Sept. 17, 2008

VM-20 Outstanding Issues

The VM Life Requirements Subgroup has reviewed the VM-20 document as exposed by LHATF in September 2007, except for the definitions. The Subgroup worked to resolve each issue raised and exposed at least three revisions to the draft. Some issues were resolved quickly, but others have not yet been resolved and need additional discussion. The outstanding issues and some discussion points are summarized below. The subgroup will continue to work on resolving each of these issues. To the extent that subgroup is unable to resolve an issue, that issue will be presented to the full LHATF for discussion. **This list now includes a Reinsurance issue that has far-reaching impact on many sections of VM-20.**

Issue No	Section	Paragraph	Description of Issue	Discussion	Others' Input?	Status
				High Priority		
2	C.3	4	What is the appropriate level of aggregation (grouping of policies) for the stochastic reserve	**Option 1:** Consider homogeneity of risks (product features, lapse, mortality, guarantees) in developing groupings group by major lines of business (term, UL, VUL); For example, UL and Term have different crediting strategies and assets backing the liabilities and so should be modeled separately Pros • Aggregated consistent with how business is managed and assets backing the business • Better audit ability than with full aggregation • More conservative - allows coverage of errors from modeling the unknown. Cons • Ignores risk offsets between products which is inconsistent with a principals based approach • Deterministic reserve limits degree of risk offsets • Disclosure of impact of aggregation allows regulator to limit • Reality will be a single scenario that ultimately allows for offsetting between products • Not the place to "Correct for other errors" • Is not the place to add conservatism in the reserve. Mandating a defined set of subgroups that reduces the degree of risk offsets between policies can create a level of conservatism that differs widely by company, depending on the nature of the risks and the degree to which the company effectively manages those risks. **Option 2:** Require the company to determine subgroups of polices for aggregation purposes in a manner that is consistent with how the company manages risks across different product types, taking due account of changes in risk offsets that could arise from shifts between product types. If the company defines two or more subgroups for aggregation purposes, then the stochastic reserve methodology must be	NY will submit APF	Talk seems to lean toward permitting aggregation with disclosure of impact. NY described audit ability as their big issue with currently drafted aggregation. If disclosure permits efficient audit ability, that may appease. See C.3.7.b

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				applied separately to each subgroup and the results added together. Pros • Is more consistent with the principles of PBR. • Allows risk offsets to be recognized in the reserve that is consistent with how the company manages risk, taking due account of changes in risk offsets that could arise from shifts between product types. • Does not impose an arbitrary level of conservatism in the reserve compared to the approach of mandating specific groupings by product type that can differ widely company to company. • Relies upon the required disclosure to include the impact of aggregation in the PBR actuarial report to quantify and audit the "standalone" reserve for each product type, rather than requiring the reserve calculation itself to provide this information.. Cons • See Pros under Option 1.		
4	C.5 & E.3	2	Should policyholder behavior assumptions be prescribed in the absence of relevant and credible data	**Option 1**: Credibility weight company specific experience with prescribed lapse assumptions; lapse (what about others like partial w/d, policy loans, premium, account transfers, etc.) Pros • Prescribe lapse assumptions that vary by interest and duration and product will provide for better audit ability. When accumulate more experience in the future can expand options • Companies should be using similar assumptions when don't have experience; why should companies have vastly different assumptions for similar products • Prescribing assumptions may encourage data collection and intercompany studies in order to provide credible data to modify the available assumption options Cons • There is sufficient guidance in VM-20 to select assumptions at the conservative end and perform sensitivity testing • PBR will naturally result in differences by company as a result of actuarial judgment; we should rely on the profession and proper disclosure • Required disclosure will provider support for the assumptions • SVL allows commissioner to modify any assumption (however, if there is no data, on what basis with the commissioner challenge an assumption)	Will NY propose something on this?	Subgroup agrees that lacking credible experience, PHB assumption should be prescribed. Issue is at what level that prescribed assumption. How will company's credibility be determined?

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				• Significant resources would be needed to prescribe assumptions (every new product)
				• Assumptions are not locked under PBR approach and can modify if needed
				• Will be difficult to determine credibility.
				• Doesn't provide for variations in policyholder behavior assumptions to reflect material impact of marketing, distribution and customer service differences as well as product and policyholder characteristics
				• VM-20 requires that assumptions be based on relevant data. Under this option, assumptions may not be relevant for a particular product
				• Policyholder behavior risks are less likely to be homogeneous across companies because policyholder behavior is materially influenced by differences in product, marketing, distribution and customer service.
				
				Option 2: Require companies to stress test at the extremes and use the results of that to determine the assumptions
				   Pros
				• Assumptions would reflect the specific circumstances of the company.
				   Cons
				• Alternative does not explain how extremes are to be defined. VM-20 currently only defines extremes for premium payment patterns of flexible premium policies.
				
				Option 3: Retain Current Requirements - Assumptions must reflect appropriate variations based on characteristics such as product features, distribution channel, age at issue, duration of the contract, etc. Assumptions must be appropriate considering the other assumptions in the cash flow models and the scenarios most likely to contribute to the reported reserve. If data are lacking, use experience from another block of business that is similar to the block of business being valued. Adjustments must be made to reflect differences between the block being valued and the business included in the experience data. To the extent that there is an absence of relevant and fully credible data, the margin shall be determined such that the policyholder behavior assumption is shifted toward the conservative end of the plausible range of behavior, that is, the end of the range that serves to increase the reported reserve.
				   Pros		

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				• Companies set there assumptions using appropriate judgment often (GAAP). • Assumptions reflect unique risks of product designs, marketing approaches, distribution methods and other factors that have a material impact on policyholder behaviors and thus on reserves. • Changes in experience are reflected as they emerge; don't need a regulatory mechanism to update prescribed tables • Provides appropriate assumptions for new product designs, marketing approaches and distribution methods • Increased margins are required in the absence of relevant and credible data. Assumptions must reflect differences in risk among similar products in different companies. Policyholder behavior assumptions should be different for similar products that are marketed, distributed or serviced differently when these differences have a material impact on policyholder behavior and hence reserves. • Policyholder behavior assumptions which are consistent with other aspects of the cash flow models. Cons • More difficult to review assumptions than when a standard assumption is used • When there is a lack of experience, different companies could use different assumptions for similar products, even if all aspects of the product's marketing, distribution, and customer service were similar.		
5	C.5.4		What is the appropriate level of margin	Moderately adverse? Once this is defined then should it be substituted for "objectives of statutory financial reporting"? **Option 1:** Margins are set by each company, based on actuarial judgment, reflecting the level of uncertainty in anticipated experience assumptions and the covariance between the assumptions. Pros: • Consistent with a principle-based approach to reflect the underlying risks of the product. • Reflects the covariance between variables, including the low likelihood that assumptions that are not highly correlated will simultaneously produce adverse experience in the tail of the distribution of outcomes.		A subgroup combining members of LHATF/AAA/ACLI is considering the issue of margins within the SVL. Not yet discussed in any depth by VM-20 SG

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				Cons: • Requires a complex stochastic model to produce a joint distribution of all future outcomes to accurately quantify the degree of covariance between assumptions (such a model has not been fully developed yet). • Difficult for regulators to audit and assess the appropriateness of the level of margins • Each company may have different methods and processes to establish and validate margins **Option 2:** [This is the approach used in the current draft of VM-20]. Same as #1, except margins are set independently on each material assumption without regard to the degree of covariance between assumptions, unless the company can demonstrate that an appropriate method was used to jointly determine the margin for two or more risk factors in combination. Pros: • Consistent with a principle-based approach to reflect the underlying risks of the product. • Recognizes the difficulty of accurately quantifying the degree of covariance between assumptions, yet allows a limited reflection of covariance if the company can provide an appropriate demonstration. Cons: • Moderate difficulty for regulators to audit and assess the appropriateness of the level of margins • Each company may have different methods and processes to establish and validate margins **Option 3:** Prescribed margins set by regulators for all assumptions Pros: • Provides uniform standards • Easier to audit Cons: • Inconsistent with a principle-based approach. • Difficulty of determining appropriate set of prescribed margins for all assumptions due to the sheer number of margins that would be required (i.e., by product, by duration, by age, etc). • Will likely involve the use of industry data to set the prescribed margins. May lead to assumptions that are		

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				correct overall for the industry but not correct for any specific company. • Does not consider the interaction and covariance between assumptions and may lead to unduly conservative reserve valuations. • For a given product type, margins for a given risk factor could move in different directions depending upon the company, product mix, etc. For example, high lapses may be conservative for some companies, but low lapses may be conservative for others.		
6	C.6.4	e	To what extent should revenue sharing cash flows be included and should it be consistent with the decision on AG VACARVM	**Option 1:** Company sets assumption on future Revenue Sharing income. Pros • Matches reality – these agreements exist, some level should be included. • Companies provide marketing & administrative services in return for this income. If revenue sharing not recognized, costs of those services should not be recognized. Cons • The Future Revenue Sharing income is not guaranteed. **Option 2:** Do not recognize any Revenue Sharing income that is not guaranteed. Pros/Cons same as above. Pros • Would alleviate concern that company or successor may not receive future revenue sharing. **Option3:** Revenue Sharing recognized with limitations. • Would alleviate some of the concern that company or successor may not receive future revenue sharing.	AAA will submit APF	CLOSE - AAA will submit APF recommending that revenue sharing be handled consistently with AG VACARVM. Subgroup expected to adopt it.

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7	C.6.10	1	Should a cap be imposed on credit for derivatives/dynamic hedging	For stochastic reserve, maximum credit for dynamic hedging should be x% (30%, 50%?) of the reserve related to the block; for deterministic reserve only assets held on valuation date should be used to offset reserves Pros • see OFSI: Capital Offset for Segregated Fund Hedging Programs: max is 50% of difference between with hedging and without hedging results • Alleviate the concern about the ability and willingness of company to properly rebalance portfolio and receive expected cash-inflows under erratic market conditions. Cons • Credit for dynamic hedging a critical aspect of PBR • Limiting credit diminishes incentive to engage in risk mitigation activities.	Will NY propose something on this?	
8	C.7.2	2	Guidance is needed on the minimum number of scenarios that should be run	Should the number vary based on variance? Need to cover enough negative scenarios	AAA	Waiting on AAA?
9	C.8 & E.5	3	Should the discount rate be capped or otherwise limited in any way? Affects the discount rate for the deterministic reserve but not the stochastic reserve. Affects the projection of accumulated deficiencies for stochastic reserves. The stochastic discount rate has little impact on	**OPTION 1:** Cap at treasury + 50bp (or treasury*1.05 or "mx+b") Pros (stochastic and deterministic) • Risk-free + spread to reflect illiquidity of insurance liability is appropriate because policyholder sees payment of guarantee as being risk-free, doesn't consider credit quality of underlying assets; therefore, company should not get additional credit for taking on default risk. • Reduces game playing by not allowing companies with lower grade assets to hold lower reserves than companies with higher grade assets. The exception of a high yield / low risk asset is rare and should not undermine the much more common case. Assumptions should be more prescribed when company doesn't have control over the risk • Prevents companies from assuming that they can "beat the market" and not properly reflecting the risk of the investments (i.e. setting default assumption too low) in the reserve. • Experience with AOM's: This is pragmatic approach to help keep companies from being too optimistic • Simplicity: Dealing with spreads that are consistent across assets is simpler than dealing with assuming default rates for all assets. [Note: LRWG does not believe this is simpler. To comply, we believe companies would need to set a unique		

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			the reserve.	default assumption for every asset based on data captured at time of purchase. Last "Con" listed below is "difficult to model."] • The PBR movement started based on a belief that companies selling mostly to super preferred lives had redundant reserves due to the prescribed mortality table. Some companies said that there were redundancies due to lapses. The reflection of company-specific expense efficiencies is appropriate. However, companies giving themselves credit for seemingly being above average on a consistent basis in investments is questionable. [Note: LRWG believes the PBR movement started with C3 phase I, C3 phase II, then AG VACARVM which all deal primarily with market risk for interest rates and equities. Conservative valuation interest rate assumptions were also cited as a driver in the UL secondary guarantee reserving debate.] Pro (specific to deterministic) • Meaningful Deterministic Reserve: Deterministic reserve loses its worth if optionality is not recognized through a deduction in net yield. High yield assets with high optionality would lead to high, non-meaningful discount rates. Cons • Cap is arbitrary and not principles-based • Single rate not appropriate for all companies • Assets already on books, yield locked in and should be recognized • Single rate does not reflect varying market spread conditions under which assets were purchased and liabilities were written • Any limitation should apply only to starting assets. Reinvestment assets already addressed by prescribed net spreads. • Addresses wrong factor. Spread over Treasury at time of asset purchase is a reflection of the price actually paid for the asset and is not itself a prospective risk factor to be regulated. Asset default is the risk factor, not the spread at purchase. Putting in a limit based on the spread at purchase would effectively force different default assumptions for two companies holding the exact same asset but who purchased them at different prices due to differing past market conditions. Doesn't result in a level playing field. • Lower discount rate may not be conservative under a GPVAD approach because some of the scenarios in the CTE might be		

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				negative • C1 requirement is a disincentive to invest in riskier assets; negative rating agency reaction, aggregate spread may increase and cause regulatory attention • Can mitigate concerns by establishing conservative margins on default assumptions • Cap approach is difficult to model • PBR subgroup already adopted drafting changes to require that market default cost experience be the basic experience assumed for assets traded in public and liquid markets, along with adding other safeguards related to adjustments for own company experience (E.5.2.1.a). Addresses "over-optimism" issue on a large portion of assets. • See Pros for Option 2 Cons (addressing Pro specific to deterministic) • Optionality modeled directly along both the single deterministic scenario and stochastic scenarios. Deterministic scenario is a one standard deviation downward shock to the valuation date spot curve (spread over 20 years). Assets sensitive to lower rates will be impacted. Business backed by portfolios with significant high yield, high optionality assets are less likely to qualify for Stochastic Exclusion, and stochastic reserve will capture full range of optionality costs, including situations where the greater risk is higher rates. **OPTION 2:** Use net asset earned rates with disclosures (Current – 3/29/2008 draft) Pros • Consistent with PBR approach—recognizes the risks and the revenues which fund those risks • Consistent with reserve adequacy standard of the SVL, which requires reserves make adequate provision "when considered in light of the assets held by the company.., including but not limited to the investment earnings on the assets…" • There is ample guidance in VM-20 re setting of anticipated experience and margin for default costs • Embedded spread disclosure requirement should identify portfolios with relatively greater risk as viewed by capital markets. Based on market spreads at valuation date rather than at time of asset purchases. Cons • See Pros for Option 1		

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				OPTION 3: Prescribe default assumptions on below investment grade assets
				   Pros
				     • Addresses concern with companies investing in lower quality assets and lowering reserves
				   Cons
				     • Doesn't address other risks like prepayment and liquidity
				     • Defining investment grade is problematic and doesn't address the level playing field/game playing concern
				     • The concern is not just with junk. A company investing in BBB's should not hold lower reserves than a company investing in AAA's when the risk is higher.
				
				OPTION 4: Prescribe spreads by investment grade based on historical spreads
				   Pros
				     • Levels playing field and addresses concerns with companies investing in below investment grade asset under PBR or assuming that can beat the market
				   Cons
				     • Need to derive spreads
				     • Still would probably lead to lower reserves for company with more investment risk.
				
				OPTION 5: Prescribe minimum default cost assumptions for the core asset classes based on available published historical data and a well-defined methodology. Require the company to apply similar methodology for all other material asset classes in its portfolio. (Expansion of Option 3)
				
				For example, develop prescribed assumptions for corporate bonds using Moody's published default rate and recovery rate data. To ensure conservatism the default rate and recovery rate could each be determined at the prescribed CTE level.
				
				Pros
				     • More principle-based than spread cap and doesn't involve arbitrary parameters
				     • Helps achieve level playing field since companies would all have same minimum prescribed default cost assumptions
				     • Same prescribed minimum default cost assumptions could be		

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				used in determining prescribed net reinvestment spread assumptions • Methodology involving separate distributions of both default rates and recovery rates can address assets having different risk profiles than comparably-rated corporate bonds Cons • Substantial efforts to develop and maintain system by Academy and NAIC. • May not produce significant benefit versus companies developing assumptions themselves and following the current guidance • Less obvious what industry or market data sources are available beyond corporate bonds; however, individual companies will have a similar challenge identifying sources if assumptions are not prescribed • Default and recovery distributions for emerging asset classes challenging to estimate • Does not regulate "net spread," so lower reserves could still result from assets with relatively higher spreads in the same class		
12	E.5.3		Prescribed spreads on reinvestments	**Option 1** - Current draft sets prescribed spread on reinvestment assets at "4% of the appropriate Treasury spot path plus 25bp". All seem to be in agreement that reinvestment spreads should be prescribed. **Option 2** - The LRWG's Asset Modeling Subgroup will propose a methodology based on historical analysis. Prescribing gross spreads, default and recovery rates based on history.	AAA	Most are in agreement that it is appropriate to cap reinvestment spreads. The question is how will that cap be determined?
38	All Over		Rigor with which Gross reserves need to be calculated.		VM-Reins SG, Will NY propose something on this?	Recently identified.
	Other important issues					
13	C.3.6		Stochastic Scenario Mechanics – Concerning scenarios that produce little or no reserve but have the pattern of large losses at	**Option 1** – Somehow limit the amount of intermediate profits that can be presumed to be available to cover later losses. Pros • Addresses case where profits are released before the loss occurs instead of being retained to cover future losses.		

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			later durations – How can we be assured that early profits will be available later to cover the losses?			
15	C.1	7	Develop reporting requirements for simplifications and approximations			
16	C.2	5	Guidance for allocating reinsurance CF under aggregate reinsurance agreements	Look for guidance from the Reinsurance Subgroup		
17	C.3	2	What are acceptable methods of capturing risk that are not reflected in CTE			
18	C.5.3		More guidance is needed on level, type and how to reflect the results of sensitivity testing in setting assumptions			
19	C.5.4	1	Additional guidance on margins for assumptions not stochastically modeled or prescribed	Should this be in an ASOP or is guidance needed in VM-20	AAA	AAA
21	C.6.2	5	Should this provision remain in VM-20?	What does it mean that the actuary may "rely" on asset adequacy analysis? Leaving this in basically makes ASOPs and guidance requirements		
22	C.9		Need reporting requirements for	VM-31 should include details		

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			NGE			
23	C.9		Should the NGE provisions apply only to policies with material tail risk/meet stochastic exclusion test?	What is the procedure for policies without material tail risk?	AAA	AAA
24	E		Guidance and disclosures similar to AG-TAB needed for mortality grading beyond experience period		AAA	AAA
25	E.2.3	3	Need credibility criteria		AAA	AAA
26	E.2.4	1b	Need credibility criteria procedure	The options are out there - the subgroup needs to research & decide. Can the Academy provide guidance?	AAA	AAA
27	E.2.5	2	Need underwriting scoring procedure and guidance on how to apply		AAA	AAA
28	E.3		Prescribed assumptions in absence of experience	See C.5.1 above		
29	E.3.2	3	Should policyholder "efficiency" be defined		Will NY or AAA propose something on this?	
30	E.4	13	Should validation of the allocation of expenses be a required disclosure item	Experience with AOM expense allocation is a big problem and need top down validation		
31	E.5.4	1	Need to specify source of treasury yield curves for deterministic	Academy LRWG has not yet recommended a deterministic scenario, but a possible definition has been discussed. The Modeling Report on the Stochastic Exclusion Test discusses some implications of that possible definition.	AAA	AAA

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			scenario			
32	E.5.4	2	Need to specify ultimate yield curve for the deterministic scenario	Base on C3PI generator, determine rates at CTE level		
33	E.5.4	4	Should there be a drop and recovery like VACARVM for S&P 500 and SA returns		Will NY propose something on this?	
10	E.4	9	Should federal income taxes be included in the assumptions	Cons • reserves need to be calculated before tax because part of reserve is tax deductible • deferred tax asset, tax liability reported elsewhere • should FIT be handled in capital not reserves Pros • It is a cash flow that ultimately results from the product		Tone of subgroup was that this issue is not a high priority.
			Issues the subgroup will no longer consider unless directed by LHATF			
1	C.3	2	What is the appropriate CTE level?	**Option 1:** CTE level varies by line of business (which lines)? Pros • Would somehow capture greater variability in more volatile product lines. Cons • Not necessary. The nature of the CTE calculation captures the tail scenarios appropriately. It needn't vary by product. **Option 2:** CTE level is determined based on variance in the tail? Pros • Requires additional reserve be held for product lines with greater variability. Cons • Additional complexity. **Option 3:** CTE should be the same for all products because of the nature of CTE		DONE – Subgroup recommends level set at CTE(70). Consistent with AG VACARVM and most felt it best (easier) to later lower it than raise it, if necessary.
3	C.4.2	1	The Stochastic Exclusion Test pass ratio	Academy has prepared a "Modeling Report on the Stochastic Exclusion Test". There are 16 deterministic scenarios to be used in the SET. 4% has been recommended and adopted as the pass/fail threshold on the Stochastic Exclusion Test.		DONE - SG recommends setting threshold at 4% - See APF #33

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11	E.5.5	1	Treasury yield curve, S&P returns and future fund performance for SA should be prescribed	Option 1 - Subgroup has recommended a single set of prescribed scenarios Pros • Audit ability, Level playing field Option 2 – Allow companies to determine stochastic scenarios most appropriate to their situation.		Subgroup has recommended a single set of prescribed scenarios. AAA will defend original draft position (multiple scenario sources would be available) at Fall Meeting.
34	E.5.5	3	Need to specify calibration standards if don't prescribe interest rate paths and equity returns paths			Done – Not necessary if scenarios are prescribed.
35	E.5.5	4	Prescribe correlation, number of scenarios and efficiency in estimation, frequency of projection and time horizon	This is addressed in prepackaged scenarios but will need direction on how to use prescribed scenarios		Done – Not necessary if scenarios are prescribed.
36	E.5.6		Do we need this section dealing with analyzing the impact of margins	If prepackaged scenarios only, then this may not be needed		Not needed?

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