

# 2006 SEAC Spring Meeting Miami Beach, Florida

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Individual Health Topics  
Exploring Methods for Premium Deficiency  
Reserves

Wednesday, June 14, 2006



## Topics will Discuss

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- Purpose
- Background
- Regulations
- GPV vs. PDR
- Case Study



## Historical Basis

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- GPV – part of HIRMR – statutory
- PDR – GAAP – came about with codification – SSAP #54
- PDR not specifically part of HIRMR



## Purpose of GPV & PDR

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- Tools to help assess financial condition
- Impact on surplus and net income



## Background for GPV and PDR

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- GPV – ultimate test of reserve adequacy – part of NAIC HIRMR – introduction
- GPV – Reserve adequacy, long-term financial solvency
- PDR – came to light from accounting – codification of SSAPs
- PDR – Premium adequacy, short-term premium rate sufficiency



## Regulation – GPV

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- NAIC HIRMR & SSAP Appendix A-010 - "With respect to any block of contracts, or with respect to an insurer's health business as a whole, a prospective gross premium valuation is the ultimate test of reserve adequacy ..."
- SSAP #54 – items 10 & 23. – "A prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date."



## Regulation – PDR

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- NAIC HRGM - “a reserve that is established when future premiums and current reserves are not sufficient to cover future claim payments and expenses for the remainder of a contract period”
- SSAP #54 – item 18. – “When the expected claims payments or incurred costs, claim adjustment expenses and administration costs exceed the premiums to be collected for the remainder of a contract period, a premium deficiency reserve shall be recognized ...”



## Calculation Mechanics

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### Reserve equals

- Sum of:
  - PV of future claims,
  - PV of future expenses, commissions,
  - PV of claim & contract reserves at end of period
- Less the sum of:
  - PV of future premiums,
  - Current claim & contract reserves,
  - Current accrual for future expenses.



## Issues & Assumptions

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- Grouping
- Time period
- Assumptions
  - Premium Rate Increases
  - Claim Trends
  - Expenses
  - Investment Income
  - Taxes
  - Margin



## Grouping of Business

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- GPV – no guidelines, typically done for insurer's health block as a whole – may look at major lines
- PDR – SSAP #54 – “contracts shall be grouped in a manner consistent with how policies are **marketed, serviced and measured**”



## Grouping of Business – HRGM

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- “Reflect how premium rates are developed and applied.”
- Other criteria: marketing methods, geographic ratings, guarantee periods
- Materiality



## Grouping – Regulatory Debates

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- Extremes – Whole Company (1 projection) vs. Policy Forms (many projections)
- Question of offsets of deficiencies against sufficiencies
- Looking at possible modifications to HRGM



## LHATF – Possible Changes

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- Expand applicable lines of business to include 4 specified maximum groupings:
  1. Major Medical (inc. Med Supp, Dental, Vision, lines subject to inflation)
  2. LTC
  3. DI
  4. Limited Benefit (HI, CI, no cost trends)
- Within the 4 lines above, calculate PDR for material groups, sufficiencies are allowed to offset deficiencies within the line



## Additional Grouping Issues

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- Group and Individual may be combined within the 4 specified lines of business
- Some states may ignore the recommended changes to the HRGM. May require more detailed groupings at a smaller level.
- Not allow any offsets between sufficiencies and deficiencies regardless of groupings.



## Time Period

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- GPV – Longer Period (20 – 30 years) – most policies have lapsed off
- PDR – Shorter Period
  1. Short Term – contract period rates guaranteed or set – next policy anniversary or end of rate guarantee period
  2. Medium Term – several years till reflect underwriting impact



## Time Period – Issues

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- Later period gains offset earlier period losses?
- Losses in later years, but can cancel business, do you need PDR?
- HRGM – “ending of the time period is more difficult to determine, and requires a substantial amount of judgment”.
- HRGM - Discourages using later period gains to offset early losses and/or assuming you can cancel the business





## Assumptions

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- Premium Rate Increases – reasonable, market and regulatory restrictions
- Claim Trends – Underwriting wear-off, adverse selection due to rate increases, claim cost inflation
- Expenses – marginal vs. fully allocated  
HRGM – “If other lines of business can cover overhead expenses, the test for a deficiency and the calculation of the deficiency reserve can be performed using only direct costs”.  
Document how overhead expenses are covered in total if not assumed in PDR calculations



## Assumptions - continued

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- Investment Income – Confusing language in HRGM  
Life vs. P&C approach to discounting reserves caused some of language problems. Traditional reserve calculation that implicitly includes investment income vs. cash flow modeling that explicitly accounts for investment income.
- Taxes – Pre-tax vs. after-tax  
HRGM – “deficiency reserve should be calculated on a pre-tax basis; any tax impact related to the establishment of deficiency reserve should be incorporated into the calculation of deferred tax assets/liabilities under SSAP #10”.
- Margins – best estimate vs. margin for adverse deviation  
HRGM – no explicit requirement for margins – “reasonable” used throughout assumptions



## Documentation!!!

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- Proposed revisions to the HRGM have changed this section to be called "Disclosure and Documentation".
- Would require disclosing the contract groupings within each specified line of business. Any change in groupings would also need to be disclosed.
- If PDR not required for any grouping, must document and disclose actuarial tests that established none was necessary.
- If PDR required, documentation should include
  1. Description of groupings
  2. Assumptions used in analysis
  3. Time period of projections



## Future of PDR & GPV

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- Principles-based Valuation
- Life and Annuity Products – UL & Term
- LTC – AAA State LTC Task Force Principles-based Valuation Subgroup
- All Health Lines of Business?



## Case Study

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- American Academy of Actuaries – Life and Health Qualifications Seminar
- Sample case study to examine some of the issues surrounding establishing a premium deficiency reserve.

