AMERICAN ACADEMY of ACTUARIES

MEMORANDUM

TO: NAIC HORBC Working Group

FROM: Academy of Actuaries Health Organization Risk Based Capital Task Force
Chair, Burt Jay

DATE: May 17, 1999

RE: RBC for Insurance Subsidiaries held at Market Value

Attached are the recommendations from the Academy's P&C RBC Task Force to the NAIC P&C RBC Working Group and from the Academy's Life RBC Task Force to the NAIC Life RBC Working Group on the RBC treatment of insurance affiliates held at market value. The Academy's HORBC Task Force makes the same recommendation to the NAIC HORBC Working Group. That is, for all but a few unusual circumstances, the RBC of the subsidiary is included in the H_0 component and the excess of haircut market over book value is multiplied by .225 and is added to the H_2 component inside of the radical. Both the Life and MCO RBC formulas generally apply a 30% factor to both affiliated and non-affiliated common stocks (other than insurance subsidiaries) but justify a lower, 22.5% factor because of certain "double counting" between the "Haircut adjustment" and the RBC treatment. See the Academy's Life RBC Task Force's memo for more detail on this rationale.

The Academy's HORBC Task Force recommends the same treatment described in the Academy's P&C RBC Task Force's recommendation for the odd and unusual cases, such as when market is below book value. The R_0/H_0 components of the P&C and MCO formulas are capped at the lessor of book value or the RBC of the subsidiary. This is not he case in the Life RBC formula.

It is our understanding that the NAIC P&C RBC Working Group now intends to apply a 15% factor, rather than the 22.5% factor that was recommended by the Academy Group, to the portion that is added to the R_2 component.

TO: NAIC Life RBC Working Group

FROM: Academy of Actuaries Life Risk Based Capital Task Force

DATE: May 17, 1999

RE: RBC for Insurance Subsidiaries Held at Market Value

RECOMMENDATION

We recommend that the Life Risk Based Capital calculation for Insurance Subsidiaries Held at Market Value be changed to the following:

(1) Add to the C-0 component (outside of the radical) the lookthrough RBC on the book value of the subsidiary, and
(2) Add to the C-1 component (inside the radical) 22.5% of any excess of the statutorily haircut market value over the book value of the subsidiary.

This is the same as the recommendation made by the American Academy of Actuaries at the December NAIC meeting for the P&C RBC formula. Note that the LRBC recommendation uses the 22.5% affiliated common stock factor from the P&C formula, as opposed to the 30% affiliated common stock factor from the life formula. The LRBC formula still uses the life risk based capital covariance treatment. (We heard just today that NAIC P&C RBC Working Group may have changed the affiliated common stock factor applicable to the P&C formula to 15%.)

RATIONALE

The current Life RBC factor for all equities, including excess market value of subsidiaries, is 30%. This factor, in our opinion, should be reduced for any double counting in the haircut applied to the market value (required under SSAP 46) and should, if possible, be consistent with the factor used for the P/C and the health formulas (22.5%).

In discussions with the SVO, we have determined that their haircut consists of three elements:

(1) turnover of stock in last six months,
(2) restrictions on sales accounting, mailings and commissions required to sell subsidiary, and
(3) operations of the company.

The third element seems to cover similar risks as that of our 30% factor (trend, level of earnings, stock price). On the other hand, this component is also somewhat like a Beta adjustment (which has been recommended but not implemented for the RBC formula). This part of the haircut can range from 0% to 15% but is often in the 5% to 8% range according to Dick Newman of the SVO. The fact that the average is a significantly positive percentage tends to suggest that it

represents more than just the beta adjustment.

We also believe that part or all of the second element may be redundant. Many of these costs would be reduced or negligible in a non-rushed sale (say, over a period longer than 6 months) as covenants and restrictions expire. This would be the case in the liquidation of a troubled company, which would likely take longer than 6 months. Commissions may also be redundant since the 30% factor, as applied to all common stock, would have to cover commissions as well. This part of the haircut ranges from 0% to 5%.

We could make each of these adjustments on an individual company basis if the data were available from the SVO. However, our preference and recommendation is to use the industry averages as we have done to develop other RBC factors.

Based on the above, the reductions could range from 5% to 13% and are most likely to be in the lower end of the range. Given that these results are roughly consistent with the P/C factor of 22.5%, we are recommending this factor be used for the life formula also. Any further fine-tuning would only create another inconsistency among the formulas.

One final argument for lowering the life RBC factor is the apparent conservativeness of the haircut, independent of double counting. From discussions with some members of the broker dealer community we have found that the haircut market value may be an overly conservative estimate of the actual realized sale value.

This conservatism, if subsequently agreed to by the regulators, may even be large enough to support the argument made by some that we simply use the RBC result for all subs whether at book or market value without any additional charge. This concept may deserve further consideration by all three groups in the future.

Recommendation Concerning the Risk-Based Capital Treatment of Publicly-Traded Insurance Subsidiaries Carried at Values Based on Market

November 25, 1998

An insurance company which owns 100% of another insurer carries that insurer as an asset on its books at the statutory book value of the subsidiary insurer plus, if relevant, any allowed goodwill remaining from the purchase of the subsidiary insurer. This asset amount is the contribution of the subsidiary insurer to the parent insurer's adjusted surplus, so changes to the subsidiary's surplus affect the parent's surplus on a dollar for dollar basis.

In most cases, the risk-based capital (RBC) currently generated for the parent insurer on behalf of the subsidiary insurer is equal to the RBC of the subsidiary insurer considered as a stand-alone insurer. The RBC generated for the parent insurer on behalf of the subsidiary insured is included in the parent insurer's RBC formula outside the covariance-adjusted portions of the formula, so that increases in the subsidiary insurer's RBC increase the parent insurer's RBC also on a dollar for dollar basis.

Accordingly, the contribution of the subsidiary insurer to the parent insurer's RBC ratio can be understood by comparing the goodwill-adjusted book value of the subsidiary to the stand-alone RBC of the subsidiary.

What happens when the parent insurer owns less than 100% of the subsidiary insurer? If the parent insurer owns X% of the subsidiary insurer and uses the book value approach to valuing the subsidiary, then the asset will be X% of the subsidiary's book value, adjusted if necessary for good will, and the RBC contribution will be X% of the subsidiary insurer's stand-alone RBC. This approach is perfectly analogous to the 100% owned situation discussed above.

The focus of this paper is the remaining case: What happens when the parent insurer owns less than 100% of a subsidiary insurer that is publicly-traded where the parent insurer carries the subsidiary insurer as an asset in an amount based on the market value of the subsidiary insurer? Note that under codification this asset value will be "haircut" on the parent insurer's books by an amount, say Y% per share, that depends primarily on the percentage (X%) owned by the parent insurer.

Codification's SSAP 46 imposes the haircut as a conservative measure. Were a parent insurer to attempt to dispose quickly of a large block of the subsidiary insurer's stock in order to meet a solvency need, it is possible that the price obtained would be less than the market price that existed before that large block became available for sale. Given this possibility, and the fact that the market value of the subsidiary will fluctuate from day to day, it can be argued that an RBC charge in addition to the stand-alone subsidiary RBC charge should be imposed on the parent insurer in respect of the subsidiary insurer.

However, it is also true that a parent insurer with a publicly-traded subsidiary insurer has more options and more efficient access to the capital markets with respect to that subsidiary than does a

parent insurer whose subsidiary insurer is not publicly-traded. From a policyholder protection point of view, it would be unwise to penalize excessively the establishment of publicly-traded subsidiaries.

We conclude that simply carrying a subsidiary at haircut market value should not in itself cause a parent insurer to generate more RBC than the fact of carrying the same subsidiary at book value. Only if the haircut market value exceeds the book value should the parent insurer's investment risk-related RBC be increased.

Attached is the formula we have designed to charge the parent insurer for additional investment risk where appropriate while not penalizing the parent insurer for creating additional access to the capital markets. Note that the formula includes the necessary adjustments to handle special cases. In essence, however, the formula provides for the following:

- If the haircut market value is less than or equal to the good will-adjusted subsidiary book value, no adjustment to the current RBC charge in respect of the subsidiary insurer should be made.

- If the haircut market value exceeds the good-will adjusted subsidiary book value, an adjustment to the parent insurer's common stock risk calculation can be computed by applying the risk factor for affiliated common stock investments to the excess of the haircut market value of the subsidiary insurer over the good will-adjusted stand-alone book value of the subsidiary. This adjustment would always be positive or zero, and would be affected by the covariance adjustment in the parent's RBC calculation in the same manner as other investment risk components of RBC.

Insurance Subsidiaries Carried at Market

The AAA P&C RBC Committee recommends the following formula for the above captioned:

RBC Component	Formula	Comments
R_0	Min(Bk, RBC)	This is part of the current P/C RBC formula. The current Life RBC formula does not cap RBC at the book value – if this is maintained the remainder of the adjustment is not effected since (RBC–R_0) will always equal zero.

R_2	If RBC > Mkt then
	R_2 = Mkt – R_0
	Else
	R_2 = Max((Mkt – Bk) x F, (RBC – R_0))
	
	This additional R_2 component is subject to a floor of zero.
		If RBC exceeds market then post additional RBC until Market (the new carrying value) is reached. This is similar to the first part of the P/C formula where RBC is capped at the book value. If RBC is less than market post additional RBC equal to the maximum of the additional surplus (Market – Book) times the appropriate risk factor or the amount by which RBC exceeds R_0 (RBC – R_0 can be positive in the P/C RBC formula if RBC exceeds Book).

Where:

Bk = The value of the subsidiary as it would have appeared on the parent's balance sheet had the parent decided not to carry the subsidiary at market.

Mkt = The value of the subsidiary as it appears on the parent's balance sheet under the mark–to–market rules as stated in SSAP 46. Note this is the "hair–cut" market value.

F = The RBC formula risk factor for non–insurance affiliated investments. (.225)