability distribution of cash flows is far from trivial. It involves considerable judgment, estimation error, and experts will not necessarily agree. Under FAS 113, estimation error or differences of opinion can make the difference between a "pass" and a "fail." Under the continuous Proportional Method, such errors or differences cannot have as extreme an impact. Thus, the method is more practical and less subject to the impact of estimation error than current accounting.

In addition, the above definition of *risk-limiting features* provides larger and more clearly defined "safe harbors" than current accounting practice, another practical advantage.

3.   Summary of the Method

The *PRT* is estimated as follows:

a) Start with a probability distribution of the cash flows subject to the contract.

b) Calculate probability distributions of the present value ("PV") of cash flows under the contract:
        (b-i)   applying all features other than risk limiting features; and
        (b-ii) applying all features including risk limiting features.

c) Define the "Base scenario" as either the scenario that is expected to be used to determine financial statement entries, or the scenario that creates a breakeven underwriting result, whichever is less favorable. The idea is that "adverse deviation" will be defined relative to the Base scenario. For a scenario to be a "downside" scenario, it must be worse than what's in the financial statements, and must at least generate a financial statement loss.

d) Apply contract terms to the Base scenario and calculate PV's:
  - (d-i) applying all features other than risk limiting features; and
  - (d-ii) applying all features including risk limiting features.

e) Calculate probability distributions of "adverse deviations" as follows:
  - (e-i) (b-i) minus (d-i), but not less than zero; and
  - (e-ii) (b-ii) minus (d-ii), but not less than zero.

f) Calculate the following two risk measures:
  - (f-i) The mean (probability-weighted average) of the value: (e-i)^2.
    This risk measure is a downside variance.
  - (f-ii) The mean of the value: (e-i)*(e-ii)
    This risk measure is a downside covariance, reflecting the portion of the downside variance that is ceded after the *risk-limiting features* are applied.

g) The *PRT* = (f-ii)/(f-i)

The *PRT* is used to determine accounting entries that are in between insurance/reinsurance accounting and deposit accounting (under the "interest method") as follows:

i) Calculate insurance/reinsurance accounting entries for the entire contract.

ii) Calculate deposit accounting entries for the entire contract.

iii) Each accounting entry under the Proportional Method is equal to *PRT* times the reinsurance/insurance entry plus [1.0 minus *PRT*] times the deposit accounting entry.

The above approach is equivalent to sub-dividing all the cash flows in proportion to *PRT* and [1.0 minus *PRT*].

E.   INTERNATIONAL ACCOUNTING STANDARDS AND FAIR VALUE

Both FASB and the International Accounting Standards Board (IASB) have expressed a desire for eventual convergence of accounting standards. IASB has an ongoing project on accounting for insurance contracts, with increasing prominence of the concept of "fair value." In this context, FASB has raised the question of whether any of these changes should be considered.

The time frame to convergence is difficult to estimate. The "fair value" concept includes many difficult issues and complications. On one hand, it would seem unwise to rely too heavily on convergence coming soon. On the other hand, a complete redefinition of the insurance accounting paradigm, as per the Expected Loss or Cash Flow Yield methods could seem poorly timed.

The Proportional Method, in contrast, is an incremental change, and can be considered as simply a "repair" of the shortcomings of FAS 113.

Some have said that fair value accounting, which would include present value, will substantially eliminate the historical accounting concerns regarding "finite" and "risk-limiting features." However:
- Many of the historical concerns have been with regard to leverage ratios and the like, which are unrelated to present value concepts; and
- Fair value will probably include both explicit discounting and explicit risk margins. When and to what extent will it be appropriate to release risk margins due to ceded reinsurance? The answer will hinge on the degree of risk transfer.

These same issues will still be with us.

Very truly yours,

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