Because the article and commentary provided by the professionals of our firm are often general in nature, we recommend that our readers seek the advice of an actuary or attorney before taking action.
Deficiency Reserves -
The Idea

Present Value of Net Premiums
minus
Present Value of Gross Premiums
Deficiency Reserves - The Current Reality

Minimum Reserve =

Present Value of Benefits

minus

Present Value of Lesser of Gross Premium or Net Premium
Deficiency Reserves Expressed Algebraically . . .

\[ V_x^{Def} = (P^M - G) \cdot \ddot{\bar{a}}_{x+t} - \left[ \left( A_{x+t} - P \cdot \ddot{\bar{a}}_{x+t} \right) - \left( A_{x+t}^M - P^M \cdot \ddot{\bar{a}}_{x+t} \right) \right] \]
Comparison of Deficiency Reserve and Basic Reserve Pattern

20 Year Level Term Policy

Basic Reserves

Deficiency Reserves
Comparison of Deficiency Reserve and Basic Reserve Pattern
Whole Life Policy
Comparison of Deficiency Reserve and Basic Reserve Pattern

Whole Life Policy (first 10 years)
Term Insurance - XXX

Deficiency Reserves =

Quantity A

Minus

Basic Reserve
Deficiency Reserve Mortality

Can be modified by:

- ‘80 CSO 10-Year select factors
- XXX select factors
- X% of the XXX select factors
- Any other table of select factors adopted by the NAIC
X Factor Restrictions

- Can vary by any factor that affects mortality
- Cannot be less than 20%
- Cannot decrease by policy year
More X Factor Restrictions

- PV death benefits using X factors ≥ PV death benefits using anticipated mortality
- Mortality rates with X factors ≥ anticipated mortality rates in each of the next 5 years
- Must meet requirements at each valuation date
More X Factor Restrictions

- May be decreased at future valuation dates if expected mortality decreases
- Must provide Actuarial Opinion and Memorandum if < 100%
Impact of Select Factors on Deficiency Reserves
20 Year Level Term Policy

- Basic Reserves
- Deficiency Reserves
- 10 Yr Select
- XXX Select
More Guidance... 

- Academy Practice Note for XXX
- Actuarial Standard of Practice #40
- Academy Practice Note for ASOP#40
XXX Exemptions

XXX defines exemptions to its segmentation methodology for YRT reinsurance, and Attained-age-based YRT policies.

In these exemptions, deficiency reserves are required using the classic definition.
Universal Life
Alternative Minimum Reserves

If $GMP < \text{Valuation Net Premium}$

Then the Minimum Reserve is calculated using by replacing the valuation net premium with the $GMP$
Product Features Common with AMR’s

- No-load products, if the guaranteed cost bases are similar to the valuation basis
- Guaranteed COIs < Valuation q’s
- Guaranteed Interest > Valuation
- Any feature that tends to lower the GMP
2001 CSO Table

- Can use select rates in 1st segment
- Can multiply select rates by X factors in 1st segment
- X factors have same restrictions as before
- Different mortality can be used for basic and deficiency reserves