

## METHODOLOGY

Beginning with the 2019 report, using 2018 annual statement data, several calculations were modified in accordance with proposed and approved changes by members of the Statistical Data (C) Working Group. Calculations were revised to match elements on direct business where possible. The changes only affect the results of the 2018 and future data years. Calculations were not changed retroactively to modify prior year results included in the 2019 publication. A description of the changes with prior and new calculations is included below. Provide Link

- Ceded reinsurance premiums payable is now allocated to state based on the ratio of each state's direct premiums written for each line to the countrywide direct premiums written for the line from the Exhibit of Premiums and Losses (State page) instead of the ratio of each state's direct premiums earned for each line to the countrywide all lines net premiums earned from the Statement of Income. Allocation to line of business is completed by multiplying the result from the prior step by each line's ceded premiums written from the Underwriting and Investment Exhibit Part 1B. The allocation to state now uses premiums written instead of premiums earned to match amounts payable more appropriately.
  - Prior to 2018 Data: Ceded Reinsurance Premiums Payable =  $\left[\frac{\text{Page 8, Column 4 + Column 5} \times \text{F1}}{\text{Page 4, Column 1 Line 1}}\right] \times \text{Page 19, Column 2}$
  - Beginning with 2018 Data: Ceded Reinsurance Premiums Payable =  $\left[\frac{\text{Page 8, Column 4 + Column 5} \times \text{F1}}{\text{Page 19, Column 1 Countrywide}}\right] \times \text{Page 19, Column 1}$
- Ceded reinsurance premiums payable is now added instead of subtracted in the estimated investment gain as payables represent investable funds.
  - Prior to 2018 Data:  $(n8aA + n8aC + n8aD - n8aF - n8aF2 - n8aG) \times n8aH$
  - Beginning with 2018 Data:  $(n8aA + n8aC + n8aD - n8aF + n8aF2 - n8aG) \times n8aH$
- Agents' balances are allocated using direct premium written, instead of direct premium earned, from the State page.
  - Prior to 2018 Data: Agents' Balances = Page 19, Column 2 x E
  - Beginning with 2018 Data: Agents' Balances = Page 19, Column 1 x E
- Investment Gain Ratio uses countrywide direct all lines mean loss, LAE and unearned premium reserves from the State page plus mean ceded reinsurance premiums payable net of ceding commissions from the Liability, Surplus and Other Funds Exhibit. Surplus is added as adjusted by the surplus adjustment factor, and the total is reduced by agents' balances from the Insurance Expense Exhibit Part III. This change was made for consistency to pull direct numbers where feasible as opposed to the prior calculation, which included net amounts for many data elements.
  - Prior to 2018 Data: Investment Gain Ratio =  $(\text{ADAF} \times \text{Page 4, Column 1, Line 11}) / \left[\left(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Line 12, Current Year} + (\text{SAF} \times \text{Line 37, Current Year}) + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year}\right)\right]$

+ Line 3, Prior Year + Line 12, Prior Year + (SAF x Line 37, Prior Year) + Page 6, Column 2, Line 35 – Page 2, Column 3, Line 15.1, Current Year – Line 15.2, Current Year – Page 2, Column 3, Line 15.1, Prior Year – Line 15.2, Prior Year) / 2]

- Beginning with 2018 Data: Investment Gain Ratio = (ADAF x Page 4, Column 1, Line 11) / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + ((Page 3, Column 1, Line 12, Current Year + Page 3, Column 1, Line 12, Prior Year) / 2) + ((SAF Current Year x Page 3, Column 1, Line 37, Current Year + SAF Prior Year x Page 3, Column 1, Line 37 Prior Year) / 2) – (((IEE, Part III, Column 2, Line 35 + IEE, Part III, Column 21, Line 35) / 2) / IEE, Part III, Column 2, Line 35 x Page 19, Column 1, Line 35 Countrywide)]
- Surplus Ratio now uses the countrywide direct all lines loss, LAE, unearned premium reserves and earned premium from the State page. This is done to better align with the allocation done by state calculated using direct figures.
  - Prior to 2018 Data: Surplus Ratio = [((SAF x Page 3, Column 1, Line 37, Current Year) + (SAF x Page 3, Column 1, Line 37, Prior Year)) / 2] / [((Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35) / 2) + Page 4, Column 1, Line 1]
  - Beginning with 2018 Data: Surplus Ratio = [((SAF x Page 3, Column 1, Line 37, Current Year) + (SAF x Page 3, Column 1, Line 37, Prior Year)) / 2] / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + Countrywide All Lines Premiums Earned]
- Premium Deficiency Reserve Ratio was modified to remain consistent with the Surplus Ratio. It now uses the countrywide direct all lines loss, LAE, unearned premium reserves and earned premium from the State page.
  - Prior to 2018 Data: Premium Deficiency Reserve Ratio = [(Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Current Year + Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Prior Year) / 2] / [((Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35)/2) + Page 4, Column 1, Line 1]
  - Beginning with 2018 Data: Premium Deficiency Reserve Ratio = [(Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Current Year + Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Prior Year) / 2] / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean Loss Adjustment Expense Reserves + Countrywide All Lines Mean Unearned Premiums + Countrywide All Lines Premiums Earned]
- Tax law changes, effective in 2018, reduced the tax rate from 35% to 21%.

## FORMULAS FOR 2022 - Direct

(Note: Column 2 through Column 8C results are divided by Column 1 and multiplied by 100. The results of Column 9 through Column 11 are all divided by the amount in item 9M and multiplied by 100.)

1. Direct Premiums Earned  
Page 19, Column 2
2. Losses Incurred  
Page 19, Column 6
3. LAE  
[Page 19, Column 9 + (IEE, Part III, Column 11 x (Page 19, Column 6/IEE, Part III, Column 7))]
4. General Expenses  
[IEE, Part III, Column 29 x (Page 19, Column 2 / IEE, Part III, Column 1) x .5] + [(IEE, Part III, Column 29) x (Page 19, Column 2 / IEE, Part III, Column 3) x .5]
5. Selling Expenses  
[Page 19, Column 11 x (Page 19, Column 2 / Page 19, Column 1) + (IEE, Part III, Column 27 x (Page 19, Column 2 / IEE, Part III, Column 1))]
6. Taxes, Licenses and Fees  
Page 19, Column 12 x (Page 19, Column 2 / Page 19, Column 1)
7. Dividends to Policyholders  
Page 19, Column 3
- 7a. Premium Deficiency Reserve Addition  
[Page 19, Column 2 x (Page 4, Column 1, Line 5 (Premium Deficiency Reserve Write-In Only) / Page 19, Column 2, Line 35 Countrywide (or IEE, Part III, Column 1, Line 35))]
8. Underwriting Profit  
Premiums Earned – Losses Incurred – LAE – General Expenses – Selling Expenses – Taxes, Licenses and Fees – Dividends to Policyholders + Premium Deficiency Reserve Addition
- 8a. Investment Gain on Insurance Transactions
  - A. Mean Loss Reserve = (Page 19, Column 7, Current Year + Page 19, Column 7, prior year) / 2
  - B. Mean Adjusting and Other Expense Reserve Ratio = [(IEE, Part III, Column 17, Current Year + IEE, Part III, Column 17, Prior Year) / 2] / [(IEE, Part III, Column 13, Current Year + IEE, Part III, Column 13, Prior Year) / 2]
  - C. Mean LAE Reserve = (A x B) + (Page 19, Column 10, Current Year + Page 19, Column 10, Prior Year) / 2
  - D. Mean Unearned Premiums = (Page 19, Column 4, Current Year + Page 19, Column 4, Prior Year) / 2

- E.  $[(\text{IEE, Part III, Column 21, Current Year} + \text{IEE, Part III, Column 21, Prior Year}) / 2] / \text{IEE, Part III, Column 1}$
- F. Agents' Balances = Page 19, Column 1 x E  
*Prior to 2018 Data: Agents' Balances = Page 19, Column 2 x E*
- F1.  $[(\text{Page 3, Column 1, Line 12, Current Year} + \text{Page 3, Column 1, Line 12, prior year}) / 2] / (\text{Page 8, Column 4} + \text{Column 5, Line 35})$
- F2. Ceded Reinsurance Premiums Payable =  $[(\text{Page 8, Column 4} + \text{Column 5}) \times \text{F1}] / \text{Page 19, Column 1 Countrywide}] \times \text{Page 19, Column 1}$   
*Prior to 2018 Data: Ceded Reinsurance Premiums Payable =  $[(\text{Page 8, Column 4} + \text{Column 5}) \times \text{F1}] / \text{Page 4, Column 1 Line 1}] \times \text{Page 19, Column 2}$*
- G. Prepaid Expense =  $[\text{D} \times ((\text{Page 19, Column 11} + \text{Column 12}) / \text{Page 19, Column 1})] + [\text{D} \times ((\text{IEE, Part III, Column 27} + (\text{Column 29} \times 0.5)) / \text{IEE, Part III, Column 1})]$
- H. Investment Gain Ratio =  $(\text{ADAF} \times \text{Page 4, Column 1, Line 11}) / [\text{Countrywide All Lines Mean Loss Reserve} + \text{Countrywide All Lines Mean LAE Reserves} + \text{Countrywide All Lines Mean Unearned Premiums} + ((\text{Page 3, Column 1, Line 12, Current Year} + \text{Page 3, Column 1, Line 12, Prior Year}) / 2) + ((\text{SAF Current Year} \times \text{Page 3, Column 1, Line 37, Current Year} + \text{SAF Prior Year} \times \text{Page 3, Column 1, Line 37 Prior Year}) / 2) - (((\text{IEE Part III, Column 21, Line 35, Current Year} + \text{IEE Part III, Column 21, Line 35, Prior Year}) / 2) / \text{IEE Part III, Column 1, Line 35 Current Year} \times \text{Page 19, Column 1, Line 35 Countrywide Current Year})]$   
*Prior to 2018 Data: Investment Gain Ratio =  $(\text{ADAF} \times \text{Page 4, Column 1, Line 11}) / [(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Line 12, Current Year} + (\text{SAF} \times \text{Line 37, Current Year}) + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Line 12, Prior Year} + (\text{SAF} \times \text{Line 37, Prior Year}) + \text{Page 6, Column 2, Line 35} - \text{Page 2, Column 3, Line 15.1, Current Year} - \text{Line 15.2, Current Year} - \text{Page 2, Column 3, Line 15.1, Prior Year} - \text{Line 15.2, Prior Year}) / 2]$*   
 ADAF = Affiliate Dividend Adjustment Factor (from table)  
 SAF = Surplus Adjustment Factor (from table)
- I. Estimated Investment Gain =  $(\text{A} + \text{C} + \text{D} - \text{F} + \text{F2} - \text{G}) \times \text{H}$   
*Prior to 2018 Data: Estimated Investment Gain =  $(\text{A} + \text{C} + \text{D} - \text{F} - \text{F2} - \text{G}) \times \text{H}$*
- J. Other Income Ratio =  $\text{IEE, Part III, Column 31} / \text{IEE, Part III, Column 3}$
- K. Estimated Other Income =  $\text{J} \times \text{Page 19, Column 2}$
- L. Investment Gain on Insurance Transactions (Including Other Income) =  $\text{I} + \text{K}$

8b. Taxes on Insurance Transactions

$[0.21 \times \text{Underwriting Profit}] + [\text{Z} \times \text{Investment Gain on Insurance Transactions}]$

Where  $\text{Z} = [0.21 \times (\text{A} - 0.85\text{B} - 0.60\text{C})] / \text{A}$

A =  $\text{ADAF} \times \text{Page 4, Column 1, Line 11}$

B =  $\text{Page 12, Ex of Net Inv In, Column 2, Line 1.1}$

$$C = (\text{Page 12, Ex of Net Inv In, Column 2, Line 2.1} + \text{Line 2.11} + \text{Line 2.2} + \text{Line 2.21}) - [(1 - \text{ADAF}) \times \text{Page 4, Column 1, Line 11}]$$

ADAF = Affiliate Dividend Adjustment Factor (from table)

8c. Profit on Insurance Transactions

Underwriting Profit + Investment Gain on Insurance Transactions – Income Taxes on Insurance Transactions

9. Earned Premiums to Net Worth

A. Mean Loss Reserve = (Page 19, Column 7, Current Year + Page 19, Column 7, Prior Year) / 2

B. Mean Adjusting and Other Expense Reserve Ratio = [(IEE, Part III, Column 17, Current Year + IEE, Part III, Column 17, Prior Year) / 2] / [(IEE, Part III, Column 13, Current Year + IEE, Part III, Column 13, Prior Year) / 2]

C. Mean LAE Reserve = (A x B) + (Page 19, Column 10, Current Year + Page 19, Column 10, Prior Year) / 2

D. Mean Unearned Premiums = (Page 19, Column 4, Current Year + Page 19, Column 4, Prior Year) / 2

E. Premiums Earned = Page 19, Column 2

F. Surplus Ratio = [(SAF, Current Year x Page 3, Column 1, Line 37, Current Year) + (SAF, Prior Year x Page 3, Column 1, Line 37, Prior Year)] / 2 / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + Countrywide All Lines Premiums Earned]

SAF = Surplus Adjustment Factor (from table)

*Prior to 2018 Data: Surplus Ratio = [(SAF x Page 3, Column 1, Line 37, Current Year) + (SAF x Page 3, Column 1, Line 37, Prior Year)] / 2 / [(Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35) / 2] + Page 4, Column 1, Line 1]*

G. Premium Deficiency Reserve Ratio = [(Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Current Year + Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Prior Year) / 2] / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + Countrywide All Line Premiums Earned]

*Prior to 2018 Data: Premium Deficiency Reserve Ratio = [(Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Current Year + Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Prior Year) / 2] / [(Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35) / 2] + Page 4, Column 1, Line 1]*

H. Unauthorized Reinsurance Ratio = [(Page 3, Column 1, Line 16, Current Year + Page 3, Column 1, Line 16, Prior Year) / 2] / (Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserve + Countrywide All Lines Mean Unearned Premiums)

- I. Nonadmitted Assets Ratio = 0.015
- J. Prepaid Expense Ratio = [IEE, Part III, Column 23 + Column 25 + Column 27 + (Column 29 x 0.5)] / IEE, Part III, Column 1
- M. Net Worth = Surplus: [(A + C + D + E) x F] +  
Premium Deficiency Reserves: [(A + C + D + E) x G] +  
Unauthorized Reinsurance: [(A + C + D) x H] +  
Nonadmitted Assets: [(A + C + D + E) x I] +  
Prepaid Expense: (D x J)
- N. Earned Premiums to Net Worth = E/M x 100

10. Investment Gain on Net Worth

- A. Mean Loss Reserve = (Page 19, Column 7, Current Year + Page 19, Column 7, Prior Year) / 2
- B. Mean Unallocated LAE Reserve Ratio = [(IEE, Part III, Column 17, Current Year + IEE, Part III, Column 17, Prior Year) / 2] / [(IEE, Part III, Column 13, Current Year + IEE, Part III, Column 13, Prior Year) / 2]
- C. Mean LAE Reserve = (A x B) + (Page 19, Column 10, Current Year + Page 19, Column 10, Prior Year) / 2
- D. Mean Unearned Premiums = (Page 19, Column 4, Current Year + Page 19, Column 4, Prior Year) / 2
- E. Premiums Earned = Page 19, Column 2
- F. Prepaid Expense = [D x ((Page 19, Column 11 + Column 12) / Page 19, Column 1)] + [D x ((IEE, Part III, Column 27 + (Column 29 x 0.5)) / IEE, Part III, Column 1)]
- G. Surplus Ratio = [((SAF, Current Year x Page 3, Column 1, Line 37, Current Year) + (SAF, Prior Year x Page 3, Column 1, Line 37, Prior Year)) / 2] / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + Countrywide All Lines Premiums Earned]

SAF = Surplus Adjustment Factor (from table)

*Prior to 2018 Data: Surplus Ratio = [((SAF x Page 3, Column 1, Line 37, Current Year) + (SAF x Page 3, Column 1, Line 37, Prior Year)) / 2] / [((Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35) / 2) + Page 4, Column 1, Line 1]*

- H. Investment Gain Ratio = (ADAF x Page 4, Column 1, Line 11) / [Countrywide All Lines Mean Loss Reserve + Countrywide All Lines Mean LAE Reserves + Countrywide All Lines Mean Unearned Premiums + ((Page 3, Column 1, Line 12, Current Year + Page 3, Column 1, Line 12, Prior Year) / 2) + ((SAF Current Year x Page 3, Column 1, Line 37, Current Year + SAF Prior Year x Page 3, Column 1, Line 37, Prior Year) / 2) - (((IEE Part III, Column 21, Line 35, Current Year + IEE Part III, Column 21, Line 35, Prior Year) / 2) / IEE Part III, Column 1, Line 35, Current Year x Page 19, Column 1, Line 35, Countrywide, Current Year)]

*Prior to 2018 Data: Investment Gain Ratio = (ADAF x Page 4, Column 1, Line 11) / [(Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Line 12, Current Year + (SAF x Line 37, Current Year) + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Line 11, Prior Year + (SAF x Line 37, Prior Year) + Page 6, Column 2, Line 35 - Page 2, Column 3, Line 15.1, Current Year - Line 15.2, Current Year - Page 2, Column 3, Line 15.1, Pr, Prior Year)/2]*

ADAF = Affiliate Dividend Adjustment Factor (from table)

SAF = Surplus Adjustment Factor (from table)

- I. Estimated Investment Gain =  $[(A + C + D + E) \times G + F] \times H$

11. Tax on Investment Gain on Net Worth

(Z x Investment Gain on Net Worth)

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)]/A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) - [(1 - ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

12. Return on Net Worth

$[(\text{Column } 8c \times \text{Column } 9)/100] + \text{Column } 10 - \text{Column } 11$

**FORMULAS FOR 2022  
SUPPLEMENTAL REPORT ON PROFITABILITY  
BY LINE COUNTRYWIDE USING THE**

**INSURANCE EXPENSE EXHIBIT**

**STATUTORY BASIS**

**(Note: The results of Column 2 through Column 8C are all divided by Column 1 and multiplied by 100. The results of Column 9 through Column 11 are all divided by the amount in item 9F and multiplied by 100.)**

Shown below are the specifications for a countrywide page of the Profitability Report on a statutory basis, using net IEE data instead of Page 19 (the state page) and direct IEE data. This is a supplement to the Profitability Report, which includes a countrywide page obtained by summing the state pages. The grouping of the lines differs from the Profitability Report on a direct basis in that the international and reinsurance lines of business are included.

1. Net Premiums Earned  
IEE, Part II, Column 3
2. Losses Incurred  
IEE, Part II, Column 7
3. LAE  
(IEE, Part II, Column 9 + IEE, Part II, Column 11)
4. General Expenses  
IEE, Part II, Column 29
5. Selling Expenses  
(IEE, Part II, Column 23 + Column 27)
6. Taxes, Licenses and Fees  
IEE, Part II, Column 25
7. Dividends to Policyholders  
IEE, Part II, Column 5
8. Underwriting Profit  
Premiums Earned – Losses Incurred – LAE – General Expenses – Selling Expenses – Taxes, Licenses and Fees – Dividends to Policyholders
- 8a. Investment Gain on Insurance Transactions
  - A. Mean Loss Reserves = (IEE, Part II, Column 13, Current Year + IEE, Part II, Column 13, Prior Year) / 2
  - B. Mean LAE Reserve = (IEE, Part II, Column 15, Current Year + Column 17, Current Year + IEE, Part II, Column 15, Prior Year + Column 17, Prior Year) / 2



- C. Mean Unearned Premiums = (IEE, Part II, Column 19, Current Year + IEE, Part II, Column 19, Prior Year) / 2
- D. Agents' Balances = IEE, Part II, Column 21
- D1. Ceded Reinsurance Premiums Payable = [(Page 8, Column 4 + Column 5) x (Page 3, Column 1, Line 12, Current Year)] / (Page 8, Column 4 + Column 5, Line 35)
- E. Prepaid Expense = C x [(IEE, Part II, Column 23 + Column 25 + Column 27 + (Column 29 x 0.5)) / IEE, Part II, Column 1]
- F. Investment Gain Ratio =  
 (ADAF x Page 4, Column 1, Line 11) / [(Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Line 12, Current Year + (SAF x Line 37, Current Year) + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Line 12, Prior Year + (SAF x Line 37, Prior Year) + Page 6, Column 2, Line 35 – Page 2, Column 3, Line 15.1, Current Year – Line 15.2, Current Year – Page 2, Column 3, Line 15.1, Prior Year – Line 15.2, Prior Year) / 2];  
 ADAF = Affiliate Dividend Adjustment Factor (from table)  
 SAF = Surplus Adjustment Factor (from table)
- G. Estimated Investment Gain = (A + B + C – D + D1 – E) x F  
*Prior to 2018 Data:* Estimated Investment Gain = (A + B + C – D – D1 – E) x F
- H. Other Income = IEE, Part II, Column 31
- I. Investment Gain on Insurance Transactions (Including Other Income) = G + H
- 8b. Taxes on Insurance Transactions  
 [(0.21 x Underwriting Profit) + (Z x Investment Gain on Insurance Transactions)]  
 Where Z = [0.21 (A – 0.85B – 0.60C)] / A  
 A = ADAF x Page 4, Column 1, Line 11  
 B = Page 12, Ex of Net Inv In, Column 2, Line 1.1  
 C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) – [(1 – ADAF) x Page 4, Column 1, Line 11]  
 ADAF = Affiliate Dividend Adjustment Factor (from table)
- 8c. Profit on Insurance Transactions  
 Underwriting Profit + Investment Gain on Insurance Transactions – Income Taxes on Insurance Transactions
9. Earned Premiums to Surplus
- A. Mean Loss Reserve = (IEE, Part II, Column 13, Current Year + IEE, Part II, Column 13, Prior Year) / 2
- B. Mean LAE Reserve = (IEE, Part II, Column 15, Current Year + Column 17, Current Year + IEE, Part II, Column 15, Prior Year + Column 17, Prior Year) / 2
- C. Mean Unearned Premiums = (IEE, Part II, Column 19, Current Year + IEE, Part II, Column 19, Prior Year) / 2

- D. Premiums Earned = IEE, Part II, Column 3
- E. Surplus Ratio =  $\frac{[(\text{SAF} \times \text{Page 3, Column 1, Line 37, Current Year}) + (\text{SAF} \times \text{Page 3, Column 1, Line 37, Prior Year})] / 2}{[(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Page 6, Column 2, Line 35}) / 2] + \text{Page 4, Column 1, Line 1]}$
- SAF = Surplus Adjustment Factor (from table)
- F. Surplus =  $[(A + B + C + D) \times E]$
- G. Earned Premiums to Surplus =  $D / F \times 100$

10. Investment Gain on Surplus

- A. Mean Loss Reserve =  $(\text{IEE, Part II, Column 13, Current Year} + \text{IEE, Part II, Column 13, Prior Year}) / 2$
- B. Mean LAE Reserve =  $(\text{IEE, Part II, Column 15, Current Year} + \text{Column 17, Current Year} + \text{IEE, Part II, Column 15, Prior Year} + \text{Column 17, Prior Year}) / 2$
- C. Mean Unearned Premiums =  $(\text{IEE, Part II, Column 19, Current Year} + \text{IEE, Part II, Column 19, Prior Year}) / 2$
- D. Premiums Earned = IEE, Part II, Column 3
- E. Prepaid Expense =  $C \times [(\text{IEE, Part II, Column 23} + \text{Column 25} + \text{Column 27} + (\text{Column 29} \times 0.5)) / \text{IEE, Part II, Column 1}]$
- F. Surplus Ratio =  $\frac{[(\text{SAF} \times \text{Page 3, Column 1, Line 37, Current Year}) + (\text{SAF} \times \text{Page 3, Column 1, Line 37, Prior Year})] / 2}{[(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Page 6, Column 2, Line 35}) / 2] + \text{Page 4, Column 1, Line 1]}$
- SAF = Surplus Adjustment Factor (from table)
- G. Investment Gain Ratio =  $\frac{(\text{ADAF} \times \text{Page 4, Column 1, Line 11})}{[(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Line 12, Current Year} + (\text{SAF} \times \text{Line 37, Current Year}) + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Line 11, Prior Year} + (\text{SAF} \times \text{Line 37, Prior Year}) + \text{Page 6, Column 2, Line 35} - \text{Page 2, Column 3, Line 15.1, Current Year} - \text{Line 15.2, Current Year} - \text{Page 2, Column 3, Line 15.1, Prior Year} - \text{Line 15.2, Prior Year}) / 2]}$
- SAF = Surplus Adjustment Factor (from table)
- ADAF = Affiliate Dividend Adjustment Factor (from table)
- H. Estimated Investment Gain =  $[(A + B + C + D) \times F] + E \times G$

11. Tax on Investment Gain on Surplus

(Z x Investment Gain on Net Worth)

Where Z =  $[0.21 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) - [(1 - ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

12. Return on Surplus

$[(\text{Column } 8c \times \text{Column } 9) / 100] + \text{Column } 10 - \text{Column } 11$

PROFITABILITY FACTORS

| <u>Year</u> | <u>Affiliate<br/>Dividend<br/>Adjustment<br/>Factor</u> | <u>Surplus<br/>Adjustment<br/>Factor</u> |
|-------------|---|--|
| 2022        | 1.034   | 0.812                                    |
| 2021        | 0.942   | 0.813                                    |
| 2020        | 0.972   | 0.811                                    |
| 2019        | 0.954   | 0.807                                    |
| 2018        | 0.903   | 0.808                                    |
| 2017        | 0.904   | 0.813                                    |
| 2016        | 0.932   | 0.809                                    |
| 2015        | 0.971   | 0.810                                    |
| 2014        | 0.862   | 0.810                                    |
| 2013        | 0.883   | 0.811                                    |

For other factors used in prior years reports, see prior reports.

## FEDERAL INCOME TAX FORMULAS FOR 2013–2022

### 2022 Income Taxes

$[0.21 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.21 \times (\text{Page 10, Column 5} + \text{Column 6}) \times (\text{Page 19, Column 7} / \text{Page 10, Column 8})]$

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)]/A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Column 2, Line 1.1

C =  $(\text{Page 12, Ex of Net Inv In, Column 2, Line 2.1} + \text{Line 2.11} + \text{Line 2.2} + \text{Line 2.21})^1 - [(1 - \text{ADAF}) \times \text{Page 4, Column 1, Line 11}]$

### 2021 Income Taxes

$[0.21 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.21 \times (\text{Page 10, Column 5} + \text{Column 6 for 1986}) \times (\text{Page 1, Column 8 for 1986} / \text{Page 10, Column for 1986})]$

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)]/A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Column 2, Line 1.1

C =  $(\text{Page 12, Ex of Net Inv In, Column 2, Line 2.1} + \text{Line 2.11} + \text{Line 2.2} + \text{Line 2.21}) - [(1 - \text{ADAF}) \times \text{Page 4, Column 1, Line 11}]$

ADAF = Affiliate Dividend Adjustment Factor (from table)

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<sup>1</sup> Ex. Of Net Investment Income – total of preferred and common stock

### **2020 Income Taxes**

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) –  
[(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2019 Income Taxes**

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) –  
[(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2018 Income Taxes**

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) –  
[(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2017 Income Taxes**

$[0.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.35 \times (\text{Page 10, Column 5 + Column}) \times (\text{Page 1, Column} / \text{Page 10, Column})]$

Where  $Z = [0.35 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) –  
[(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2016 Income Taxes**

$[0.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.35 \times (\text{Page 10, Column 5} + \text{Column 6 for 1986}) \times (\text{Page 14, Column 8 for 1986}/\text{Page 10, Column 5 for 1986})]$

Where  $Z = [0.35 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) – [(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2015 Income Taxes**

$[0.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.35 \times (\text{Page 10, Column 5} + \text{Column 6 for 1986}) \times (\text{Page 14, Column 8 for 1986} / \text{Page 10, Column 5 for 1986})]$

Where  $Z = [0.35 \times (A - 0.85B - 0.60C)]/A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) – [(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2014 Income Taxes**

$[0.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.35 \times (\text{Page 10, Column 5} + \text{Column 6 for 1986}) \times (\text{Page 14, Column 8 for 1986}/\text{Page 10, Column 5 for 1986})]$

Where  $Z = [0.35 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) – [(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

### **2013 Income Taxes**

$[0.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain}] - [0.35 \times (\text{Page 10, Column 5} + \text{Column 6 for 1986}) \times (\text{Page 14, Column 8 for 1986} / \text{Page 10, Column 5 for 1986})]$

Where  $Z = [0.35 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) – [(1 – ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

| Year | <b>Affiliate Dividend<br/>Adjustment Factor</b> | <i>Surplus Adjustment<br/>Factor</i> |
|------|---|--------------------------------------|
| 2022 | 1.034   | 0.812                                |
| 2021 | 0.942   | 0.813                                |
| 2020 | 0.972   | 0.811                                |
| 2019 | 0.954   | 0.807                                |
| 2018 | 0.903   | 0.808                                |
| 2017 | 0.904   | 0.813                                |
| 2016 | 0.932   | 0.809                                |
| 2015 | 0.971   | 0.810                                |
| 2014 | 0.862   | 0.810                                |
| 2013 | 0.883   | 0.811                                |

**FORMULAS FOR 2021  
SUPPLEMENTAL REPORT ON PROFITABILITY  
BY LINE COUNTRYWIDE USING THE  
INSURANCE EXPENSE EXHIBIT**

**(Note: The results of Column 2 through Column 8C are all divided by Column 1 and multiplied by 100. The results of Column 9 through Column 11 are all divided by the amount in item 9L and multiplied by 100.)**

Shown below are the specifications for a countrywide page of the Profitability Report, using net IEE data instead of Page 19 and direct IEE data. This is a supplement to the Profitability Report, which includes a countrywide page obtained by summing the state pages. The grouping of the lines differs from the Profitability Report on a direct basis in that the international and reinsurance lines of business are included.

1. Net Premiums Earned

IEE, Part II, Column 3

2. Losses Incurred

IEE, Part II, Column 7

3. LAE

(IEE, Part II, Column 9 + Column 11)

4. General Expenses

(IEE, Part II, Column 29 x 0.5) +  
[((IEE, Part II, Column 29/IEE, Part II, Column 1) x IEE, Part II, Column 3) x 0.5]

5. Selling Expenses

(IEE, Part II, Column 23 + Column 27) x (IEE, Part II, Column 3/IEE, Part II, Column 1)

6. Taxes, Licenses and Fees

IEE, Part II, Column 25 x (IEE, Part II, Column 3 / IEE, Part II, Column 1)

7. Dividends to Policyholders

IEE, Part II, Column 5

\*7a. Premium Deficiency Reserve Addition

IEE, Part II, Column 3 x [Page 4, Column 1, Line 5 (Premium Deficiency Reserve Write-In Only) / IEE, Part II, Column 3, Line 35]

\* Premium deficiency reserve additions are included in the report data, but in the current year are not material. Therefore, the report does not include a separate column for 7A "Premium Deficiency Reserves Addition."

8. Underwriting Profit

Premiums Earned – Losses Incurred – LAE – General Expenses – Selling Expenses – Taxes, Licenses and Fees – Dividends to Policyholders + Premium Deficiency Reserve Addition

8a. Investment Gain on Insurance Transactions

A. Mean Loss Reserves = (IEE, Part II, Column 13, Current Year + IEE, Part II, Column 13, Prior Year) / 2

B. Mean LAE Reserve = (IEE, Part II, Column 15, Current Year + Column 17, Current Year + IEE, Part II, Column 15, Prior Year + Column 17, Prior Year) / 2

C. Mean Unearned Premiums = (IEE, Part II, Column 19, Current Year + IEE, Part II, Column 19, Prior Year) / 2

D. Agents' Balances = IEE, Part II, Column 21

D1. Ceded Reinsurance Premiums Payable = [(Page 8, Column 4 + Column 5) x (Page 3, Column 1, Line 12, Current Year)] / (Page 8, Column 4 + Column 5, Line 35)



E.  $\text{Prepaid Expense} = C \times [(\text{IEE, Part II, Column 23} + \text{Column 25} + \text{Column 27} + (\text{Column 29} \times 0.5)) / \text{IEE, Part II, Column 1}]$

F.  $\text{Investment Gain Ratio} = (\text{ADAF} \times \text{Page 4, Column 1, Line 11}) / [(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Line 12, Current Year} + (\text{SAF} \times \text{Line 37, Current Year}) + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Line 12, Prior Year} + (\text{SAF} \times \text{Line 37, Prior Year}) + \text{Page 6, Column 2, Line 35} - \text{Page 2, Column 3, Line 15.1, Current Year} - \text{Line 15.2, Current Year} - \text{Page 2, Column 3, Line 15.1, Prior Year} - \text{Line 15.2, Prior Year}) / 2]$

ADAF = Affiliate Dividend Adjustment Factor (from table)

SAF = Surplus Adjustment Factor (from table)

G.  $\text{Estimated Investment Gain} = (A + B + C - D + D1 - E) \times F$

*Prior to 2018 Data:*  $\text{Estimated Investment Gain} = (A + B + C - D - D1 - E) \times F$

H.  $\text{Other Income} = \text{IEE, Part II, Column 31}$

I.  $\text{Investment Gain on Insurance Transactions (including Other Income)} = G + H$

8b. Taxes on Insurance Transactions

$[0.21 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain on Insurance Transactions}]$

Where  $Z = [0.21 (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) - [(1 - ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

8c. Profit on Insurance Transactions

Underwriting Profit + Investment Gain on Insurance Transactions – Income Taxes on Insurance Transactions

9. Earned Premiums to Net Worth

A. Mean Loss Reserve = (IEE, Part II, Column 13, Current Year + IEE, Part II, Column 13, Prior Year) / 2

B. Mean LAE Reserve = (IEE, Part II, Column 15, Current Year + Column 17, Current Year + IEE, Part II, Column 15, Prior Year + Column 17, Prior Year) / 2

C. Mean Unearned Premiums = (IEE, Part II, Column 19, Current Year + IEE, Part II, Column 19, Prior Year) / 2

D. Premiums Earned = IEE, Part II, Column 3

E. Surplus Ratio =  $\frac{[(\text{SAF} \times \text{Page 3, Column 1, Line 37, Current Year}) + (\text{SAF} \times \text{Page 3, Column 1, Line 37, Prior Year}) / 2]}{[(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Page 6, Column 2, Line 35}) / 2] + \text{Page 4, Column 1, Line 1}]}$

SAF = Surplus Adjustment Factor (from table)

F. Premium Deficiency Reserve Ratio =  $\frac{[(\text{Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Current Year} + \text{Page 3, Column 1, Line 25 (Premium Deficiency Reserve Write-In Only), Prior Year}) / 2]}{[(\text{Page 3, Column 1, Line 1, Current Year} + \text{Line 3, Current Year} + \text{Page 6, Column 3, Line 35} + \text{Page 3, Column 1, Line 1, Prior Year} + \text{Line 3, Prior Year} + \text{Page 6, Column 2, Line 35}) / 2] + \text{Page 4, Column 1, Line 1}]}$

G. Unauthorized Reinsurance Ratio =  $\frac{[(\text{Page 3, Column 1, Line 16, Current Year} + \text{Page 3, Column 1, Line 16, Prior Year}) / 2]}{(A + B + C)}$

- H. Nonadmitted Assets Ratio = 0.015
- I. Prepaid Expense Ratio = [IEE, Part II, Column 23 + Column 25 + Column 27 + (Column 29 x 0.5)] / IEE, Part II, Column 1
- L. Net Worth = Surplus: [(A + B + C + D) x E] +  
 Premium Deficiency Reserves: [(A + B + C + D) x F] +  
 Unauthorized Reinsurance: [(A + B + C) x G] +  
 Nonadmitted Assets: [(A + B + C + D) x H] +  
 Prepaid Expense: (C x I)
- M. Earned Premiums to Net Worth = D / L x 100

10. Investment Gain on Net Worth

- A. Mean Loss Reserve = (IEE, Part II, Column 13, Current Year + IEE, Part II, Column 13, Prior Year) / 2
- B. Mean LAE Reserve = (IEE, Part II, Column 15, Current Year + Column 17, Current Year + IEE, Part II, Column 15, Prior Year + Column 17, Prior Year) / 2
- C. Mean Unearned Premiums = (IEE, Part II, Column 19, Current Year + IEE, Part II, Column 19, Prior Year) / 2
- D. Premiums Earned = IEE, Part II, Column 3
- E. Prepaid Expense = C x [(IEE, Part II, Column 23 + Column 25 + Column 27 + (Column 29/2)) / IEE, Part II, Column 1]
- F. Surplus Ratio = [((SAF x Page 3, Column 1, Line 37, Current Year) + (SAF x Page 3, Column 1, Line 37, Prior Year)) / 2] / [((Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Page 6, Column 2, Line 35) / 2) + Page 4, Column 1, Line 1]

SAF = Surplus Adjustment Factor (from table)

- G. Investment Gain Ratio =  
 (ADAF x Page 4, Column 1, Line 11) / [(Page 3, Column 1, Line 1, Current Year + Line 3, Current Year + Line 12, Current Year + (SAF x Line 37, Current Year) + Page 6, Column 3, Line 35 + Page 3, Column 1, Line 1, Prior Year + Line 3, Prior Year + Line 12, Prior Year + (SAF x Line 37, Prior Year) + Page 6, Column 2, Line 35 – Page 2, Column 3, Line 15.1, Current Year – Line 15.2, Current Year – Page 2, Column 3, Line 15.1, Prior Year – Line 15.2, Prior Year) / 2];

SAF = Surplus Adjustment Factor (from table)

ADAF = Affiliate Dividend Adjustment Factor (from table)

H. Estimated Investment Gain =  $[(A + B + C + D) \times F + E] \times G$

11. Tax on Investment Gain on Net Worth

$(Z \times \text{Investment Gain on Net Worth})$

Where  $Z = [0.21 \times (A - 0.85B - 0.60C)] / A$

A = ADAF x Page 4, Column 1, Line 11

B = Page 12, Ex of Net Inv In, Column 2, Line 1.1

C = (Page 12, Ex of Net Inv In, Column 2, Line 2.1 + Line 2.11 + Line 2.2 + Line 2.21) - [(1 - ADAF) x Page 4, Column 1, Line 11]

ADAF = Affiliate Dividend Adjustment Factor (from table)

12. Return on Net Worth

$[(\text{Column 8c} \times \text{Column 9}) / 100] + \text{Column 10} - \text{Column 11}$