

### III. LIFE, ACCIDENT & HEALTH RATIOS

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This chapter describes the financial ratios and offers suggestions for interpreting ratio results and for determining the types of further analysis that need to be performed. The purpose of IRIS is to assist state insurance departments in allocating resources to those insurers in the greatest need of regulatory attention.

The suggestions for analysis included in the discussion of each financial ratio are intended to assist state regulators in the interpretation of ratio results. The examiner or financial analyst should adjust the depth and direction of their analysis in accordance with their knowledge of the insurer and its particular circumstances.

Analysis should begin with a review of the insurer's ratio results. The analyst should note the ratios on which the insurer has values outside the usual ranges and the amounts by which such values deviate from those ranges.

All ratios are reported as percentages, rounded to the nearest percent. For Ratios 10 and 11, results are rounded to the nearest tenth of one percent.

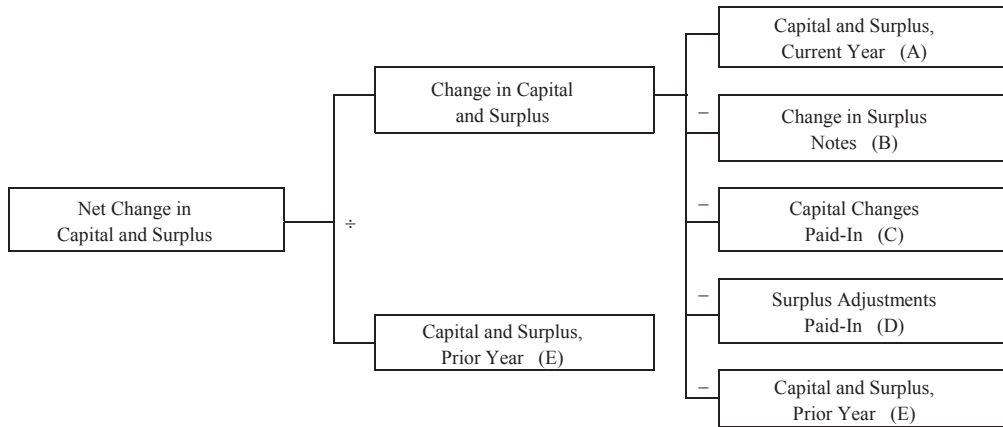
IRIS Ratio	Unusual Values Equal to or	
	Over	Under
1. Net Change in Capital and Surplus	50	-10
2. Gross Change in Capital and Surplus	50	-10
3. Net Income to Total Income (Including Realized Capital Gains & Losses)	---	0
4. Adequacy of Investment Income	900	125
5. Nonadmitted to Admitted Assets	10	---
6. Total Real Estate & Total Mortgage Loans to Cash & Invested Assets	30	---
7. Total Affiliated Investments to Capital and Surplus	100	---
8. Surplus Relief		
(Over \$5 Million Capital and Surplus)	30	-99
(\$5 Million or Less Capital and Surplus)	10	-10
9. Change in Premium	50	-10
10. Change in Product Mix	5.0	---
11. Change in Asset Mix	5.0	---
12. Change in Reserving	20	-20

U indicates result is automatically considered unusual.

NR indicates no result is calculated.



**LIFE/A&H OVERALL RATIO 1 – NET CHANGE IN CAPITAL AND SURPLUS**



- |                                      |                               |       |
|--------------------------------------|-------------------------------|-------|
| A. Capital and Surplus, Current Year | Page 3, Line 38, Column 1     | _____ |
| B. Change in Surplus Notes           | Page 4, Line 48, Column 1     | _____ |
| C. Capital Changes Paid-In           | Page 4, Line 50.1, Column 1   | _____ |
| D. Surplus Adjustments Paid-in       | Page 4, Line 51.1, Column 1   | _____ |
| E. Capital and Surplus, Prior Year   | PY: Page 3, Line 38, Column 1 | _____ |

Result = (A–B–C–D–E) / E \* 100 \_\_\_\_\_ %

- If A is zero or negative, result is -99.
- If E is zero or negative and A is positive, result is 999.
- If commenced business date is current year, no result is calculated (NR).

The Net Change in Capital and Surplus ratio is the most general measure of the improvement or deterioration in an insurer’s financial condition during the year. It does not consider capital and surplus paid-in to reflect the impact of operations on capital and surplus.

The usual range includes all results greater than -10 percent and less than 50 percent. If the Change in Capital and Surplus ratio equals or falls below the -10 percent range limit or equals or goes above the 50 percent range limit, further analysis should be conducted to determine the reasons behind the decrease or increase in capital and surplus and whether a trend is developing.

Review the capital and surplus account on the Summary of Operations page of the annual financial statement. If the only significant change in capital and surplus resulted from operations (including capital gains and losses), refer to the suggestions discussed under Ratio 3, Net Income to Total Income.

## LIFE/A&H OVERALL RATIO 1 – NET CHANGE IN CAPITAL AND SURPLUS

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Factors other than operations likely to have a significant negative impact on capital and surplus include:

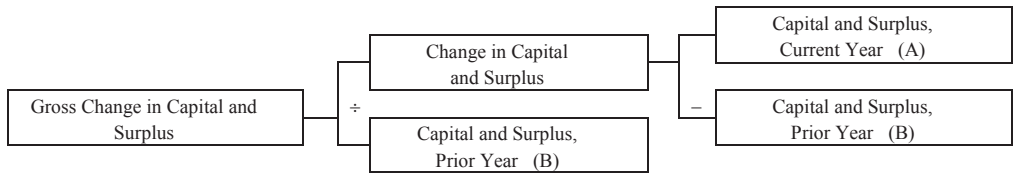
1. Stockholder dividends - Review the amount of dividends paid to stockholders to determine if it was appropriate, considering the insurer's net income (loss) and general financial condition. Evaluate the insurer's dividend policy to determine if over the past five years it has been consistent with protecting the insurer's ability to meet its financial obligations to policyholders.
2. Change in unrealized capital gains and losses on investments - Review the Exhibit of Capital Gains (Losses) in the annual financial statement. Compare the current year-end components to the prior year-end components to determine which categories of investments are responsible for the changes in unrealized capital gains and losses. Determine if unrealized capital losses on common stock were caused by decreases in the value of affiliates. Review the affiliate(s) for potential solvency issues. Review the Assets page of the annual financial statement and Schedules A through DB to gain an understanding of how the insurer's assets are currently invested. Compare changes in unrealized capital gains and losses to those experienced by other insurers investing in the same classes of assets during the same time period. If large decreases have occurred, review the annual financial statement investment schedules, the MD&A and other available information to determine if the insurer has taken any action to protect itself against further losses. If large increases have occurred, based on current stock market and economic information, determine if improvements in the stock market may have created a temporary increase to capital and surplus.
3. Increases in reserves due to valuation changes – Review Exhibit 5A and review the insurer's result on Ratio 12, Change in Reserving. Also, review the results of the Department's last reserve valuation. If the insurer appears to have been under-reserved, determine if the recent change in valuation basis corrected the problem, or if further decreases in surplus may be anticipated.
4. Losses from nonadmitted assets – Determine the source (or sources) of the losses from the Assets page and the Exhibit of Nonadmitted Assets page of the annual financial statement. Review the insurer's result on Ratio 5, Nonadmitted to Admitted Assets, and refer to the suggestions for further analysis under the section "Life/A&H Investment Ratios" later in this manual.
5. Change in accounting principle – Review Notes to financial statement #2 to determine the nature of the changes. Compare the insurer's changes for consistency with changes experienced by other insurers with similar lines of business. Evaluate if the changes are expected to have a material impact on current year operations and future periods.
6. Change in net deferred income tax – Review Notes to financial statement #9 to obtain a greater understanding of the sources of the insurer's book/tax differences and the changes in these items during the current year.

## **LIFE/A&H OVERALL RATIO 1 – NET CHANGE IN CAPITAL AND SURPLUS**

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Also, determine the amount of any increases in capital and surplus from the capital and surplus account on the Summary of Operations page of the annual financial statement. Determine whether these increases partially masked other significant decreases in capital and surplus and whether the decreases are likely to be repeated in future years. Keep in mind that capital and surplus paid-in is netted out of the Net Change in Capital and Surplus ratio. See Ratio 2, Gross Change in Capital and Surplus, which does not exclude paid-in capital and surplus from the calculation of the ratio.

**LIFE/A&H OVERALL RATIO 2 – GROSS CHANGE IN CAPITAL AND SURPLUS**



A. Capital and Surplus, Current Year Page 3, Line 38, Column 1 \_\_\_\_\_  
 B. Capital and Surplus, Prior Year PY: Page 3, Line 38, Column 1 \_\_\_\_\_

Result = (A-B) / B \* 100 \_\_\_\_\_ %

- If A is zero or negative, result is -99.
- If B is zero or negative and A is positive, result is 999.
- If commenced business date is current year, no result is calculated (NR).

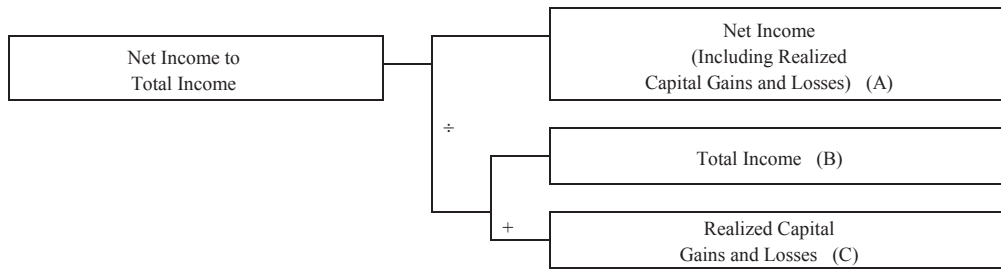
The Gross Change in Capital and Surplus ratio is a measure of improvement or deterioration in the insurer’s financial condition during the year. It does take into account capital and surplus, including surplus notes, paid-in during the year. The usual range includes all results greater than -10 percent and less than 50 percent.

This ratio should be reviewed along with the review of Ratio 1, Net Change in Capital and Surplus. The interpretation comments that apply to Ratio 1 also apply to Ratio 2. However, if the insurer had paid-in capital and surplus during the year, the result for Ratio 2 may be significantly better than the result for Ratio 1. If capital and/or surplus were not paid-in during the year, the results of Ratios 1 and 2 should be the same.

If Ratio 2 is negative or reflects a result less than the lower limit of the range despite paid-in capital and surplus, the reasons for the decrease to capital and surplus should be analyzed to determine the causes of the decrease and if the causes represent a trend. Operational problems may be a possibility if the results are part of a trend over a period of years.

If the result of Ratio 2 is higher than the result of Ratio 1, it may indicate a strong parent willing to maintain an adequate level of capital and surplus in its subsidiary. In some instances, a review of the nature of the assets funding the additional capital and surplus paid-in may be appropriate. Factors such as the stability of the parent, whether the insurance group is publicly held and the parent’s access to capital should be considered.

**LIFE/A&H OVERALL RATIO 3 – NET INCOME TO TOTAL INCOME  
(INCLUDING REALIZED CAPITAL GAINS AND LOSSES)**



- |                                  |                           |       |
|----------------------------------|---------------------------|-------|
| A. Net Income                    | Page 4, Line 35, Column 1 | _____ |
| B. Total Income                  | Page 4, Line 9, Column 1  | _____ |
| C. Realized Capital Gains/Losses | Page 4, Line 34, Column 1 | _____ |

Result =  $A / (B+C) * 100$  \_\_\_\_\_ %

- If (B+C) is zero or negative and A is positive, no result is calculated (NR).
- If (B+C) is zero or negative and A is zero or negative, result is automatically considered unusual (U).

Net income (including realized capital gains and losses) is a measure of the insurer’s profitability. The usual range for this ratio includes all results greater than zero.

From the current and previous reports of financial ratio results, review the trend in the Net Income to Total Income ratio and review the income or loss by product line on the Analysis of Operations by Lines of Business page of the annual financial statement. Keep in mind that the insurer has considerable discretion in allocating expenses among product lines and that realized capital gains and losses are not allocated by line on the Analysis of Operations by Lines of Business page. If an insurer’s losses result from a few product lines, the following analysis may be done for only those lines of business.

Five principal factors affect the insurer’s net income, as reflected in this ratio:

1. Mortality and morbidity – Review the trend in benefits paid as a percentage of premiums by product line. If these ratios have increased, consider requesting supplemental information on mortality and morbidity experience and consult the department's actuary to determine the financial implications of the insurer’s mortality and morbidity experience.
2. Adequacy of investment income – See Ratio 4, Adequacy of Investment Income. If investment income is significantly less than the interest required to maintain policy reserves and interest credited on deposit funds, the probability of financial difficulty is high and the increase in reserves understates the true expense associated with future benefit payments. On the other hand, if investment income is greater than the interest required to maintain policy reserves and interest credited on deposit funds, ultimately the business will probably be more profitable than indicated by the current net income or loss.

### **LIFE/A&H OVERALL RATIO 3 – NET INCOME TO TOTAL INCOME**

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3. Commissions and expenses – High commissions and expenses could be caused by excessive spending or a high growth rate. Loose control over expenses, in general, may not pose an immediate threat to solvency. However, excessive spending may indicate that the insurer's management attitude and objectives are not consistent with the long-term financial security of policyholders.
4. Relationship of statutory reserve requirements to prevailing interest and mortality rates - When statutory reserve requirements are materially more conservative than prevailing interest and mortality rates, an insurer basing its rates for new business on prevailing rates will suffer an apparent loss from operations. This is particularly noticeable for insurers writing substantial amounts of annuity business when prevailing interest rates are materially higher than the maximum interest rate permitted for statutory reserves (6 percent for most states). Such insurers are exposed to the risk that interest rates may decline in the future to the point where their renewal premiums may prove to be inadequate. (See the results of Ratio 4, Adequacy of Investment Income).
5. Realized capital gains and losses – Life insurers are required to establish an interest maintenance reserve (IMR). The reserve captures the realized capital gains and losses resulting from changes in the general level of interest rates. These gains and losses are amortized into investment income over the approximate remaining life of the investments sold. Realized capital gains are reported in the Summary of Operations net of transfers to the IMR.



## LIFE/A&H INVESTMENT RATIOS

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For life insurers, investments represent a particularly critical element in insurer performance and stability. Ratios 4, 5, 6 and 7 concern various investment aspects of significance in analyzing the financial condition of an insurer. Familiarize yourself with the insurer's investments on the Assets page of the annual financial statement and review the insurer's results on Ratio 11, Change in Asset Mix, to assist in determining the stability of the insurer's investment policy.

Review Ratio 5, Nonadmitted to Admitted Assets. For insurers with ratio results of 10 percent and above, review the Assets page and the Exhibit of Nonadmitted Assets page of the annual financial statement to determine the nature of the nonadmitted assets and the reasons for non-admission. Compare the amount of nonadmitted assets with capital and surplus to determine the impact of nonadmitted assets on the financial condition of the insurer.

Review the amount of investments in affiliated insurers and receivables from affiliates as a percentage of invested assets and as a percentage of capital and surplus (Ratio 7). If the amount is high, an insurer may experience illiquidity or a low yield. Large investments in affiliated insurers may also increase the overall risk to which an insurer is subject. Determine whether the insurer's investments in and amounts due from affiliates are consistent with protecting the interest of policyholders.

Review the insurer's investment in real estate and mortgages and the relationship of that investment to cash and invested assets (Ratio 6). A high result may indicate higher asset risk and possible liquidity concerns.

It is helpful to consider the insurer's investments from three points of view:

1. Risk – Certain classes of investments are generally more risky than others. For example, equity investments (such as stocks and real estate) tend to experience greater fluctuations in value than investments in debt (such as bonds and mortgage loans). Review the insurer's mix of assets. Compare the percentage of invested assets in equities with the ratios for similar insurers. Also, determine the percentage of each component of the asset valuation reserve to the appropriate investment in the various assets. Information provided in the annual financial statement with regard to derivative instruments should be reviewed carefully.
2. Return – Determine from the Exhibit of Net Investment Income the gross yield on each of the major classes of assets. Compare these to the interest requirements reflected in Exhibit 5 and the Interest Sensitive Life Insurance Products Report. This should show the degree of inadequacy of investment income resulting from large investments in assets that produce little or no current income. Some insurers may forego a certain amount of current income in the expectation of capital gains. Therefore, also compare

the insurer's capital gains and losses, by type of investment [from the Exhibit of Capital Gains (Losses)], with other insurers over a period of several years. If the insurer has experienced large gains or losses, review Schedules A through E and attempt to determine whether the insurer's investments may be unduly speculative.

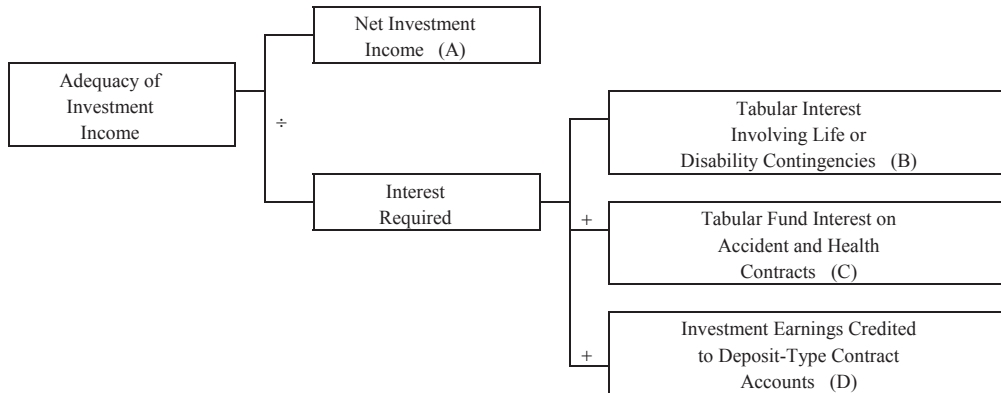
3. Liquidity – In the past, investment liquidity has been less important for life insurers than for accident and health and property/casualty insurers because of the long-term nature of the conventional life insurance contract. This has changed over the years. With many new products on the market, liquidity has become important to many life insurers. For any insurance company with a real and immediate potential for cash outflow, a problem arises if the realizable market value of investments is sufficiently below the statement value.

Under the present system of statutory life insurance accounting, equity securities are carried at market value while other investments are generally valued at cost. Some cash outflow situations could arise from conditions such as a sudden large spurt of new issues involving considerable sales and issue expense, a slow attrition by a mature block of business with declining sales, or sudden demand for policy loans or cash surrenders.

It is important when reviewing the distribution of an insurer's assets to consider 1) the possibility of cash outflow, as determined by the nature of the insurer's business; and 2) the ability of the insurer to withstand such a cash demand without undue deterioration of the asset portfolio. The summaries of the maturity distribution of bonds reported in Schedule D, Part 1A, short-term investment holdings reported in Schedule DA, Part 1 and the Cash Flow schedule of the annual financial statement are helpful in reviewing the insurer's liquidity.

Because an asset adequacy analysis is required by the *Standard Valuation Law* and the accompanying *Actuarial Opinion and Memorandum Model Regulation*, the insurer's actuarial opinion and supporting actuarial memorandum (if requested) should be reviewed carefully.

**LIFE/A&H INVESTMENT RATIO 4 – ADEQUACY OF INVESTMENT INCOME**



A. Net Investment Income	Page 4, Line 3, Column 1	_____
B. Tabular Interest Involving Life or Disability Contingencies	Page 7, Line 4, Column 1	_____
C. Tabular Fund Interest on A&H Contracts	Page 14, Exhibit of Aggregate Reserve for A&H Contracts, Line 18, Column 1	_____
D. Investment Earnings Credited to Deposit-Type Contract Accounts	Page 15, Exhibit of Deposit-Type Contracts, Line 3, Column 1	_____
Result = $A / (B+C+D) * 100$		_____ %

- If (B+C+D) is zero, result is 999.
- If insurer has no beginning or ending reserves per page 7 of the annual financial statement and item B is zero, no result is calculated (NR).

This ratio indicates whether an insurer’s investment income is adequate to meet the interest requirements of its reserves. The adequacy of investment income in meeting an insurer’s interest obligations is a key element in an insurer’s profitability.

The usual range includes all results greater than 125 percent and less than 900 percent.

A ratio of 125 percent or less may indicate that an insurer’s investment yield is not adequate to meet its interest requirements. This may result from a low yield, or from interest guarantees or other interest requirements that may be too high for the investment environment of the insurer.

A ratio of 900 percent or more may indicate reporting errors concerning items of the interest required, as listed above, and should require an investigation concerning the method of determining interest required.

#### **LIFE/A&H INVESTMENT RATIO 4 – ADEQUACY OF INVESTMENT INCOME**

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Analysis of the reasons for a low investment yield may reveal significant problems. Low yields may be caused by:

1. Speculative investments intended to produce large capital gains over the long run but providing little income in the interim – Analysis should focus on the proper valuation of these investments and a determination of their stability and liquidity. This includes a review of the hedging program and derivatives on Schedule DB, which may actually be speculative.
2. Large investments in affiliated companies or enterprises under the control of company management or owners – Analysis should focus on the propriety of these investments and their value and liquidity.
3. Large investments in home office facilities – Analysis should focus on the ability of the insurer to afford its facilities while maintaining liquidity and on the appropriateness of the amount of rent charged to underwriting expenses and credited to investment income.
4. Large investments in tax-exempt bonds – Analysis should focus on an estimate of the current market value of such securities, which might be substantially less than book/adjusted carrying value if the securities are long-term, tax-exempt bonds purchased many years ago. If an insurer is currently paying federal income taxes and has large amounts of tax-exempt securities, its after-tax yield would be comparable to that of other insurers with a substantially higher before-tax yield derived from taxable securities. Such an investment policy is often a sign of financial strength and stability.
5. Significant interest payments on borrowed money – Large borrowings by an insurer may result in significant interest payments, which will reduce the insurer's investment yield. Some reinsurance contracts may also require interest payments, which will also reduce the yield. In either instance, apart from the reduction in yield, these situations should be investigated further to determine if they are symptomatic of other problems, such as lack of liquidity.
6. Extraordinarily high investment expenses – Although an insurer may be investing in assets that would be expected to provide an adequate return, investment expenses and other deductions from investment income may be reducing the net investment yield below a point at which investment income is adequate.

While investment yields may be adequate, an insurer may have interest requirements that exceed the investment income received. This situation may be caused by:

1. Unreasonably high interest guarantees by the insurer – In order to sell its contracts, an insurer may have set guaranteed interest rates on its contracts at unreasonably high levels. If the guarantee period is too long, an insurer may be trapped in a period of declining interest rates with a guaranteed rate that is higher than the return it is able to realize on its investments.

#### **LIFE/A&H INVESTMENT RATIO 4 – ADEQUACY OF INVESTMENT INCOME**

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2. Poor management of investments as they relate to the type of contracts an insurer may be writing – In the past, conventional life insurance products permitted long-term investments that matched the long-term nature of the contracts. Newer products require investments that match their particular requirements including cash flow.

See also the general comments on investments, “Life/A&H Investment Ratios,” preceding this ratio.

**LIFE/A&H INVESTMENT RATIO 5 – NONADMITTED TO ADMITTED ASSETS**

Nonadmitted to Admitted Assets	÷	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Nonadmitted Assets (A)</td> </tr> <tr> <td style="text-align: center;">Admitted Assets (B)</td> </tr> </table>	Nonadmitted Assets (A)	Admitted Assets (B)
Nonadmitted Assets (A)				
Admitted Assets (B)				

A. Nonadmitted Assets	Page 2, Line 28, Column 2	
B. Admitted Assets	Page 2, Line 28, Column 3	

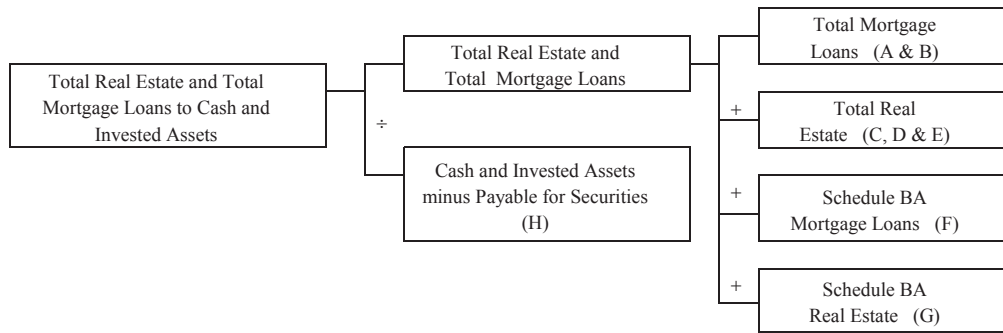
Result = A / B \* 100 %

- If B is zero or negative and A is positive, result is 999.
- If A and B are both zero or negative, result is zero.

This ratio measures the degree to which an insurer has acquired nonadmitted assets that may represent either nonproductive assets or risky investments.

The usual range includes all results less than 10 percent. See the general comments on investments titled “Life/A&H Investment Ratios,” preceding Ratio 4.

**LIFE/A&H INVESTMENT RATIO 6 – TOTAL REAL ESTATE AND TOTAL MORTGAGE LOANS TO CASH AND INVESTED ASSETS**

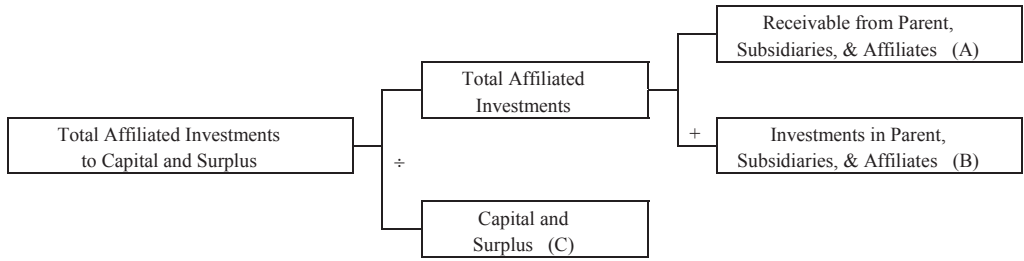


A. Mortgage Loans – First Liens	Page 2, Line 3.1, Column 3	_____
B. Mortgage Loans – Other	Page 2, Line 3.2, Column 3	_____
C. Real Estate – Properties Occupied by the Company	Page 2, Line 4.1, Column 3	_____
D. Real Estate – Properties Held for the Production of Income	Page 2, Line 4.2, Column 3	_____
E. Real Estate – Properties Held for Sale	Page 2, Line 4.3, Column 3	_____
F. Schedule BA – Mortgage Loans	Page E07, Line 0999999 + 1099999 + 1999999 + 2099999, Column 12	_____
G. Schedule BA – Real Estate	Page E07, Line 1799999 + 1899999, Column 12	_____
H. Cash and Invested Assets minus Payable for Securities	(Page 2, Line 12, Column 3) – (Page 3, Line 24.09, Column 1)	_____
Result = [(A+B+C+D+E+F+G) / H] * 100		_____ %
<ul style="list-style-type: none"> <li>• If H is zero or negative and (A+B+C+D+E+F+G) is positive, result is 999.</li> <li>• If (A+B+C+D+E+F+G) and H are both zero or negative, result is zero.</li> </ul>		

This ratio reflects the percentage of cash and invested assets that are invested in real estate and mortgage loans. Real estate and mortgage loans may be overstated. Excessive investment in real estate and mortgage loans, investment in non-income producing real estate, and overdue or restructured mortgage loans are relatively common sources of financial difficulty.

Results less than 30 percent are included in the usual range for all insurers. See the general comments on investments titled “Life/A&H Investment Ratios,” preceding Ratio 4.

**LIFE/A&H INVESTMENT RATIO 7 – TOTAL AFFILIATED INVESTMENTS TO CAPITAL AND SURPLUS**



A. Receivable from Parent, Subs., & Affiliates	Page 2, Line 23, Column 3	_____
B. Investments in Parent, Subs., & Affiliates	Page 22, Line 50, Column 1	_____
C. Capital and Surplus	Page 3, Line 38, Column 1	_____

Result = (A+B) / C \*100 \_\_\_\_\_ %

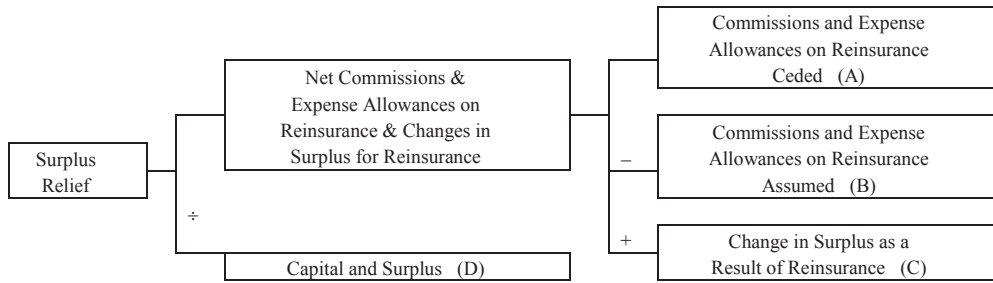
- If C is zero or negative and (A+B) is positive, result is 999.
- If (A+B) and C are zero or negative, result is zero.

This ratio is a measure of the amount of capital and surplus invested in affiliated investments and receivables that may not be liquid or available to meet policyholder obligations.

A relatively large value for this ratio should be questioned. The usual range includes all results less than 100 percent. See the general comments on investments titled “Life/A&H Investment Ratios,” preceding Ratio 4.



**LIFE/A&H SURPLUS RELIEF RATIO 8 – SURPLUS RELIEF**



- |  |                             |       |
|--|-----------------------------|-------|
| A. Comm. & Expense Allowances on Reinsurance Ceded   | Page 6, Line 6, Column 1    | _____ |
| B. Comm. & Expense Allowances on Reinsurance Assumed | Page 6, Line 22, Column 1   | _____ |
| C. Change in Surplus as a Result of Reinsurance      | Page 4, Line 51.4, Column 1 | _____ |
| D. Capital and Surplus                               | Page 3, Line 38, Column 1   | _____ |

Result = (A-B+C) / D \* 100 \_\_\_\_\_ %

- If D is zero or negative, result is 999.

A positive value for this ratio generally indicates a temporary increase to surplus because often no liability is established for the unearned portion of reinsurance commissions and expense allowances ceded. A large positive value for this ratio may indicate that company management believes its surplus is inadequate.

This ratio result will be negative for insurers with large amounts of reinsurance assumed in relation to direct business. An extreme negative value may indicate that the additional reserves required for reinsurance assumed are beginning to strain capital and surplus or that excessive commissions and expenses are being incurred by the insurer in acquiring this business.

Results greater than -10 percent and less than 10 percent are included in the usual range for those insurers with capital and surplus of \$5 million or less. For insurers with capital and surplus in excess of \$5 million, the usual range includes results which are greater than -99 percent and less than 30 percent.

## **LIFE/A&H CHANGE IN OPERATIONS RATIOS**

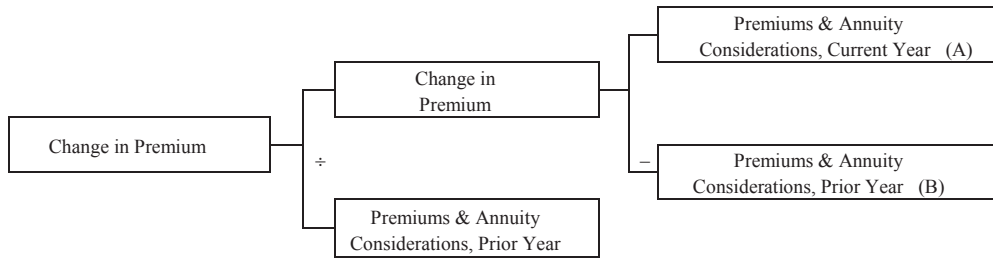
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In evaluating the significance of the following ratios for a particular insurer, familiarity with the insurer's history, management and operations are of particular importance. If an insurer increases or decreases its premium rapidly, changes its mix of products or assets, or alters its ratio of reserve increases to premium, key areas should be reviewed: management's business plan, management's control of the situation, and knowledge and experience required to maintain financial strength while operations are changing dramatically.

The analyst should determine the reasons for the changes in operations. For example, rapid premium growth or a decision to cease writing one or more products may have been the result of changes in the sales and distributions systems, exiting or entering an insurance market, changes in the economic environment, product development, or changes in the insurer's business plan. A change in the business plan may be indicated by the following ratios and may result from a change in company ownership or management.

Changes in the asset mix may also be indicative of changes in ownership and management or changes in the business focus of the insurer. A review of the insurer's investment strategy would assist in understanding management's investment philosophy. Life and health insurers should be reviewed carefully during their first years under new ownership or management.

**LIFE/A&H CHANGE IN OPERATIONS RATIO 9 – CHANGE IN PREMIUM**



- A. Premiums & Annuity Considerations, Current Year      Page 49, Line 99, Column 2, 3, 4, 5, 7      \_\_\_\_\_
- B. Premiums & Annuity Considerations, Prior Year      PY: Page 49, Line 99, Column 2, 3, 4, 5, 7      \_\_\_\_\_

Result = (A-B) / B \* 100      \_\_\_\_\_ %

- If A and B are both zero or negative, result is zero.
- If B is zero or negative and A is positive, result is 999.
- If commenced business date is current year, no result is calculated (NR).

This ratio represents the percentage change in premium from the prior to the current year.

The usual range includes all results less than 50 percent and greater than -10 percent. See the general comments preceding this ratio, “Life/A&H Change in Operations Ratios.”

**LIFE/A&H CHANGE IN OPERATIONS RATIO 10 – CHANGE IN PRODUCT MIX**

	CURRENT YEAR AMOUNT (1)	CY % OF TOTAL (2)	PRIOR YEAR AMOUNT (3)	PY % OF TOTAL (4)	COL (2) LESS COL (4)% (5)
Premiums & Annuity Considerations					
Page 6, Line 1					
A. Industrial Life, Column 2	_____	_____	_____	_____	_____
B. Ordinary Life Ins., Column 3	_____	_____	_____	_____	_____
C. Ind. Annuities, Column 4	_____	_____	_____	_____	_____
D. Credit Life, Column 6	_____	_____	_____	_____	_____
E. Group Life, Column 7	_____	_____	_____	_____	_____
F. Group Annuities, Column 8	_____	_____	_____	_____	_____
G. Group A&H, Column 9	_____	_____	_____	_____	_____
H. Credit A&H, Column 10	_____	_____	_____	_____	_____
I. Other A&H, Column 11	_____	_____	_____	_____	_____
J. Total	_____	_____	_____	_____	_____
K. Total of Ratio Column 5 Disregarding Sign					_____

Result = K / 9

\_\_\_\_\_ %

- If J for either current or prior year is zero or negative, no result is calculated (NR).
- Ratio is calculated as follows: First determine the percentage of premium from each product line for CY and PY. Next, determine the difference in the percentage of premium between the two years for each product line. Finally, the total of these differences, without regard to sign, is divided by the number of product lines to determine the change in the percentage of premium for the average product line.

The result of this ratio represents the average change in the percentage of total premium from each product line during the year. The product lines are those defined in the Analysis of Operations by Line of Business page of the annual financial statement.

The usual range includes results less than 5 percent. See the general comments titled "Life/A&H Change in Operations Ratios," preceding Ratio 9.

**LIFE/A&H CHANGE IN OPERATIONS RATIO 11 – CHANGE IN ASSET MIX**

Assets Page 2, Column 3	CURRENT YEAR AMOUNT (1)	CY % OF TOTAL (2)	PRIOR YEAR AMOUNT (3)	PY % OF TOTAL (4)	COL (2) LESS COL (4)% (5)
A. Bonds – Line 1					
B. Preferred Stocks – Line 2.1					
C. Common Stocks – Line 2.2					
D. Mortgage Loans – First Liens – Line 3.1					
E. Mortgage Loans – Other – Line 3.2					
F. Real Estate – Properties Occupied by Company – Line 4.1					
G. Real Estate – Properties Held for the Production of Income – Line 4.2					
H. Real Estates – Properties Held for Sale Line 4.3					
I. Contract Loans – Line 6 minus inside amount 1					
J. Premium Notes – Inside amount 1 of Line 6					
K. Derivatives – Line 7					
L. Cash, Cash Equivalents & Short-Term – Line 5					
M. Other Invested Assets – Line 8					
N. Receivable for Securities – Line 9 minus Payable for Securities – Page 3, Line 24.09, Column 1					
O. Securities Lending Reinvested Collateral Assets – Line 10					
P. Aggregate Write-Ins for Invested Assets – Line 11					
Q. Total					
R. Total of Ratio Column 5 Disregarding Sign					
Result = R / 16					%

- If Q for either current or prior year is zero or negative, result is automatically considered unusual (U).
- Ratio is calculated as follows: First determine the percentage of total assets from each asset type for CY and PY. Next, determine the difference in the percentage of assets between the two years for each asset type. Finally, the total of these differences, without regard to sign, is divided by the number of asset types to determine the change in the percentage of assets for the average asset type.

This ratio result represents the average change in the percentage of total cash and invested assets for the classes of assets listed above less payable for securities from the Liabilities, Surplus and Other Funds page of the annual financial statement.

The usual range includes all results less than 5 percent. See the general comments on investments titled “Life/A&H Investment Ratios,” preceding Ratio 4 and the comments titled “Life/A&H Change in Operations Ratios,” preceding Ratio 9.

**LIFE/A&H CHANGE IN OPERATIONS RATIO 12 – CHANGE IN RESERVING**

		CURRENT YEAR	PRIOR YEAR
A. Increase in Agg. Reserves – Industrial Life	Page 6, Line 19, Column 2	_____	_____
B. Increase in Agg. Reserves – Ordinary Life Ins.	Page 6, Line 19, Column 3	_____	_____
C. Net Single Premiums – Industrial Life	Page 9, Line 10.4, Column 2	_____	_____
D. Net Renewal Premiums – Industrial Life	Page 9, Line 19.4, Column 2	_____	_____
E. Net Single Premiums – Ordinary Life Ins.	Page 9, Line 10.4, Column 3	_____	_____
F. Net Renewal Premiums – Ordinary Life Ins.	Page 9, Line 19.4, Column 3	_____	_____
Result = $[(CY (A+B) / (C+D+E+F)) - (PY (A+B) / (C+D+E+F))] * 100$			_____ %

- If (A+B) and (C+D+E+F) for current or prior year are both zero or negative,  $(A+B) / (C+D+E+F) = 0$  for that year.
- If (A+B) is positive and (C+D+E+F) is zero or negative for current or prior year,  $(A+B) / (C+D+E+F) = 100\%$  for that year.
- This ratio represents the number of percentage points of difference between the reserving ratio for current and prior years. For each of these years, the reserving ratio is equal to the aggregate increase in reserves for individual life insurance taken as a percentage of renewal and single premiums for individual life insurance.

Positive ratio results indicate an increase in this ratio from the prior year. Negative results indicate a decrease. The usual range of the number of percentage points of difference between the reserving ratios for current and prior years includes all results less than 20 percent but greater than -20 percent. For insurers with no industrial or ordinary life lines of business, a ratio value of zero, which is within the range of acceptability for the ratio, will be reported. See the comments titled “Life/A&H Change in Operations Ratios,” preceding Ratio 9.