

OVERALL

PROFITABILITY

LIQUIDITY

RESERVES

| RATIO | FORMULA | RANGE | INTERPRETATION | OTHER NOTES |
|---|--|--------------|--|--|
| ★ 1: GWP to PH Surplus | $\frac{(\text{Direct WP} + \text{Reins Assm (Aff + Non-Aff)})}{\text{PH Surplus}}$ | ≤900% | Measures adequacy of cushion to absorb losses (ignoring ceded premiums). high value = more risk in relation to surplus | Recalc if IRIS 4 is unusual Don't want gap between Ratios 1&2 to be too small or too large |
| ★ 2: NWP to PH Surplus | $\frac{\text{NWP}}{\text{PH Surplus}}$ | ≤300% | Measures adequacy of cushion to absorb losses (net of ceded premiums) high value = more risk in relation to surplus | Recalc if IRIS 4 is unusual Don't want gap between Ratios 1&2 to be too small or too large |
| ★ 3: Change in NWP | $\frac{(\text{CY NWP} - \text{PY NWP})}{\text{PY NWP}}$ | -33% to +33% | High or low indicates a lack of stability in operations High ratio could mean less strict underwriting req or writing new line | Familiarity with insurer (expanding in new area or writing new lob?) is helpful when interpreting |
| ★ 4: Surplus Aid to PH Surplus | $\frac{\text{Surplus Aid}}{\text{PH Surplus}}$ (See other side) | <15% | High = PH surplus may be inadequate. High surplus aid may conceal important results on other ratios | Must recalc IRIS 1, 2, 7, 10 and 13 with surplus aid removed from surplus if IRIS 4 is unusual. |
| 5: 2yr Op Ratio | $\frac{2 \text{ Yr Loss Ratio} + 2 \text{ Yr Expense Ratio} - 2 \text{ Yr Inv Income Ratio}}{\text{PH Surplus PY}}$ (See other side) | <100% | Low = better operating profit helps determine why operating profit could be bad - expenses, losses or investment | Recalc if IRIS 11 is unusual |
| 6: Investment Yield | $\frac{2 \times \text{NII Earned}}{(\text{Total Cash} + \text{Invested Assets CY \& PY} + \text{Inv Income Due \& Accrued CY \& PY} - \text{Borrowed Money CY \& PY} - \text{NII Earned})}$ | 2% to 5.5% | Too low = speculative instruments giving capital gains with no interim income Too high = high risk instruments | |
| 7: Gross Change in PH Surplus | $\frac{(\text{PH Surplus CY} - \text{PH Surplus PY})}{\text{PH Surplus PY}}$ | -10% to 50% | Low = dangerous surplus decrease (may be caused by decrease in net income) High = possible insolvency (surplus often goes up before insolvency) | Recalc if IRIS 4 is unusual Large increase may indicate instability/upcoming insolvency |
| 8: Change in Adj PH Surplus | $\frac{(\text{PH Surplus CY} - \text{Chng in Surplus Notes} - \text{Capital Pd in or transferred} - \text{Surplus Pd in or transferred} - \text{PH Surplus PY})}{\text{PH Surplus PY}}$ | -10 to 25% | Low = deterioration in financial condition due to operations High = improvement in financial condition due to operations | Helps highlight insurer's actual operations |
| 9: Adj Liabilities to Liquid Assets | $\frac{(\text{Total Liabilities} - \text{Liabilities Equal to deferred agents' balances})}{[(\text{Bonds} + \text{Stocks} + \text{Cash, Cash Eqv \& Short Term Inv} + \text{Receivables for Securities} + \text{Inv Inc Due and Accrued}) - \text{Invest in Parent, Subsid \& Affiliates}]}$ | <100% | High ratio means an insurer might have trouble meeting short term obligations | Increasing trend is a bad sign |
| 10: Gross Agents Bal to PH Surplus | $\frac{\text{Gross Agents' Balances in Collection}}{\text{PH Surplus}}$ | <40% | High ratio means that an agent might be slow in paying | Recalc if IRIS 4 is unusual Balances > 90 days overdue may need to be removed from admitted assets |
| ★ 11: One Yr Reserve Dev to PH Surplus | $\frac{1 \text{ Yr Loss Reserve Development}}{\text{PH Surplus PY}}$ | <20% | Positive = reserve deficiency; Negative = reserve redundancy | Can isolate LOB/AY using Sch P Pt 2 |
| ★ 12: Two Yr Reserve Dev to PH Surplus | $\frac{2 \text{ Yr Loss Reserve Development}}{\text{PH Surplus 2nd PY}}$ | <20% | Positive = reserve deficiency; Negative = reserve redundancy | Can isolate LOB/AY using Sch P Pt 2 |
| ★ 13: Est Curr Reserve Deficiency to PH Surplus | $\frac{\text{Estimated Reserve Deficiency}^*}{\text{PH Surplus}}$ (See other side) | <25% | Positive = reserve deficiency; Negative = reserve redundancy | Recalc if IRIS 4 is unusual Affected by changes in mix or prem volume Good test for correction of reserve deficiencies |

IRIS 4

Surplus Aid = ((Reinsurance Ceded Commissions + Reinsurance Ceded Contingent Commissions) / (Reinsurance Premiums Ceded - Affiliates and Non-Affiliates)) x (Unearned Premiums - Total Authorized, Unauthorized, Certified and Reciprocal Jurisdiction for Other US Unaffiliated Insurers, Mandatory & Voluntary Pools and Other Non-US Insurers)

IRIS 5

$$\frac{\text{Loss \& LAE CY \& PY + Dividends to PH CY \& PY}}{\text{EP CY + PY}} + \frac{\text{Other UW Expenses CY \& PY - Other Income CY \& PY}}{\text{WP CY + PY}} - \frac{\text{Investment Income Earned CY \& PY}}{\text{EP CY + PY}}$$

IRIS 13

A = 2nd PY Developed Loss & LAE Reserves to Premiums Ratio = (2nd PY Loss & LAE Reserves + 2 Yr Loss Reserve Development) / 2nd PY Premiums Earned

B = 1st PY Developed Loss & LAE Reserves to Premiums Ratio = (1st PY Loss & LAE Reserves + 1 Yr Loss Reserve Development) / 1st PY Premiums Earned

Estimated Loss & LAE Reserve Deficiency = (((A+B)/2) x CY Premiums Earned) - CY Loss & LAE Reserves

my notes: