

REPORT ON PROFITABILITY BY LINE BY STATE IN 2011

INTRODUCTION

The purpose of the *Report on Profitability By Line By State* is to estimate and allocate profitability in property/casualty insurance by state and by line of insurance. Combined with other information, this can be utilized in further analysis of competition and market performance. “Other information” that might be considered in evaluating these results include- market concentration; involuntary market mechanisms; the rate of growth, leverage and capitalization; the rate of inflation; and exposure to risk and investment policies. **The report cannot and should not be used to determine whether current rates are adequate to cover future costs.** At the same time, historical profits do provide some indication as to whether premiums have been sufficient to cover costs in the past.

It is important to interpret the results in the context of each business line’s underlying characteristics—including risk exposures, underwriting cycles and economic climate. For instance, catastrophic events such as hurricanes, storms, and fires can erase several years of an insurer’s profitability. This is commonly seen in insurance lines impacted by high severity, but low frequency (and often regional) catastrophic events, like that of homeowners insurance, where it is important to build policyholders’ surplus during years without these events, to cover losses from future catastrophic events. Additionally, the general economic climate can substantially impact profitability through investment income, ability to maintain and raise capital, and stability of certain insurance markets. For example, the 2007 mortgage default crisis resulted in large losses for financial and mortgage guaranty insurers (captured in the “All Other” line of business).

The report combines by-line and by-state calendar year data from the Exhibit of Premiums and Losses by State (Page 19 of the annual statement) with by-line data from the Insurance Expense Exhibit (IEE) and certain other pages of the annual statement to develop estimates of profits on earned premium and the return on net worth by line and by state. The report also shows the various components of estimated profits, including: premiums earned; losses incurred; loss adjustment expenses; general expenses; selling expenses; state taxes, licenses and fees; dividends to policyholders; changes in premium deficiency reserves; underwriting profits; investment income; and federal income taxes. Because of fluctuations in calendar-year financial results, long-term historical averages are also provided.

The data utilized in the report are obtained from annual statements and exhibits filed with the NAIC by 3,060 property/casualty insurers. It is estimated that well in excess of 95% of the premiums written in the United States are represented. Insurers not filing with the NAIC tend to be small, single-state companies. Data from joint underwriting associations, state funds and non-admitted insurers are included in the report if they file with the NAIC.

Most companies do not restrict their operations to writing a single line of business in a single state. Accordingly, the by-line and by-state profitability analysis is built, in part, on allocations of financial data reflecting multi-line and multi-state operations. The data that are not reported by state are allocated to each state according to its premiums, losses or liabilities to estimate state results. In addition, it should be noted that company data are aggregated prior to calculations, which means that regardless of how much business a company may write in each state, a company will have the same effect in every state on the allocations of data that are not reported by state.

To the extent possible, the data from the annual statement utilized in the report are adjusted to approximate figures on a generally accepted accounting principles (GAAP) basis. The data reported in the annual statement are on a statutory accounting principles (SAP) basis, which tends to be more conservative than GAAP and is intended to measure the “liquidation value” of an insurer as of the statement date, rather than its value as a “going concern.” It is more appropriate to measure profitability on a GAAP basis for making comparisons with other industries. However, because of the limitations of

the annual statement, the GAAP adjustments made for the report are imperfect approximations. An additional report labeled “Statutory Net” provides countrywide profitability results by line without the GAAP adjustments. A comparison of this report with the report labeled “Countrywide IEE” indicates the significance of these GAAP adjustments on a countrywide basis.

A chart has been included comparing the return on net worth in the property/casualty insurance industry with the return on net worth in other industries. The results for other industries have been obtained from figures published in *Fortune* magazines for the years 2002 through 2011. Over the period of 2002 to 2011, the property/casualty insurance industry had an average return on net worth of 6.6%, compared to an estimated 13.3% for all industries, based on results reported by *Fortune*.

It is necessary to emphasize that because of inherent data limitations and the need to apply a “one size fits all” methodology; this report provides only approximations of actual profits earned by line and by state. Some components of profit in a particular state and line could differ significantly from the results shown in the report. Consequently, the results of the report would not supersede a more state-specific analysis, which could better encompass factors particular to a state and to the companies that do business in that state. The NAIC report is intended to be an important starting point that could be combined with other information in a complete market performance analysis. Further details on state-specific issues are provided in the Technical Notes at the end of this report.

Methodology

A complete list of the formulas and factors for the report follows this narrative section. The following provides a narrative description of the methodology used.

Data

The two basic data sources for the report are Page 19 of the annual statement and the IEE. Data also are taken from Pages 2, 3, 4, 6, 8 and 12 of the annual statement. These pages and exhibits are prepared on different bases. Page 19 presents results of direct transactions, before reinsurance, while the remaining annual statement pages are on a net basis, after reinsurance. The IEE contains both direct and net data. As noted above, company data are aggregated prior to a calculation, which means that regardless of how much business a company may write in each state, a company will have the same effect in every state on the allocations of data that are not reported by state. Also, no results (NR) are calculated in the event that aggregated premiums earned are less than or equal to zero when rounded.

Experience Period

The report is based on calendar-year data, by line and by state. Because of fluctuations in financial results from year to year and changes in allocation methodologies, care should be taken in drawing conclusions from only one year of data. The report summarizes results for 2002 through 2011 to facilitate analysis of profitability over a longer period. The average losses incurred, average profit on insurance transactions and average return on net worth are simple averages of the 10 years of results.

Allocation of Expenses

Direct defense cost containment expenses are reported by state in the annual statement.

Countrywide adjusting and other expenses related to losses from the IEE are multiplied by the ratio of statewide direct losses incurred from Page 19 to countrywide direct losses incurred from the IEE. Countrywide general expenses are multiplied by the ratio of statewide direct premiums earned to one-half countrywide direct premiums earned and one-half countrywide direct premiums written. In effect, this treatment adjusts one-half of general expenses to recognize that, on a GAAP basis, a portion of general

expenses represents prepaid expenses.¹ Also, to recognize that a portion of statutory underwriting expenses represent prepaid expenses on a GAAP basis, statewide taxes, licenses and fees are multiplied by the ratio of statewide direct premiums earned to statewide direct premiums written, and commissions and brokerage expenses are multiplied by the ratio of statewide direct premiums earned to statewide direct premiums written. Other acquisition expenses are obtained by multiplying direct premiums earned by state and by line with the corresponding ratio of countrywide direct other acquisition expenses incurred to countrywide direct premiums written. The latter two are combined to arrive at selling expenses. Additions to premium deficiency reserves, which were new in 2001, are allocated to each line and state on the basis of premiums earned.

Because of potential differences between profitability results on a net vs. direct basis, a countrywide report based solely on net data from the IEE is also included in the report.

Investment Gain

This report shows two investment gain estimates. Column 8(a) includes only investment gain attributable to “insurance transactions” and excludes investment gain on capital and surplus. Investment gain on “insurance transactions” is estimated for each line/state by multiplying an “investment gain ratio” by the sum of loss and loss adjustment expense reserves and unearned premium reserves plus ceded reinsurance premiums payable and less agents’ balances and prepaid expense for each line/state. The investment gain ratio is calculated by dividing total investment income and realized capital gains by the sum of loss and loss adjustment expense reserves, unearned premium reserves, capital and surplus, and ceded reinsurance premiums payable less agents’ balances. Ceded reinsurance premiums payable are shown as a separate item. Investment gain is multiplied by a factor of .9536 for 2011 to adjust for dividends received on stock held in affiliates. Capital and surplus is multiplied by a factor of .80 for 2011 to adjust it to a consolidated basis. Ceded reinsurance premiums payable are allocated to each line on the basis of reinsurance ceded. These amounts, along with loss adjustment expense reserves, agents’ balances and prepaid expense, are estimated for each line/state by applying countrywide factors to Page 19 data. Investment gain also includes “other income” reported in the IEE, which is allocated to each state on the basis of premiums earned.

Unrealized capital gains or losses generally are not included in net income under GAAP and, accordingly, are not included as investment gain in this report. However, because unrealized capital gains and losses are a part of the total return of property/casualty insurers and do have an impact on underwriting decisions and underwriting results, and because unrealized capital gains and losses are of interest to many observers or analysts of property/casualty insurance profitability, information on unrealized capital gains is included as a technical note.

Column 10 shows estimated investment gain on net worth for each line. This is calculated by multiplying capital and surplus and prepaid expense allocated to each line by the investment gain ratio. Industry aggregate capital and surplus is allocated to each line/state on the basis of loss and loss adjustment expense reserves, unearned premium reserves and premiums earned.

Considerable judgment should be exercised in interpreting the investment gain figures and the resulting estimates of federal taxes and profits. There are different views on whether or how investment gain attributable to capital and surplus should be included in calculations of profits by line and by state. Some analysts point out the difficulty in allocating investment gain on capital and surplus by line and by state on a basis that explicitly recognizes the total set of considerations faced by insurers, including varying degrees of risk posed by different lines of insurance. Notwithstanding these objections, it is felt that the usefulness of showing return on net worth using a relatively simple allocation of net worth by state and by

¹This approach is consistent with the formula used in the IEE to estimate prepaid expense and investment income by line.

line outweighs the fact that it might not be exactly representative of any actual processes undertaken by individual insurers.

Inclusion of investment income on capital and surplus is consistent with the position expressed in the NAIC's 1984 report on investment income, which states that, for ratemaking purposes, all insurer investment income should be considered. Although the NAIC's report was controversial at the time, this view is now widely accepted.

The report uses the sum of loss reserves, loss adjustment expense reserves, unearned premium reserves and earned premiums to allocate capital and surplus. As losses in some lines of insurance take much longer to be reported and settled, this results in more capital and surplus per premium dollar being allocated to "longer tail" lines of insurance. (While unearned premium is also considered, differences in unearned premium ratios tend to have a much smaller effect.) Column 9 shows the ratios of earned premiums to allocated net worth, which underlie the profitability calculations that culminate with Column 12. As can be seen, this ratio tends to be lower for "longer tail" lines of insurance. Although not identical, the ratio is similar in calculation and meaning to writings to surplus ratios.

Although some might view this as a relatively simple approximation, it reflects the fact that capital and surplus is used to cover adverse variation in underwriting results, as well as unexpected increases in liabilities. The appropriateness of such an allocation is demonstrated both by analyses of historical profitability by line of insurance and the fact that economic analysts frequently allocate capital and surplus on the basis of reserves plus premiums when by-line analyses are required.

Federal Income Taxes

Federal taxes are estimated on income excluding investment gain on capital and surplus in Column 8(b) and on investment gain on capital and surplus in Column 11. Currently, the tax rate is at 35% in accordance with the Revenue Reconciliation Act of 1993.

A proration provision of the Tax Reform Act of 1986 also taxes 15% of the interest earned on tax-exempt bonds and 15% of previously excluded dividends on stocks acquired after Aug. 7, 1986. A proration factor has been incorporated into the tax calculation to account for this effect.

No provision is made for the Alternative Minimum Tax (AMT). The direct effect of the AMT is believed to not be material. Although it does impact insurer investment decisions, most of the impact is indirect and reflected in the results of the basic tax formula.

When income before taxes is negative, the report might show a negative income tax or credit, which decreases the operating loss. This assumes that profit offsets from other lines or businesses are available or that other years' tax payments can be recovered. Other methods of reflecting taxes continue to be explored.

Profits

The report shows profit on insurance transactions and return on net worth in Column 8(c) and Column 12, respectively. Profit on insurance transactions is equal to underwriting profits plus investment gain on insurance transactions minus estimated related federal income taxes.

The return on net worth in Column 12 is calculated to help regulators and others evaluate the profits earned in a particular market in relation to the net worth committed to that market. The return is equal to profit after taxes divided by allocated capital and surplus adjusted to place it on a GAAP basis. In this calculation, capital and surplus is allocated to each line/state on the same basis used for the total investment gain allocation. GAAP-adjusted net worth in the report is equal to statutory capital and surplus plus premium deficiency reserves, unauthorized reinsurance, nonadmitted assets, prepaid expense and salvage/subrogation. Beginning with 2001, deferred taxes are reported and shown as a component of surplus or as a non-admitted asset.

Qualifications

The development of this report is dependent on the accuracy of the information contained in the annual statements filed by the insurers. Although the data used to calculate the statistics contained in this report were extracted from annual statements filed with the NAIC, the NAIC does not guarantee their accuracy.

While the NAIC exercises a great deal of care in capturing data from annual statements and producing this report, as with any statistical project of this magnitude, errors can occur. Consequently, the NAIC makes no representations or warranties with respect to the accuracy of the data and statistics in this report.

For Regulator Use Only

FORMULAS FOR 2011

(Note: The results of Columns 2 through 8C are all divided by Column 1 and multiplied by 100. The results of Columns 9 through 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. Loss Adjustment Expense
[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 - Loss Adjustment Expense - 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 Loss Adjustment Expense 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. [(IEE, Part III, Column 21, current year + IEE, Part III, Column 21, prior year)/2]/IEE, Part III, Column 1
- F. Agents' Balances = Page 19, Column 2 x E
- F1. [(Page 3, Column 1, Line 12, current year + Page 3, Column 1, Line 12, prior year)/2]/(Page 8, Columns 4 + 5, Line 35)
- F2. Ceded Reinsurance Premiums Payable = [(Page 8, Columns 4 + 5) x F1]/Page 4, Column 1, Line 1] x Page 19, Column 2
- G. Prepaid Expense = [D x ((Page 19, Column 11 + Column 12)/Page 19, Column 1)] + [D x ((IEE, Part III, Column 27 + (Column 29 x .5))/IEE, Part III, Column 1)]
- H. 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)
- I. Estimated Investment Gain = (A + C + D - F - F2 - G) x H
- J. Other Income Ratio = IEE, Part III, Column 31/IEE, Part III, Column 3
- K. Estimated Other Income = J x Page 19, Column 2
- L. Investment Gain on Insurance Transactions (including Other Income) = I + K

8b. Taxes on Insurance Transactions

$[.35 \times \text{Underwriting Profit}] + [Z \times \text{Investment Gain on Insurance Transactions}]$

Where $Z = [.35 \times (A - .82B - .60C)]/A$

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 = (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 Loss Adjustment Expense 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 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. 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]/(A + C + D) (countrywide)

- I. Non-admitted Assets Ratio = .015
- J. Prepaid Expense Ratio = [IEE, Part III, Column 23 + Column 25 + Column 27 + (Column 29 x .5)]/IEE, Part III, Column 1
- M. Net Worth = Surplus: $[(A + C + D + E) \times F] +$
Premium Deficiency Reserves: $[(A + C + D + E) \times G] +$
Unauthorized Reinsurance: $[(A + C + D) \times H] +$
Non-admitted Assets: $[(A + C + D + E) \times I] +$
Prepaid Expense: $(D \times J)$
- N. Earned Premiums to Net Worth = $E/M \times 100$

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 Loss Adjustment 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 Loss Adjustment Expense 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 .5))/IEE, Part III, Column 1)]
- G. 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)

- H. 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, prior year - Line 15.2, prior year)/2]

ADAF = Affiliate Dividend Adjustment Factor (from table)

SAF = Surplus Adjustment Factor (from table)

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

11. Tax on Investment Gain on Net Worth

(Z x Investment Gain on Net Worth)

Where $Z = [.35 \times (A - .82B - .60C)]/A$

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

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