A Consumer Advocate's
Guide to

Getting

Understanding

and

Using

Insurance Data

premium incurred loss acquisition expense loss adjustment expense case reserve IBNR reinsurance trend values investment exposure class relativities accident year capital gains credibility long tail line redlining return on net worth marketshare page 15 exposure involuntary

The Center for Economic Justice

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The Center for Economic Justice is a 501(c)(3) advocacy and education center dedicated to representing the interests of low-income and minority consumers as a class on economic justice issues.

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Texas Auto Insurance Profitability 1990 to 1998 (April 1999)

1998
Credit Insurance in Texas: Better Rate Regulation Needed to Protect Consumers (April 1998)
Texas Auto Insurance Profitability 1990 to 1997 (April 1998)

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Auto Insurance Redlining in Texas: Availability Worsens While Consumers Lose Affordable Coverage Options (April 1997)
Worst Redliners Identified: Department of Insurance Fails to Act (May 1997)

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nsurance companies and their lobbyists deluge consumers and the media with broad generalizations about insurance often designed to promote legislative changes or rate increases. While the statements to the right are all false or misleading, the ideas float in a sea of numbers that can drown out opposing views—unless consumer advocates learn to understand insurance data for themselves. Consumer advocates who use publicly available insurance data to support sound policy proposals gain respect and credibility from both regulators and news media. And advocates can quickly identify and rebut the misuse of insurance industry data by industry lobbyists, a powerful tool during negotiations over legislation or rates.

Auto and homeowners insurance data can be used for a variety of purposes:

- Determine whether rates charged are reasonable;
- Identify false claims of insurance companies and insurance regulators.
- Analyze the impact of law changes and regulations.
- Review individual insurer and industrywide profitability by state and by type of insurance coverage in relation to claims for higher rates or less regulation;
- Analyze insurance availability and redlining. If insurers promise to increase insurance availability in underserved areas, this data will help document their efforts;
- Track changes in insurance markets – for example, insurers may claim that rates have been reduced, but analysis of loss data shows that consumers are paying the same or more for specific coverages.

1. Purpose

This handbook provides an introduction to the topic of auto and homeowners insurance data and ratemaking. This handbook attempts to serve as a tool kit for consumer advocates working on insurance issues by discussing the sources, uses, and misuses of insurance data. Sections 2 through 4 of the handbook provide background on homeowners and personal automobile insurance sales, markets, and ratemaking. Section 5 discusses the sources of insurance data. Section 6 provides a glossary of insurance data terms.

2. What is Insurance?

Insurance is a contract between a consumer (who may be an individual or a business) and an insurance company in which the consumer transfers the risk of loss for certain occurrences to the insurance company in exchange for a fee, or premium. The contract that transfers risk from the consumer to the insurer is the insurance policy. For example, a homeowner pays a premium to an insurance company in exchange for an agreement (policy) by the insurance company to pay the cost to replace the consumer's home if the home is destroyed by fire during the term of coverage. Or a driver pays a premium to an insurance company in exchange for an agreement by the insurance company to pay the value of the driver's vehicle if it is stolen.

You might hear insurance companies say...

'Tort reform will lead to billions of dollars in savings for insurance consumers.'

'Insurance companies must raise their rates after a natural disaster like a hurricane because claim costs from major disasters can equal the amount of insurance premium paid over the last 30 years.'

'No-fault insurance will lower insurance costs for all insurance consumers.'

'Deregulation of insurance rates and policies will benefit all consumers because market competition is sufficient to regulate insurance.'

'Insurance companies don't redline consumers – they want to write as much insurance business as they can.'

...but don't believe it!

3. An Introduction to Insurance

3.1   Types of Insurance

There are many types of insurance sold. The types of insurance are generally broken down into two major categories: life/health (L&H) and property/casualty (P&C). Life/health coverages include life, health, and disability insurance. Property/casualty coverages are generally broken into personal and commercial lines. Personal lines are those coverages purchased by individuals, including private passenger automobile and homeowners insurance. Commercial lines are those coverages purchased by businesses and include commercial multi-peril (property and liability), medical mal-practice, workers' compensation, and commercial automobile insurance. This handbook focuses on private passenger automobile insurance and residential property (homeowners) insurance; although the basic concepts discussed apply to all types of insurance.

Private passenger automobile insurance and residential property insurance are considered "lines" of insurance. Within each line are a variety of coverages. For private passenger automobile, the consumer typically selects several of the coverages for his or her policy. For residential property

insurance, the consumer typically selects one of the major coverages. An important characteristic of coverages is whether they provide first party or third party coverage. First party coverage pays for personal injury or property damage to the insured. Third party coverage pays for personal injury or property damage that the insured causes to a third party.

3.2 Auto Insurance

Auto insurance generally covers your *liability* for bodily injury and property damage to others, and your costs in case of *physical damage* to your own car. Specifically, consumers may purchase:

Bodily Injury Liability – This is third-party coverage. This coverage pays the other person (the third party) if you cause an accident and are liable for the personal injuries to the other person.

Property Damage Liability – This is third-party coverage. This coverage pays the other person (the third party) for the cost to repair or replace the other person's vehicle if you cause an accident and are liable.

Personal Injury Protection / No-Fault – This is first-party coverage. This coverage pays your medical bills and lost wages if you are injured in an accident, regardless of fault in the accident.

Uninsured / Underinsured Motorists – These are first party coverages. UM/UIM pay for your personal injuries (UM Bodily Injury) and damage to your vehicle (UM Property Damage) if you are involved in an accident with another person, the other person is at fault, and the other person has insufficient (or no) insurance to pay the claims.

Collision – This is first-party coverage. This coverage pays the cost to repair or replace your car if it is damaged in an accident, regardless of whether it was your fault or the fault of a third party.

Comprehensive – This is first-party coverage. This coverage pays for the cost to repair or replace your car for damage caused by causes other than collision with another vehicle or object. The most common causes of loss under comprehensive are theft, vandalism, and weather-related damage.

3.3 Homeowners and Renters Insurance

Residential property insurance is a broader term for insurance most people know as homeowners insurance. The coverages are:

Dwelling – This is first-party coverage. This coverage pays for damage to your house. An important factor for dwelling coverage is whether the coverage is for replacement value or actual cash value. The replacement value policy pays the replacement cost of the home, while the actual cash value policy only pays the actual market value of a home. If a $100,000 home is totally destroyed, for instance, but costs $125,000 to rebuild, the replacement

value policy would pay $125,000, but the actual cash value policy would only pay $100,000.

Personal property – This is first-party coverage. This coverage pays either the actual cash value or replacement cost of your personal property (excluding autos) that are damaged, stolen, or destroyed.

Liability – This is third-party coverage. This coverage pays the other person (the third party) if you cause injury to the person or the person's property while on your property.

Medical Payments – This is third-party coverage. This coverage pays the other person (the third party) for medical expenses incurred from an injury on your property.

Loss of use – This is first-party coverage. This coverage pays for your living expenses, including rent, during the time your house is being repaired.

A *Homeowners policy* refers to a multi-peril policy that provides all five coverages. A *Dwelling,* or *Fire,* policy normally provides only the dwelling coverage. A *Renters* policy normally provides all coverages other than dwelling.

3.3   Types of Insurers

Insurance companies that sell private passenger automobile and homeowners insurance differ based on the type of *ownership* of the company and the *method* of *sales*.

The two main types of ownership are stock companies and mutual companies, but there are others. Stock companies are publicly owned companies whose stock generally trades in one of the stock markets. Stock companies are owned by their shareholders – the purchasers of the company's stock. Allstate is a stock company. Mutual companies are owned by their policyholders. State Farm Mutual Automobile Insurance Company is a mutual company.

Insurers also differ by how they sell their policies. *Direct writers* do not use agents to sell their policies. Two examples are USAA and GEICO. These companies sell insurance over the phone through sales representatives. Most insurers, however, sell their policies through agents. *Captive agent* insurers sell their policies through agents who only sell for that company. State Farm, Farmers, and most Allstate agents are captive agents. *Independent agent* insurers sell their policies through independent agents that represent more than one insurer. Progressive, SAFECO, and Travelers are examples.

3.4   Market Segments

Most insurance markets consist of several submarkets: preferred, standard, nonstandard, residual, and surplus lines. *Preferred* companies

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have the lowest rates and sell to the consumers perceived to represent the lowest risk. *Standard* companies sell to consumers perceived to represent average risks. *Nonstandard* companies have the highest rates of these three types of companies and sell to consumers perceived to represent the highest risk. The preferred, standard, and substandard markets are known collectively as the "voluntary market" or the "admitted market." Those consumers unable to obtain coverage in these three markets must turn either to a residual market mechanism or to surplus lines companies.

Residual market mechanisms were created to provide some type of insurance to those consumers who could not obtain it in the voluntary market. Most states have some residual market for private passenger automobile insurance. The automobile insurance residual markets are typically called "insurance plans" or "risk pools." For residential property insurance, some states have "FAIR" (Fair Access to Insurance Requirements) plans, which are similar in structure to automobile insurance risk pools. Most FAIR plans were created in the 1960's and 1970's following the incidence of urban riots and charges of insurance redlining. A number of coastal states now have property insurance residual markets for catastrophe events, including hurricane and earthquake. These residual markets are relatively new, some having been created in the last few years.

Not all states have residual market mechanisms and many of those that do limit the types of coverages available. Residual market mechanisms operate in one of two ways. In some, consumers are insured through a pool with state-set rates and all insurers share the profits or losses from all such policies. Alternatively, these consumers are assigned to an insurance company that must accept the risk at a state-set rate and the profit or loss on the policy. Consumers normally pay higher rates in a residual market and receive limited benefits.

Surplus lines carriers, also known as "off shore" and "non-admitted" insurers, are not regulated by the state. These insurers are permitted to insure only those consumers who are unable to purchase coverage in the admitted market. These insurers present several disadvantages to the consumer. Rates are usually much higher than admitted companies, policy forms are not regulated, no state guaranty coverage is provided if the company goes broke, and the absence of solvency regulation increases the chances that the company will be unable to pay its claims.

Most insurance "companies" are really a group of insurance companies. Normally, an insurer group owns preferred, standard, and nonstandard companies with correspondingly higher rates. Each of the companies in the insurer's group has decreasingly restrictive underwriting guidelines. When a consumer goes into State Farm, for instance, he or she may be placed in State Farm's preferred company if the consumer meets the most restrictive underwriting guidelines. Otherwise, State Farm will insure the consumer in either the standard company or substandard company, or deny coverage altogether.

For most consumers, auto and homeowners coverage is obtained in the standard and preferred markets. These two markets normally sell the

large majority of insurance policies in a state. For consumers forced into the substandard, residual, or surplus lines markets, however, insurance is unavailable in the standard and preferred markets. The insurance availability problem includes both the inability to obtain insurance at all and the inability to purchase insurance in the standard and preferred markets.

Table 1: Top Underwriting Guidelines For Auto and Homeowners Insurers	
Auto	**Homeowners**
Credit history	Credit history
Driving experience	Made previous homeowners claim
Cancelled/refused by another company	Minimum coverage / value of the home
No prior insurance	Age of home
Age	Location of the home
Occupation	Lifestyle
Residential stability	Marital status
Employment stability	
Not-at-fault accidents and claims	
Marital status	
Purchase of other insurance	
Previous insurer was nonstandard	

3.5   Underwriting Guidelines

Underwriting is the process by which an insurer determines whether it will accept or reject an applicant and, if acceptable, at what price. *Underwriting guidelines* are the standards on which the insurer makes the underwriting decision. Insurers provide underwriting guidelines to insurance agents (or sales representatives for direct writers) for the agent to make the initial decision as to whether to offer coverage and at what price. An underwriter in the insurer's home office reviews applications to ensure they meet the underwriting guidelines. Insurers also use underwriting guidelines to determine whether the company will renew an existing policy.

Underwriting guidelines range from very detailed and objective written rules (*e.g.* limitations on insuring homes under a specified value) to broad and subjective forms of guidance for the agent or underwriter (*e.g.* limitations on insuring consumers with "bad morals"). Some of the more common underwriting guidelines for auto and homeowners insurance are listed in Table 1.

Not all discrimination is wrong or illegal. Some discrimination is clearly proper, such as refusing to sell homeowners insurance to the class of consumers who have been convicted of arson. Other discrimination is clearly *improper*, such as refusing to sell to the class of African-American consumers.

Those practices in the middle require a two-step analysis. First, does the underwriting guideline violate broad public policy? Is the guideline simply a surrogate for another prohibited characteristic? Second, does the underwriting guideline identify a characteristic of the consumer, vehicle, or property that is demonstrably and uniquely related to risk of loss? The second test typically requires detailed insurance data upon which to perform statistical and actuarial analyses. The data must be sufficiently detailed to enable the analyst to identify the unique contribution of the underwriting guideline or rating factor in question. Identifying the unique contribution is necessary to ensure that the underwriting guideline is simply not correlated

(*i.e.*, a surrogate) for another known underwriting guideline or rating factor – including prohibited rating factors. Such an analysis enables the analyst to to determine whether the practice *unfairly* discriminates against consumers who do not satisfy the underwriting guideline.

Finally, the *ways* insurers use underwriting guidelines to discriminate is not limited to the mere denial of coverage, as described at left.

Underwriting guidelines are important because they determine both the availability and affordability of insurance to groups of consumers. Insurance data are critical in the review of underwriting guidelines because the data will show whether the underwriting guideline properly identifies a group of consumers for whom the expected costs of the transfer of risk are higher or lower.

3.6   Rating Factors and Premium Calculations

Calculating a premium for auto and homeowners insurance is a two-part process. First, the underwriting process determines the *base rate* for the coverage. The base rate for each company will differ, as will the base rate for the different insurers within the company group. Thus, the base rates between Allstate and State Farm will differ, but the base rates between State Farm's preferred and substandard companies will also differ.

Second, the premium calculation involves the application of a series of rating factors to the rate base. *Rating factors* are the factors that change the base rate because the insurer or state has determined that the factor represents a difference in risk. For instance, a brick home represents a lower risk for fire than a wood frame house, so a discount factor is applied to the base rate for brick homes. Rating factors can cause the rate to increase (*surcharges*) or decrease (*discounts*).

Rating factors differ by state and by insurer. Common rating factors for auto insurance include coverage amount, territory (usually county of residence), use of car (pleasure only, business use), age of drivers, type of car, amount of deductibles, at-fault accidents, car symbol, surcharges, and various discounts. Common rating factors for homeowners insurance include coverage amount, territory (usually county), type (brick or frame), amount of deductibles, and various discounts.

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4.   Primer on Insurance Terminology and Ratemaking

Insurance ratemaking is the process of establishing rates for the insurance coverage to be offered during the period in which the rates will be in effect. Stated another way, ratemaking is the estimation of future costs associated with the transfer of risk from a consumer to the insurance company. Ratemaking is prospective; rates are established as estimates of future costs. Ratemaking generally also involves the grouping of different consumers into different risk classifications. For private passenger automobile and

residential property insurance, consumers may pay different rates based upon characteristics of the consumer, vehicle, property, and/or coverage.

4.1   Rate Standards

Rates are developed to meet both legal and *actuarial* standards. In some instances, the legal and actuarial standards differ. When that occurs, the legal standards take precedence.

The common legal standard is that rates must be just, reasonable, adequate, not excessive and not unfairly discriminatory for the risks to which they apply. Rates satisfy that standard if the rate is a sound estimate of future costs of coverage offered and if consumers of the same class and essentially the same hazard are offered the same rates.

Rates are generally developed by actuaries working for, or on behalf of, insurance companies. A certified actuary is a person who is a member of the Casualty Actuary Society, but membership is usually not mandatory. Membership in the CAS is based upon passing a series of tests. It is important to point out that membership in the CAS does not impart consistent or good judgment to actuaries. Two actuaries analyzing the same data can, and often do, come up with widely divergent rate results. While ratemaking is a complex subject and activity, a consumer advocate can often identify the key ratemaking assumptions and question those assumptions.

4.2   The Costs Associated with the Transfer of Risk

There are four general categories of costs in the ratemaking process – losses, loss settlement expenses, other expenses, and profit.

4.2.1   *Losses*

Losses are the amounts an insurance company pays for claims made under the insurance contract. *Paid losses* are losses already paid. *Reserves* are the amounts set aside to pay for losses that have occurred but have not been settled. *Case reserves* are the reserves set aside for a specific known claim, *bulk reserves* are reserves set aside for a block of known claims, and *incurred but not reported* (IBNR) reserves are set aside for claims that have not been made yet, but for which the loss has occurred.

4.2.2   *Loss Adjustment Expense*

Loss adjustment expenses, or claim settlement costs, are the costs of settling claims. There are two types of loss adjustment expenses (LAE) – allocated loss adjustment expenses (ALAE) and unallocated loss adjustment expenses (ULAE). ALAE are the claim settlement expenses attributable to specific claims, while ULAE are more general claim settlement expenses associated with the overall claim settlement process and not attributable to specific claims. For instance, the cost of hiring an attorney to defend a specific claim would be ALAE, but the salary of the in-house supervisor of the claims department would be ULAE.

4.2.3   Expenses

Expenses include *commissions and fees* paid to agents and brokers,

other acquisition expenses associated with the acquisition of business other than commissions and brokerage fees, *taxes, licenses and fees* other than federal income tax, and *general administrative and operational expenses*. Expenses are often categorized as variable or fixed. Variable expenses change with the amount of premium. For example, a 10% agent commission or a 2.5% premium tax is a variable expense. Fixed expenses would include general administrative and operational expenses that do not vary with premium volume over the period the rates will be in effect.

4.2.4   Profits Provision

The provision for profit and contingency provides a fair return on the capital at risk in the insurance enterprise after consideration of income earned from investments. Insurance companies gain significant investment income from a variety of sources – from investor-supplied funds, such as surplus or capital, and from policyholder-supplied funds, such as unearned premium reserves and loss reserves. It is not uncommon for a profit provision to be negative. A negative profit provision means the investment income to be earned from various sources will be greater than the target rate of return on capital for the insurance offered. A contingency provision may be added if there is a systematic bias in the ratemaking methodology which causes the estimation of future costs to systematically vary from actual costs. The target rate of return in the profit provision includes consideration of random variation from future expected costs.

4.3   Ratemaking Overview

Generally, for private passenger automobile and residential property insurance ratemaking, the ratemaking analysis is performed by coverage by state. That is, a rate filing contains a number of ratemaking analyses. For each major coverage, there is an analysis of the average statewide rate change.

The process of estimating future costs generally starts with historical experience. Historical premium, loss, and expense experience are adjusted and projected into the future. Projected premium is then compared to projected costs. If projected premium exceeds projected costs, a rate decrease is indicated. If projected costs exceed projected premium, a rate increase is indicated.

4.4   Premium

4.4.1   *Historical Premium*

Written premium is the total premium generated from the sale of policies during a given time period. *Earned premium* is the amount of premium booked by an insurance company due to the passage of time and that would not be returned if the policy is cancelled. For instance, assume that a company sells a one-year homeowners policy for $100 on July 1, 1999. For 1999, its written premium would be $100 and its earned premium would be $50. For 2000, its written premium would be $0 and its earned premium would be $50. Historical premiums are adjusted to future premium in two steps: adjusting to current rate levels and premium trend.

4.4.2 Projecting Future Premium – Current Rate Level Factors

The first step is to bring historical premiums to <u>current rate levels</u>. For example, if the rates for a particular coverage increased by 10% on January 1, 1997, then the historical 1996 premium must be increased by 10% to reflect the premium that would have been collected at current rate levels. This is important because any rate change indication is applied to current rate levels.

4.4.3 Projecting Future Premium – Premium Trend

The estimation of future premiums may also require the application of a <u>premium trend</u> factor. Average premium per exposure may change for a variety of reasons, most of which affect physical damage coverages. Physical damage coverages are related to the value of the vehicle being insured because the coverage is for the actual cash value, not the replacement value, of the vehicle. As consumers trade in older cars for newer cars, insurance companies gain more premium, all other factors constant. Many insurers increase the amount of coverage in residential property policies automatically each year to reflect inflation in construction costs. Another factor affecting auto physical damage and residential property premiums is changes in deductibles chosen by consumers. As consumers move to higher deductibles, insurance companies collect less premium, all other factors constant. A factor affecting auto liability coverages is changing increased limits selected by consumers or required by law. A shift by consumers to higher limits means additional premium for the insurance company (as well as additional exposure). Factors affecting all coverages are shifts in the distribution of consumers among risk classifications, such as increasing or decreasing numbers of consumers in higher-rate rating territories or higher-rate driver classifications.

To account for expected changes in average premium per exposure, a premium trend factor may be applied to historical premium. Expected future premium is generally the result of premium trend factors applied to historical premiums at current rate levels.

4.5 Losses

4.5.1 Historical Losses

Paid losses are dollars actually paid out for claims during a particular calendar period. Incurred losses are paid losses plus changes in reserves. Loss reserves are estimates of future anticipated payouts for claims. Paid losses are typically paired with written premiums to provide a cash-flow picture of the insurance company's operations. Incurred losses are typically paired with earned premiums to provide a more accurate estimate of the insurance company's results for policies issued during a particular calendar period. Insurance company-specific incurred and paid losses and written and earned premiums by line of insurance are readily available and can give an indication of the insurance company's historical profitability. Additional information is needed to perform the prospective ratemaking analysis.

It should also be noted that insurers can dramatically over- or understate reserves and, consequently, dramatically misstate historical losses. For

example, insurance companies dramatically overstated private passenger automobile liability reserves in the early 1990's. As a result, the incurred-to-earned loss ratios reported by insurance companies for those years dramatically understated the insurance companies' actual profitability.

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4.5.2 Description of Historical Losses

For ratemaking analyses, loss data are organized in three different ways with tradeoffs between the timeliness of the data (*i.e.*, how quickly the data are available after a particular experience period) and how well the losses are matched to the premium and policies under which the losses were paid.

Calendar year data typically represents incurred losses (paid losses and changes in reserves) regardless of when the claim occurred or when the policy was issued. Calendar year data are typically financial data and generally do not effectively match losses with the premium and exposure of the policies under which the losses were paid. Calendar year data are generally not used for ratemaking analyses, but are sometimes used for certain short-tailed lines because the calendar year data may not be significantly different from accident year data. The benefit of calendar year data is that the data are available quickly after the end of the particular time period.

A short-tailed line is one in which claims arise and are paid soon after the policy is issued. A long-tailed line is one which claims may arise long after the policy is issued. Examples of short-tailed lines are dwelling coverage and automobile physical damage coverage. Examples of longer-tailed lines are auto bodily injury liability and medical malpractice. The longer the "tail," the longer the insurance company holds the policyholder's money in reserves and the greater the amount of investment income earned by the insurance company.

Accident year data track claims paid and reserves on accidents occurring within a particular year, regardless of when the claim occurred or when the policy was issued. Accident year data do a better job at matching losses with the premium of the policies under which the losses were paid. Accident year data are not available as quickly as calendar year data because time is needed for the accident year data to develop, *i.e.*, time for claims occurring within a particular period to be reported and settled.

Policy year data track claims arising from policies issued in the year, regardless of when the accident occurred or when the claim was reported. Policy year data does the best job of matching losses with the premium and exposures of the policies under which the losses were paid. Policy year data take the longest time to develop.

Fiscal Accident versus *Calendar Accident Years* – Calendar accident year data refer to accident year data for a given calendar year, *i.e.*, the accident year from January 1 through December 31. Fiscal Accident year data refer to accident year data for a twelve-month period other than from January 1 through December 31. For example, a fiscal accident year may be the accident year data for the period July 1 through June 30.

4.5.3 Historical Losses Project Future Losses – Loss Development

Historical losses are subject to several adjustments to create ultimate projected losses. The pattern of claim occurrence, reporting and payment – *loss development* – occurs differently for different coverages. For property coverages, losses are generally reported and settled relatively soon after the accident occurs – short-tailed coverages. For other coverages, such as bodily injury liability, claims may not be made quickly after an accident and claims may take years to settle – long-tailed coverages. The most recent year of loss experience, for example, may not fully reflect the number of claims and amount of losses the insurer will eventually pay for coverage in a particular year. The loss development analysis adjusts historical losses for future development. Note that loss development will be minimal for older historical experience; however, that older experience will not be as reflective of current circumstances as more current experience which may not be fully developed.

4.5.4 Using Historical Losses to Project Future Losses – Loss Trend

A second adjustment to historical losses is the *loss trend*. Loss trend attempts to capture past and prospective changes in claim costs, claim frequencies, and pure premium (average loss per exposure). Loss trends may also capture many of the same changes in an insurer's risk profile that are reflected in premium trend. Loss trend data typically consist of earned exposures, paid losses, and paid claims by calendar quarter. These data are all easily obtained quickly after the end of the calendar quarter. However, the paid losses and paid claims are likely to be associated with policies (and earned premium) from earlier periods. If there are no significant changes in the volume of an insurance company's business, then the use of paid losses and paid claims matched to earned premiums will reasonably approximate the actual relationship of losses associated with policies in force during a particular calendar period. The loss trend data is analyzed to determine if changes in *claim frequency* (the number of claims per exposure) and/or *claim severity* (the average claim size) are occurring. These historical changes are typically applied to the historical loss data to not only adjust historical loss levels to estimated present loss levels, but also to adjust to estimated levels in the future.

4.5.5 Using Historical Losses to Project Future Losses – Adding ULAE

Historical private passenger automobile losses are generally reported inclusive of ALAE. The third adjustment to historical losses is to *add ULAE*. Historical losses adjusted for loss development, loss trend, and ULAE are known as *ultimate projected losses*.

4.6 Expenses

Variable expenses are generally estimated by calculating the average percentage of these expenses – commissions, taxes, and other acquisition expenses – to premium over the most recent two or three years.

Fixed expenses are generally estimated in the same manner as

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variable expenses with an additional step or two. In some cases, insurance companies apply an expense trend, or inflation factor, to fixed expenses. Such an adjustment, however, is unnecessary if the number of insured automobiles is increasing or if rates are increasing. If either one of these situations exists, the insurer is getting more fixed expense without any expense trend added and, therefore, no expense trend is necessary.

4.7   Profit Provision

The development of the *profit provision* starts with a target return on capital. This target return is offset by anticipated investment gains on surplus. The target return on capital less investment gains on capital is converted to a return on premium. The figure is further reduced, or offset, by investment gains on policyholder-supplied funds. The result is a profit provision based upon total returns, expressed as a percentage of premium. Investment gains include interest income, dividends, realized capital gains and unrealized capital gains.

4.8   Rate and Risk Classifications

The ratemaking analysis first produces *average statewide rate change indications by coverage*. For example, the ratemaking analysis may initially produce a 5% average statewide increase for bodily injury liability. The insurer then selects the average statewide rate change by coverage it will use or proposes to use. It is common for insurance companies to select rate changes significantly different from the actuarially indicated rate changes. There is generally little or no explanation provided by insurance companies for their selection of rates significantly different from the actuarially indicated rates.

The statewide average rate change is then *distributed to the various risk classifications*, such as different driver classes, increased limits factors and rating territories. If some parts of the state (rating territories) have better than average loss experience for a particular coverage, these rating territories should get a lower rate change than the statewide average for that coverage. Of course, if one rating territory gets a lower than average rate change, another rating territory must get a higher-than-average rate change.

Failure to reflect differences in costs among risk classifications, as well as attempting to charge different rates based upon a rating factor that is unrelated to differences in costs, is *unfair discrimination*. However, it is important to point out that an actuarially sound rate must be legal. For example, insurance companies are prohibited from discriminating on the basis of race, religion, or national origin. Thus, even if cost differences based upon these characteristics could be demonstrated, it would be illegal and actuarially improper to treat consumers differently based upon any of these prohibited characteristics. State legislatures routinely pass laws expressing public policy regarding the nature of insurance risk classification. It is important to mention this because risk classifications are not natural or pre-

ordained; rather, there are many ways of grouping consumers for the purposes of ratemaking that are fair.

5.   Types and Sources of Insurance Data

5.1   Financial

Financial data are those data used by insurance regulators, rating organizations, investors, and investment analysts to evaluate an insurers solvency, claims-paying ability and profitability.

5.1.1   Statutory Annual Statements

The basic source of financial data is the statutory annual statement filed by almost every insurance company annually with state insurance departments and the National Association of Insurance Commissioners. The statutory annual statement is a voluminous filing containing detailed information about an insurer's premiums, losses, expenses, and investments. For example, the Annual Statement describes what types of investments – stocks, bonds, real estate – the insurance company holds. The Annual Statement is supplemented by quarterly financial filings.

The main users of the annual and quarterly filings are state insurance departments, rating organizations, and investors. Insurance department staffs supplement their review of the filings with on-site financial examinations to determine whether an insurer is solvent – has the financial resources to pay its claim obligations. Rating organizations, including the A.M. Best Company, Standard and Poors, Moody's, Duff and Phelps, and Weiss, analyze insurers' claim-paying ability and issue a rating, or ranking, for the insurer. The rating organizations will often supplement the annual statement and quarterly financial filings with additional research. Investment analysts will evaluate publicly owned insurance companies for purposes of issuing recommendations regarding investment in the insurance company, *i.e.* whether to purchase the stock of the insurance company or not.

Insurance experience is typically reported on either a direct or net basis. *Direct* refers to the initial insurance company experience as if there was no reinsurance. *Reinsurance* is insurance purchased by the insurance company. *Net* refers to experience after the effects of reinsurance – direct experience plus reinsurance assumed less reinsurance ceded. *Reinsurance ceded* means that part of the insurance portfolio is laid off to another insurance company. *Reinsurance assumed* means that part of another company's insurance portfolio is accepted by the reporting insurance company.

Individual insurance company Annual Statements are available for viewing at state insurance departments. To find the location of your state's insurance department, try the state government section of the telephone directory for the capital city of your state. Alternatively, state insurance department phone numbers and addresses are listed at the National Association of Insurance Commissioner's Internet site: **www.naic.org.**

Table 2: Data Elements Found in Annual Statement Page 15

Premiums Written
Premiums Incurred
Dividends Paid to Policyholders
Unearned Premium Reserves
Losses Paid
Losses Incurred
Loss Reserves
Allocated Loss Adjustment Expense Paid
Allocated Loss Adjustment Expense Incurred
Allocated Loss Adjustment Expense Reserves
Commission and Brokerage Expenses
Taxes, Licenses, and Fees

5.1.2 Premium, loss and expense by state and line of insurance

One of the most useful pages in the Annual Statement for consumer advocates is the State Page or Page 15. Page 15 provides premium, loss and expense information broken out by state and by line of insurance. Table 2 lists the data elements reported on a direct basis on the Annual Statement Page, while Table 3 lists the lines of insurance reported.

Generally, the most valuable Page 15 data are those that have been compiled for all companies into lists showing market shares by insurer by line of insurance or into industrywide totals by line and by state. The state insurance department may produce, or otherwise make available, such compilations in the insurance department's Annual Report or in a special report.

5.1.3 Insurance Expense Exhibits

Another useful part of the Annual Statement is the Insurance Expense Exhibit (IEE), which is technically a supplement to the Annual Statement. In the IEE, insurance companies report countrywide experience on both net and direct bases by line of insurance. Both reports, net and direct, include the same data elements as Page 15 with the following exceptions. The IEE does not contain paid losses or paid ALAE, but does contain agent's balances, other acquisition expenses incurred, general expenses incurred, other income less other expenses, and pre-tax profit or loss excluding investment income. The IEE Net Report adds a few more crucial items – investment gain on funds attributable to insurance transactions, investment gain attributable to capital and surplus, and total profit or loss (including investment gains). The reporting instructions for the IEE provide the method to be used by insurance companies to allocate investment income to various lines of insurance.

5.1.4 Sources of Annual Statement, Page 15, and Insurance Expense Exhibit Data

Most insurance departments will make annual statement and quarterly filings available for public inspection and copying. Each Annual Statement is over 140 9" by 14" pages. Insurance companies typically file an Annual Statement in each state in which the insurance company is licensed to do business. The filings across states are identical, with the exception of the State Page. The State Pages will report the experience in the state in which the Annual Statement is filed.

The review of individual Annual Statements may be useful for the analyst interested in one or two companies. Several organizations provide the Annual Statement data in electronic format – typically on a CD-ROM. The Annual Statement data may be in full detail for all insurance companies or it

may be compiled into various summaries by state or by line. Two sources of Annual Statement data on CD-ROM are the National Association of Insurance Commissioners and the A.M. Best Company. Annual Statement data compilations on CD-ROM cost thousands of dollars.

Some states publish compilations of Annual Statement State Page and IEE information. For example, the Texas Department of Insurance annually publishes the most recent Texas Page 15 information for all reporting companies and a compilation of IEE data for all companies operating in Texas. These Texas reports are available in print and electronic format. The electronic reports are available for free from the Texas Department of Insurance Internet Site. In addition, most state insurance departments publish annual reports of their operations. These annual reports often contain state-specific premium information by line and by company.

5.1.5 *Best's Aggregates and Averages*

Two other important sources of financial information are *Best's Aggregates and Averages, Property Casualty Edition* published annually by the A.M. Best Company and the *Report of Profitability by State and By Line* published annually by the National Association of Insurance Commissioners. *Best's Aggregates and Averages* provides extensive summaries of Annual Statement and Insurance Expense Exhibit data, including separate summaries by type of insurance company (stock, mutual, reciprocal) and by line of business. It also provides valuable time series information and the most recent annual results by major insurance group for selected lines of insurance. *Best's Aggregates and Averages* contains little state-specific information. While *Best's Aggregates and Averages* offers a tremendous amount of information, the 1999 cost is about $350.00. *Best's Aggregates and Averages* available from the A.M. Best Company, Oldwick, NJ 08848. (908) 439-2200, telephone. Internet Site: **www.ambest.com.**

5.1.6 *The NAIC Report of Profitability by State by Line*

The NAIC *Profitability Report* provides detailed data and analysis by Annual Statement line of insurance and by state. The report pulls information from Annual Statement state pages and from the Insurance Expense Exhibit and, with very detailed calculations, shows profitability by state and by line by year for the most recent ten years. For example, one can look at various data elements and profit calculations for private passenger automobile liability, private passenger automobile physical damage, and homeowners insurance for each state. The report does not contain any insurer-specific data, but only aggregate data at the by-state, by-line level of detail.

Table 3: Annual Statement Page 15 Lines of Insurance	
1	Fire
2.1	Allied Lines
2.2	Multiple Peril Crop
2.3	Federal Flood
3	Farmowners Multiple Peril
4	Homeowners Multiple Peril
5.1	Commercial Multiple Peril (Non-Liability Portion)
5.2	Commercial Multiple Peril (Liability Portion)
6	Mortgage Guaranty
8	Ocean Marine
9	Inland Marine
10	Financial Guaranty
11	Medical Malpractice
12	Earthquake
13	Group A & H
14	Credit A & H
15	Other A & H
16	Workers' Compensation
17	Other (General Commercial Liability)
18	Products Liability
19.1	Private Passenger Auto No Fault (Personal Injury Protection)
19.2	Private Passenger Auto Liability
19.3	Commercial Auto No Fault (Personal Injury Protection)
21.1	Private Passenger Auto Physical Damage
21.2	Commercial Auto Physical Damage
22	Aircraft (all perils)
23	Fidelity
24	Surety
26	Burglary and theft
27	Boiler and machinery
28	Credit A & H

The report can be used, among other things, to obtain basic information about a particular line of insurance by state or countrywide, to compare profitability by line of insurance among states, to compare insurance industry profitability to other lines of insurance, to analyze profitability over time, and to analyze the major components of the premium dollar (losses, loss adjustment expenses, selling expenses, investment gains) at the by-line and by-state level of detail.

Types and Sources of Insurance Data

The *Profitability Report* contains a huge amount of information at the by-state, by-line level of detail for a relatively low cost. It is an excellent source of state-specific, industry-aggregate information in addition to the profitability calculations. The profitability calculations are well respected and particularly useful for comparing the relative profitability of states to one another. The *Profitability Report* is a relative bargain at the 1999 price of $160. NAIC *Report on Profitability by State by Line* from the National Association of Insurance Commissioners. (816) 374-7259 telephone. Internet Site: **www.naic.org.**

One weakness of the *Profitability Report* is that the insurance

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The Exhibit of Premium and Losses in the Annual Statement provides both "written" and "earned" premium information by line of insurance (see section 4.4.1 for explanation of "written" vs. "earned" premium).

Insurers can dramatically over- or under-state reserves and, consequently, dramatically misstate historical losses. For example, insurance companies overstated private passenger automobile liability reserves in the early 1990s. As a result, the incurred-to-earned loss ratios reported by insurance companies for those years understated the insurance companies' actual profitability. For an explanation of "Paid" vs. "Incurred" losses, see section 4.5.1.

BUSINESS IN THE STATE OF ....

EXHIBIT OF PREMIUMS AND LOSSES

NAIC Group Code 008
NAIC Company Code 19232

DURING THE YEAR 1994

1 Line of Business	Gross Premiums, Including Policy and Membership Fees, Less Return Premiums and Premiums on Policies Not Taken		4 Dividends Paid or Credited to Policyholders on Direct Business	5 Direct Unearned Premium Reserves	6 Direct Losses Paid (deducting salvage)	7 Direct Losses Incurred	8 Direct Losses Unpaid	9 Direct Allocated Loss Adjustment Expense Paid	10 Direct Allocated Loss Adjustment Expense Incurred	11 Direct Allocated Loss Adjustment Expense Unpaid	12 Commissions and Brokerage Expenses	13 Taxes, Licenses, and Fees
	2 Direct Premiums Written	3 Direct Premiums Earned										
1. Fire												
2.1 Allied lines												
2.2 Multiple peril crop												
3. Farmowners multiple peril												
4. Homeowners multiple peril												
5.1 Commercial multiple peril (non-liability portion)												
5.2 Commercial multiple peril (liability portion)												
6. Mortgage guaranty												
8. Ocean marine												
9. Inland marine												
10. Financial guaranty												
11. Medical malpractice												
12. Earthquake												
13. Group accident and health												
14. Credit A & H (Group and Individual)												
15.1 Collectively renewable A & H												
15.2 Non-cancellable A & H												
15.3 Guaranteed renewable A & H												
15.4 Non-renewable for stated reasons only												
15.5 Other accident only												
15.6 All other A & H												
15.7 Federal employees health benefits program premium												
16. Workers' compensation												
17. Other liability												
18. Products liability												
19.1 Private passenger auto no-fault (personal injury protection)												
19.2 Other private passenger auto liability												
19.3 Commercial auto no-fault (personal injury protection)												
19.4 Other commercial auto liability												
21.1 Private passenger auto physical damage												
21.2 Commercial auto physical damage												
22. Aircraft (all perils)												
23. Fidelity												
24. Surety												
25. Glass												
26. Burglary and theft												
27. Boiler and machinery												
28. Credit												
31. Aggregate write-ins for other lines of business												
32. TOTALS (a)												
DETAILS OF WRITE-INS												
3101.												
3102.												
3103.												
3198. Summary of remaining write-ins for Line 31 from overflow page												
3199. TOTALS (Lines 3101 thru 3103 plus 3198)(Line 31 above)												

(a) Finance and service charges not included in Lines 1 to 32

industry profitability is understated. First, the *Report* understates insurance profitability because *unrealized capital gains or losses* are included in the calculation of net worth, but are *excluded* from the calculation of income. Consider the return on net worth calculation as a fraction with income as the numerator and net worth as the denominator. The NAIC *Report on Profitability by State by Line* includes unrealized capital gains or losses in the denominator, but not in the numerator. Thus, the unrealized capital gains serve to increase the size of the base against which income is compared to calculate the return on net worth.

Changes in unrealized capital gains should be included in the calculation of income (numerator) if these gains are included in the calculation of net worth (denominator). According to Technical Note 4 of the NAIC *Report on Profitability by State by Line in 1997*, the inclusion of unrealized capital gains or losses in the calculation of income would have increased the overall return on net worth by 5.0% in 1995, by 2.5% in 1996 and by 6.2% in 1997.

Second, the NAIC *Report on Profitability by State by Line* understates insurance profitability because the return on net worth is calculated on the basis of average net worth instead of beginning year net worth. Again, consider the fraction income divided by net worth as the return on net worth. Now, consider how most investors would evaluate the return on an investment. Suppose that $1,000 was invested on January 1 and by the end of the year $200 was earned on that investment. The return on investment was 20%.

But the NAIC *Report on Profitability by State by Line* return on net worth calculation does not work this way. Assume that $200 in earnings was retained by the investor. By the end of the year, the investor now has $1,200 in capital. The NAIC *Report on Profitability by State by Line* calculates net worth as the average of beginning year and ending year net worth. Thus, using mean net worth, as in the *Report on Profitability by State by Line*, the investor's return on net worth is $200 divided by $1,100 (the average of $1,000 and $1,200) or 18.2%.

The NAIC *Report on Profitability by State by Line* use of average net worth, instead of beginning year net worth, dramatically understates insurance profitability over the past several years because the insurance industry's surplus and net worth have been growing dramatically.

5.1.7   Securities and Exchange Commission Filings for Public Companies

A publicly traded insurance company, in addition to filings to insurance departments, will also make filings to the Securities and Exchange Commission, like any other publicly-traded company. Thus, another source of financial data and information for insurers are their SEC filings, including the 10K Annual Report to Stockholders. It is important to note that insurance companies are subject to one set of accounting principles – Statutory Accounting Principles or SAP – for insurance regulators and another for investors – Generally Accepted Accounting Principles or GAAP. SEC

filings typically contain management's discussion of operations. SEC filings can be viewed at the SEC Internet Site using the EDGAR search engine: **www.sec.gov/cgi-bin/srch-edgar.**

5.1.8 *Executive Compensation*

Several states require insurance companies to report compensation – salary, bonuses, and other compensation – for the top executives in the insurance company. For publicly held (stock) companies, executive compensation is also found in certain SEC filings. A compilation of executive compensation information is performed by *The Insurance Forum*, a monthly magazine published by Professor Joe Belth. *The Insurance Forum* deals mainly with life insurance issues and demututualizations issues. The July or August issue generally contains the executive compensation compilation. *The Insurance Forum,* P.O. Box 245, Ellettsvile, Indiana 47429-0245. Telephone (812) 876-6502. Annual subscription $75 for 12 monthly issues.

5.2 Statistical Data

Statistical data refers generally to data reported by insurers to state insurance regulators that provides insurance company premium, exposure, and loss experience at a more detailed level than the statewide totals found in the Annual Statements. Statistical data collection is intended to help regulators analyze rates and markets.

5.2.1 *Statistical Agents, Advisory Organizations and Statistical Plans*

Insurers generally report their statistical data to the state insurance department through a statistical agent or advisory organization. The data are reported according to instructions contained in a statistical plan. A statistical plan is typically unique to a specific statistical agent. The statistical plan defines the data elements, reporting formats, and time frames for company reporting. The statistical agent is generally required to check the data for completeness, accuracy, and reasonableness ("edit" the data).

A statistical plan will typically require reporting of sufficient detail to enable the regulator and advisory organization to evaluate detailed rating factors. For example, a statistical plan for private passenger automobile insurance will require an insurer to report its premium, exposure, and loss experience broken out by:

- Coverage
- Deductible
- Limits
- Year or Time Period
- Rating Territory or ZIP Code
- Driver Classification
- Discounts
- Surcharge
- Voluntary vs. Involuntary Market

A useful introduction to statistical data is the NAIC *Statistical Handbook of Data Available to Insurance Regulators.* The Handbook is an attempt by insurance regulators, through the mechanism of the NAIC, to provide minimum statistical reporting standards for insurance companies and statistical agents. The *Handbook* is available from the National Association of Insurance Commissioners, (816) 374-7259 telephone. Internet Site: **www.naic.org.** Price: $135.

The *Handbook* describes minimum reporting requirements from the statistical agent to the regulator. The information reported by insurance companies to the regulator will vary by state and by statistical agents. For example, companies reporting to the National Association of Independent Insurers and the National Independent Statistical Service report summary information, while companies reporting to the Insurance Services Office report each premium and loss transaction.

Historically, organizations owned by insurance companies were licensed by state insurance departments to collect statistical data from insurance companies. The primary role of these organizations – called "advisory organizations" – was to compile statistical data from many insurance companies, analyze the data, and publish recommended rates. This method of joint decision-making by insurers through advisory organizations was, and is, legal, because insurance companies are generally exempt from anti-trust laws. In addition to licensing advisory organizations, state insurance departments also approved the statistical plan to be used by a particular advisory organization – thereby determining what information would be available to the regulator. In addition to providing compiled information to insurance companies subscribing to its services, the advisory organization also provided statistical data reports to the insurance regulator. From the insurance regulator's perspective, the advisory organization was acting as a statistical agent for the regulator.

For private passenger automobile and homeowners insurance, there are three main statistical agents – the Insurance Services Office, the National Association of Independent Insurers, and the National Independent Statistical Services. Of the three, only ISO is a true advisory organization. As such, ISO makes a variety of statistical information available to insurers and makes some statistical information available to the public.

In theory, the statistical agent's authority to collect data from insurance companies comes from the insurance regulator. In practice in most states, the insurance regulator is quite passive and does not require that the statistical agent's primary obligation be to the regulator. In some instances, the statistical agent has refused to provide information to the regulator, citing agreements with insurance companies not to divulge certain information. In recent years, the state of Texas has developed a new model for statistical agents, including the development of Texas-specific statistical plans that provide information relevant for effective market monitoring and regulation of insurance companies. The Texas private passenger automobile statistical plan can be obtained from the Texas Department of Insurance Internet Site

(**www.tdi.state.tx.us**) or by contacting the Technical Analysis Division of the Department (512) 475-3026.

Of particular interest from Texas are two reports in the private passenger automobile statistical plan. The Annual Aggregate Experience report provides premium and loss experience by individual company by private passenger automobile coverage. This statistical report – compiled into industrywide totals – forms the basis for the industrywide automobile rate hearing in Texas. The Annual Aggregate Experience Report exemplifies a statistical data report designed for ratemaking analysis. Table 4 lists the data elements (fields) contained in the Texas Annual Aggregate Experience Report.

While the Texas Annual Aggregate Experience Report provides ratemaking information, the Texas Quarterly Market Report is the exemplar of statistical data designed for market monitoring. *For most consumer advocates, access to market monitoring information will be far more useful than access to ratemaking data because effective use of market monitoring data requires far less insurance technical expertise than that required for effective use of ratemaking data.*

Table 5 lists the data elements contained the Texas Quarterly Market Report. Examples of how these ZIP Code data have been used to identify redlining problems are the Center for Economic Justice studies, described in Section 6.2.2 below. Although the Texas Quarterly Market Report is just one example of a market monitoring report, it should serve as a template for any similar request to a state insurance department. For the information to be useful, it must allow identification of market segments (preferred, standard, nonstandard), detailed geographic location of business (some measure of exposure at the ZIP Code level), and changes in activity over time (cancellations and nonrenewals). Although most insurance departments will not have the precise information specified in the Texas Quarterly Market Report, the report is a good starting point for discussions with the insurance department. For ex-

Types and Sources of Insurance Data

Table 4: Texas Annual Aggregate Experience Report Record Layout and Field Definitions

Position	Length	Type*	Field Name
1 - 2	2	N	Plan Code
3 - 7	5	N	Company NAIC Code
8 - 10	3	N	MGA Indicator
11 – 12	2	N	Year
13 – 15	3	N	Coverage Code
16	1	N	Type of Business Code
17 - 18	2	N	Row Code
19 - 21	3		RESERVED
22 - 33	12	N	Actual Earned Premium
34 - 45	12	N	Earned Premium at Benchmark Rate
46 - 57	12	N	Paid Losses at 12/31/XX
58 - 69	12	N	Incurred Losses at 12/31/XX
70 - 81	12	N	Incurred Losses at 3/31/XX+1
82 - 84	3		RESERVED
85 - 96	12	N	Paid ALAE at 12/31/XX
97 - 108	12	N	Incurred ALAE at 12/31/XX
109 - 120	12	N	Incurred ALAE at 3/31/XX+1
121 - 150	30		RESERVED

* Numeric (N) or Alphanumeric (A)

ample, instead of vehicles on policies in force, the insurance department may have access to policies written or earned car years. The key is to be persistent and find out what is available – not just learn what is not available.

Availability of statistical data will vary dramatically by state. For example, in Illinois, where the Department of Insurance has no responsibility or authority for reviewing auto or homeowners rates, the Department of

Position	Length	Type *	Description
			Table 5: Texas Quarterly Market Report Record Layout and Field Definitions
1 - 2	2	N	Plan Code
3 - 7	5	N	Company NAIC Code
8 - 10	3	N	MGA Indicator
11 - 14	4	N	Accounting Date
15	1	N	Coverage Code
16 - 20	5	N	Five Digit ZIP Code
21 - 24	4	N	Plus Four ZIP Code
25 - 36	12	N	Written Premium
37 - 39	3		RESERVED
40 - 48	9	N	Policy and Membership Fees
49 - 56	8	N	Number of Vehicles on Policies at End of Previous Quarter
57 - 64	8	N	Number of Vehicles on Policies at End of Current Quarter
65 - 67	3		RESERVED
68	1	N	Reporting Method
69 - 76	8	N	Vehicles Added During Quarter
77 - 84	8	N	Vehicles Canceled or Non-Renewed at Insurer's Initiative
85 - 92	8	N	Vehicles Canceled for Non-Payment of Premium
93 - 100	8	N	Vehicles Canceled at Insured's Initiative
101- 150	50		RESERVED

* Numeric (N) or Alphanumeric (A)

Insurance elects not to receive statistical data for ratemaking. However, the Illinois Department of Insurance does collect market monitoring information from insurance companies.

In other states, the Commissioner is responsible for reviewing industry aggregate rate levels. In Texas, North Carolina, and Massachusetts, for example, detailed industry-aggregate statistical compilations are produced annually. In other states, statistical data reports may be generated on more of an ad-hoc basis.

Who and How to Ask for Statistical Data

It may not be easy to identify the insurance department staff knowledgeable about statistical reports. Moreover, some insurance departments will be far more willing to help members of the public obtain insurance data than will other insurance departments. Table 6 provides a list of names to start with. The people listed in Table 6 are identified, as of March 1999, as statistical data contacts in state insurance departments by the NAIC. To get an updated list, contact (as of June 1999), Natalai Webster Hughes at the NAIC, telephone (816) 374-7237. If these people cannot or will not help, ask them for the name of the person who can or will. If there is no contact listed in Table 4, or if the listed contact provides no assistance, call the general insurance department number and ask for the property casualty actuary or actuaries or, in small states, ask for the person responsible for

Table 6: State Insurance Department Contacts for Data and Statistical Information

St.	Contact	Phone	Fax	Email
AL	Johnny Johnson	(334) 241-4174	(334) 240-3194	
AK	Sarah McNair-Grove	(907) 465-4613	(907) 465-3422	sarah_mcnair@commerce.state.ak.us.
AZ	Deloris Williamson	(602) 912-8466	(602) 912-8452	
AR	Lenita Blasingame	(501) 371-2800	(501) 371-2618	Lenita.Blasingame@mail.state.ar.us
CA	Dick Roth	(213) 346-6134	(213) 897-6771	Rothr@insurance.ca.gov
CO	Vacant (see Tom Abel)	(303) 894-7499, x 350	(303) 894-7455	
CT	No Contact Person Identified	(860) 297-3800	(860) 566-7410	
DE	Stephen B. White	(302) 739-5774	(302) 739-5280	Swhite@deins.state.de.us
DC	Clark Simcock	(202)442-7833	(202)535-1207	
FL	Jim Watford	(850) 413-5368	(850) 488-3334	Watfordj@doi.state.fl.us
GA	Greg Hawkin	(404) 656-4449	(404) 656-7628	
HI	Shelley Santo	(808) 586-2809	(808) 586-2806	Shelleys@insurance.dcca.state.HI.US
ID	No Contact Person Identified	(208) 334-4250	(208) 334-4298	
IL	Judy Pool or Don Wulf	(217) 524-5376	(217) 524-2271	Judy.Pool@ins.state.il.us
IN	No Contact Person Identified	(317) 232-2385	(317) 232-5251	
IA	Ramona Lee	(515) 281-4095	(515) 281-3059	
KS	William T. Wempe	(785) 296-7844	(785) 291-3673	Bwempe@ins.wpo.state.ks.us
KY	Mona Carter	(502) 564-6048	(502) 564-1453	Mona.carter@mail.state.ky.us
LA	Scarlett Robertson	(225) 342-5227	(225) 342-8622	srobertson@ldi.state.la.us
ME	Dick Johnson	(207) 624-8427	(207) 624-8599	Richard.E.Johnson@state.me.us
MD	Linas Glemza	(410) 468-2044	(410) 468-2038	
MA	No Contact Person Identified	(617) 521-7794	(617) 521-7770	
MI	No Contact Person Identified	(517) 373-9273	(517) 335-4978	
MN	Richard Amundson	(651) 297-5741	(651) 296-9434	ramundso@commerce.state.mn.us
MS	No Contact Person Identified	(601) 359-3569	(601) 359-2474	
MO	Brad Connor	(573) 751-1955	(573) 751-7819	Bconnor@mail.state.mo.us
MT	Chuck Holland	(406) 444-2047	(406) 444-3497	cholland@mt.gov
NE	Alan Wickman	(402) 471-4646	(402) 471-6559	awickman@doi.state.ne.us
NV	Cliff King	(702) 687-7680	(702) 687-3937	
NH	Michael Blake	(603) 271-2261	(603) 271-1406	
NJ	Mary Ann Kralik	(609) 292-3219	(609) 777-0019	Mkralik@dobi.state.nj.us
NM	Sharon Markowski	(505) 827-4307	(505) 827-4734	Smarkowski@state.nm.us
NY	Ann Kelly	(212) 480-5525	(212) 480-5550	Akelly@ins.state.ny.us
NC	John Donaldson	(919) 733-3284	(919) 715-7564	
ND	Larry Maslowski	(701) 328-4976	(701) 328-4880	Lmaslows@state.nd.us
OH	Peg Ising	(614) 644-3355	(614) 644-3743	Peg.ising.@ins.state.oh.us.
OK	Greg Lawson	(405) 521-3681	(405) 521-6652	
OR	Michael Lamb	(503) 947-7221	(503) 378-4351	Rmichael.lamb@state.or.us.
PA	No Contact Person Identified	(717) 787-3991	(717) 772-1969	
RI	No Contact Person Identified	401) 222-2223	(401) 751-4887	
SC	Mary S. Hanna	(803) 737-6168	(803) 737-6233	
SD	Sam Meyer	(605) 773-3563	(605) 773-5369	Sam.Meyer@state.sd.us
TN	Billy Hosea	(615) 741-1692	(615) 532-2788	
TX	David Eley	(512) 463-6425	(512) 475-2025	David_Eley@TDI.state.TX.US
UT	Vanna Hunter	(801) 538-3860	(801) 538-3829	idmain.vhunter@state.ut.us
VT	David Slayton	(802) 828-3301	(802) 828-3306	Dslayton@bishca.state.vt.us
VA	Mary Bannister	(804) 371-9826	(804) 371-9396	Mbannister@scc.state.va.us
WA	Lee Barclay	(360) 586-3685	(360) 586-3535	Leeb@oic.wa.gov
WV	Thomas J. Marchio	(304) 558-2094	(304) 558-1610	marcht@wvnvm.wvnet.edu
WI	Phil Kress	(608) 266-0430	(608) 266-9935	Pkress@mail.state.wi.us
WY	Charles Hartman	(307) 777-7308	(307) 777-5895	Chartm@missc.state.wy.us

reviewing auto and homeowners rate filings. If you still have no luck, ask for the public information officer.

5.2.2 Redlining Studies

Two examples of studies analyzing insurance availability and redlining are published by the Center for Economic Justice (CEJ). In April 1997, CEJ published a study looking at overall private passenger insurance availability in Texas – *Auto Insurance Redlining in Texas: Availability Worsens While Consumers Lose Affordable Coverage Options.* The report showed that – in aggregate – Texas auto insurers systematically deny consumers from poor and minority communities lower-cost standard and preferred coverage. Rather, consumers in poor and minority communities were forced to purchase higher-cost insurance from nonstandard insurance companies and through the assigned risk plan. Table 7 shows that as the rejection rate for standard and preferred coverage increased, the minority population increased and median household income decreased.

CEJ's May 1997 report – *Worst Redliners Identified: Department of Insurance Fails to Act* – analyzed and reported individual insurer behavior. Table 8, which excerpts some information from that report, shows how market monitoring data can be used to examine insurers' market practices.

For the companies shown in Table 8, they sell far fewer policies – as a percentage of all policies sold – in minority neighborhoods than in white neighborhoods. Since the denial of coverage in standard and preferred companies is alleged to be

Table 7: Automobile Insurance Availability in Texas

Automobile Rejection Rate	1996 Average of Non-Anglo Population Percentage	1996 Average of Median Household Income	1996 Number of ZIP Codes
0.0% to 5.2%	4.7%	$22,414	1
5.3% to 10.4%	12.1%	$44,042	74
10.5% to 15.6%	13.6%	$30,565	317
15.7% to 20.8%	20.7%	$24,871	413
20.9% to 26.0%	29.4%	$24,523	280
26.1% to 31.1%	43.0%	$23,456	142
31.2% to 36.3%	54.6%	$21,549	79
36.4% to 41.5%	68.5%	$19,954	65
41.6% to 46.7%	82.7%	$17,682	45
46.8% to 51.9%	83.7%	$16,441	38
Over 51.9%	92.3%	$14,015	26

Table 8: Redlining By Company in Texas: Vehicles Insured in Standard and Preferred Companies as a Percentage of Total Vehicles Insured

Minority Population	ZIP Codes	State Farm	USAA	Farm Bureau	Nationwide	Safeco
0.0% to 14.2%	552	31.45%	6.44%	4.55%	2.28%	1.00%
14.3% to 28.5%	412	30.86%	6.42%	4.16%	2.33%	1.01%
28.6% to 42.7%	262	28.49%	6.51%	4.14%	1.89%	0.87%
42.8% to 57.0%	150	25.23%	5.35%	4.34%	1.34%	0.82%
57.1% to 85.5%	165	23.31%	3.98%	2.19%	1.06%	0.77%
85.6% or more	93	19.41%	1.43%	1.14%	0.79%	0.46%
Statewide Market Share		28.58%	5.70%	4.05%	1.88%	0.90%

based upon driver risk and driving record, the Table 8 results raise serious questions. Do bad drivers decide to live together in minority neighborhoods? Or are insurers systematically denying standard and preferred coverage to consumers in poor and minority neighborhoods? Market monitoring data can be used to produce information similar to that of Tables 7 and 8 and can be used to demand accountability from insurance companies and the regulators responsible for enforcing anti-redlining statutes.

Copies of these reports can be obtained from CEJ at 1704½ South Congress, Suite P, Austin, TX 78703. Call (512) 312-1327 or **www.cej-online.org.**

5.2.3 Rate Filings

In those states that require insurance companies to make rate filings and justify the filed rates with supporting data and actuarial analysis, the rate filings contain a tremendous amount of company-specific statistical data. Typically, the rate filing will contain information on most, or all, of the topics discussed in Section 4, above. Rate filings typically contain a wealth of information about the insurance company's rates, discounts, loss experience, and other items.

Rate filings can generally be obtained by simply requesting a copy from the insurance department. However, the ease of obtaining a copy of a rate filing varies dramatically across states. Of the largest states, Texas is the most consumer-friendly for getting a copy of a rate filing. As of the date of this report, most rate filings can be obtained within ten days of requesting a copy of the rate filing at a cost of ten cents per page copied. Since many rate filings run hundreds of pages, the ten cents per page cost is a relative bargain. In contrast, the California Department of Insurance will only make rate filings available for public viewing and will not make copies. There are some businesses that will take a portable copier or scanner to the Public Viewing Room and provide copies for $1.00 per page. On the positive side, one service – RateFilings.com – can provide the rate filings in electronic format with great convenience. On the negative side, the cost of rate filings is very expensive at $1.00 per page. Unlike almost every other state, the New York State Insurance Department will not release copies of rate filings until the filings have been reviewed and/or approved. In Texas and California, the rate filings are available to the public within days of receipt by the insurance department. In addition, the NY SID is notoriously slow about responding to Open Records requests for information from the public.

5.2.4 NAIC State Average Expenditures & Premiums for Personal Automobile Insurance and NAIC Homeowners Average Premium Reports

The NAIC publishes two reports of average premiums paid by consumers – one for personal automobile insurance and one for homeowners insurance. The homeowners report is far more detailed, providing average premium broken out by value of property and particular property coverage. The homeowners report also provides market share within a state by type of policy coverage.

The reports are available from the NAIC Publications Department,

(816) 374-7259 telephone. Internet Site: **www.naic.org**. The auto report is $35 and the homeowners report is $75.

5.2.5   *Fast Track Data*

Fast Track data are loss trend data collected by the industry-sponsored or industry-owned statistical agents. What makes the Fast Track data unique and useful is its timeliness – the data are available quarterly within three months after the end of the calendar quarter. Typically, there is a much longer lag time between the end of a reporting period and the availability of statistical data about that reporting period. The Fast Track data are limited to earned exposures (earned car years or earned house years), paid losses, paid claims, earned premiums, and incurred losses. The data are available by major coverage and include a four-year quarterly time series.

Fast Track data can be useful for evaluating loss trends for particular coverages in a state or countrywide. Caution should be used with Fast Track data since the data represent only a portion of companies operating within a state. In some instances, the share of the market represented by the Fast Track data is less than 30%. Some states may get Fast Track data from the statistical agents and make the data available for public inspection. Contact your state insurance department to see if they get Fast Track data. Otherwise contact Joseph M. Izzo, Manager of Personal Lines Information, Insurance Services Office, Phone: (212) 898-5985, Fax: (212) 898-6060 E-Mail: jizzo@iso.com. Cost is about $250 per quarter.

5.2.6   *NAIC Auto Database*

Periodically the NAIC publishes a compendium of information related to automobile insurance, including information by state about auto insurance premiums and losses and the cost of auto insurance, such as hospitalization charges, auto theft and accident rates, and insurance and traffic laws. Since the database report is not updated annually, be sure that the version you order contains recent information. The report may be useful for debunking some insurer allegations about insurance cost drivers. The reports are available from the NAIC Publications Department, (816) 374-7259 telephone. Internet Site: **www.naic.org**. Cost is $75.

5.2.7   *Pay By the Mile Studies*

The National Organization of Women has an insurance project examining insurance discrimination against women. They have produced a series of studies promoting auto insurance priced according to the amount of miles driven. The studies are good examples of how to peel away the veneer of insurance actuarial jargon and lay bare the facts. Contact Patrick Butler, (202) 331-0066 x 727, Internet site: **www.now.org.**

5.2.8   *HLDI Auto Crash Information*

The Highway Loss Data Institute (HLDI) is, according to their own words, "a nonprofit, public service organization that gathers, processes, and publishes data on the ways in which insurance losses vary among different

kinds of vehicles." It is closely associated with and funded through the Insurance Institute for Highway Safety, which is wholly supported by automobile insurers. The IIHS Internet Site (**www.carsafety.org**) contains information on injury, collision, theft and driver death by type of vehicle. Mailing address: 1005 N. Glebe Road, Suite 800, Arlington, VA 22201. Telephone: (703) 247-1600, Fax: (703) 247-1595.

5.2.9 Periodicals

Several insurance trade periodicals routinely provide statistical studies. *Best's Review* is a monthly magazine published by the A.M. Best Company. An annual subscription is $20 for 12 issues. Much of the content is available on the A. M. Best Internet Site. *Best Week* is a weekly newsletter published by A. M. Best and often includes statistical studies and other analyses. Annual subscription is many hundreds of dollars, but the weekly lead story and special studies are available on the A. M. Best Internet Site: **www.ambest.com**.

The *Auto Insurance Report* and *Property Insurance Report* are published by Risk Information, Inc. These reports provide insider market information on auto and property insurance markets nationally and by state. The editor and publisher, Brian Sullivan, often includes detailed statistical abstracts of Page 15 data and from other sources. Contact Risk Information, Inc., at 33 Lindall Street, Laguna Niguel, CA 92677-4738. (949) 443-1983 telephone, (949) 443-0331 fax. The *Auto Report* is $647 annually for 48 issues and the *Property Report* is $427 for 24 issues. If you cannot afford the publication, your state insurance department may subscribe and make the publication available for viewing.

5.2.10 Technical Studies – The Casualty Actuarial Society

The Casualty Actuarial Society (CAS) is the professional organization for property casualty actuaries. The CAS administers a series of examinations to qualify actuaries for membership in the American Academy of Actuaries. The CAS also holds regular meetings to present and discuss research and other issues of interest to actuaries. The CAS Internet Site (**www.casact.org**) has an extensive library of actuarial articles and proceedings from meetings available for free downloading. The Proceedings of the CAS contain articles that often form the basis for actuarial practice.

Also available for downloading are the Actuarial Standards of Practice, Actuarial Statements of Principles, and Actuarial Standards of Compliance. The Statement of Principles Regarding Property and Casualty Ratemaking sets out the framework for ratemaking by CAS members. Standards of Practice address particular tasks faced by CAS members and include:

No. 7	Performing Cash Flow Testing for Insurers
No. 9	Documentation and Disclosure in Property and Casualty Insurance
	Ratemaking, Loss Reserving, and Valuations

No. 12   Concerning Risk Classification
No. 13   Trending Procedures in Property/Casualty Insurance
            Ratemaking
No. 23   Data Quality
No. 29   Expense Provisions in Property/Casualty Insurance
            Ratemaking
No. 30   Treatment of Profit and Contingency Provisions and the
            Cost of Capital in Property/Casualty Insurance
            Ratemaking

It should be noted that the overwhelming majority of the membership (and leadership) of the CAS are actuaries who work directly or indirectly for insurance companies. Perhaps as a result of the economic interests of the members' employers, the Standards of Practice are typically developed to provide a great deal of flexibility to the actuary and to place a great emphasis on the actuary's judgment. It is not uncommon to hear an actuary defend a particular opinion in a rate hearing by simply citing many years of experience.

Contact the CAS at 1100 North Glebe Road, Suite 600, Arlington, VA 22201 (703) 276-3100 phone, (703) 276-3108 fax. Internet Site: **www.casact.org**.

5.2.10 Technical Studies – Rand Corporation

Research into a variety of issues related to automobile or homeowners insurance is conducted by a variety of organizations, typically funded by the insurance industry. The Rand Corporation Institute for Civil Justice (www.rand.org/centers/icj) performs various studies on automobile injury compensation. Research is used extensively by advocates of no-fault auto insurance and so-called auto choice insurance.

5.3 Other Insurance Data

The category of other data sources covers everything other than financial data and statistical data. Other types of insurance data include:

- Closed Claim Studies
- Reports to or by Legislatures
- Consumer Complaints
- Underwriting Guidelines

5.3.1 Closed Claim Studies

A *closed claim report* is a detailed report of the characteristics of claims that have been fully paid and closed by the insurance company. Closed claim reports are typically only provided for liability claims because the liability claims are more likely than property damage claims to take longer to settle, involve attorneys for the insured or the insurance company, and have larger settlement amounts. One state – Texas – requires all insurance companies to file closed claim reports on all commercial liability closed

claims greater than $10,000. The Texas Department of Insurance compiles the closed claim data and makes the compilations available on its Internet Web Site.

Types and Sources of Insurance Data

The National Association of Insurance Commissioners has asked the Insurance Services Office to develop a closed claim report for liability claims on a periodic basis – generally every three years. ISO collects closed claim reports for a sample of closed claims from insurers who volunteer to participate. ISO compiles the results into a report and publishes the report under the supervision of the NAIC. The NAIC / ISO closed claim survey is useful because the results can be tracked over time. The underlying data are not available to the public, as they are in Texas. As with the Texas data, the NAIC / ISO closed claim data provide no information on personal lines. The ISO Internet Site contains extended excerpts from the NAIC/ISO Closed Claim studies: **www.iso.com/docs/studies.htm**.

The Insurance Research Council was created, and is funded completely, by the insurance industry to produce various studies and research considered useful by the insurance industry. The IRC has produced three closed claim studies for private passenger automobile liability insurance. The usefulness of the IRC studies is tempered by the facts that the IRC data are not available for independent review and that the IRC reports are generally produced to promote a particular political agenda of the insurance industry.

For example, the IRC has conducted closed claim studies for automobile insurance bodily injury claims. The title of one study reveals the organization's bias, *Fraud and Buildup in Auto Injury Claims: Pushing the*

Sample:

Annual Aggregate Experience Report
Example of Report for Experience through Calendar/Accident Year 1994

Row	Calendar/ Accident Year	Earned Premiums		Paid Losses at 12/31/XX	Incurred Losses at 12/31/XX	Incurred Losses at 3/31/XX+1	Paid ALAE at 12/31/XX	Incurred ALAE at 12/31/XX	Incurred ALAE at 3/31/XX+1
		Actual	Benchmark						
	Calendar Year Paid and Incurred (Excluding IBNR) Losses and ALAE for 1994								
1	Prior								
	Inception to Date Premiums and Paid and Incurred (Excluding IBNR) Losses and ALAE Evaluated as of 12/31/94 and 3/31/95								
2	1985								
3	1986								
4	1987								
5	1988								
6	1989								
7	1990								
8	1991								
9	1992								
10	1993								
11	1994								
21	Total (Sum Rows 1 - 11)								
	Inception to Date Losses Paid and Incurred (excluding IBNR) for Accident Years in Rows 2 through 10 Evaluated as of 12/31/93								
22	Prior Total (Sum Rows 3 - 11 from Prior Year)								
	Calendar Year Losses for 1994								
31	Calendar Year (Row 21 - Row 22)								

Note: For Physical Damage coverages, report only latest two years of premiums and only latest two years and prior years for losses.

Limits of the Auto Insurance System. Another study, *Homeowners Losses Patterns in Eight Cities* was an effort to disprove redlining by homeowners insurers. It is important for consumer advocates to be able to respond to "studies", such as those from the IRC, that have been prepared to serve the interests of the insurance industry. Contact IRC, 718 Providence Rd., P.O. Box 3025, Malvern, PA 19355-0725, Internet Site: **www.ircweb.org**.

5.3.2. *Reports to, or by, Legislatures*

Legislative committees and/or legislative research organizations often perform research into particular insurance issues. Contact your State Legislative Library or State House (or Senate) Research Organization, particularly in the larger states such as California, Texas, New York, Florida, Illinois, New Jersey, and Pennsylvania.
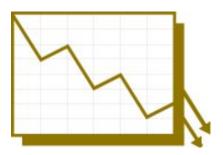
5.3.3. *Consumer Complaints*

One of the primary roles of state insurance departments is to accept and respond to consumer complaints about insurance companies and insurance agents. Although insurance departments are limited in the assistance they can actually provide consumers who feel they have been wronged by a company or agent, the insurance departments generally maintain logs of the complaints. If the insurance department is doing a good job of tracking complaints, a consumer advocate can visit the insurance department and research complaints against a particular company or complaints in a particular area, such as slow claims payment.

5.3.4 *Underwriting Guidelines*

Underwriting Guidelines are the rules that insurance companies use to determine to whom they will sell insurance and at what price and terms of coverage. Insurance companies claim that underwriting guidelines are trade secrets and most state insurance departments uncritically honor this claim. A few states, including Florida and Connecticut, collect and make publicly available underwriting guidelines. Contact your state insurance department to see if underwriting guidelines are collected and available to the public. For a good overview of underwriting guidelines used in homeowners and automobile insurance, contact the Texas Office of Public Insurance Counsel (OPIC). OPIC is a Texas state agency charged with advocating on behalf of insurance consumers as a class. OPIC has developed reports on underwriting guidelines over time. The reports are available from the OPIC Internet Site: **www.opic.state.tx.us** or by contacting OPIC at 333 Guadalupe, Suite 120, Austin, TX 78701, (512) 322-4143 phone, (512) 322-4148 fax.

6. Glossary of Insurance Data Terms

Calendar Year *vs.* ***Accident Year*** *vs.* ***Policy Year*** – these terms refer to methods of organizing insurance data. Calendar year data typically represents incurred losses (paid losses and changes in reserves) regardless of when the claim occurred or when the policy was issued. Calendar year data

are typically financial data and generally do not effectively match losses with the premium and exposure of the policies under which the losses were paid. Calendar year data are generally not used for ratemaking analyses, but are sometimes used for certain short-tailed lines because the calendar year data may not be significantly different from accident year data. The benefit of calendar year data is that the data are available quickly after the end of the particular time period.

Accident Year data tracks claims paid and reserves on accidents occurring within a particular year, regardless of when the claim occurred or when the policy was issued. Accident year data do a better job at matching losses with the premium of the policies under which the losses were paid. Accident year data are not available as quickly as calendar year data because time is needed for the accident year data to develop, i.e., time for claims occurring within a particular period to be reported and settled.

Policy Year data track claims arising from policies issues in the year, regardless of when the accident occurred or when the claim was reported. Policy year data does the best job of matching losses with the premium and exposures of the policies under which the losses were paid. Policy year data take the longest time to develop.

Capital Gains – Capital gains (or losses) are a form of investment gain (or loss) achieved by the sale of investment assets. For example, if an insurer purchases some stock for its investment portfolio and later sells the stock for a gain, that gain is a capital gain. If the stock were sold at a loss, it would represent a capital loss. Capital gains are identified as either realized capital gains for unrealized capital gains. Realized capital gains are those actually achieved during a given period by the insurer from the sale of assets. Unrealized capital gains are the gains an insurer would have realized had the insurer sold the assets. Unrealized capital gains are important in insurance because they are included in the calculation of the insurer's surplus and net worth.

Case versus *Bulk* versus *IBNR (Incurred But Not Reported) loss reserves* – case reserves are reserves associated with a specific claim. Bulk reserves are reserves generally associated with a group of claims. IBNR reserves are reserves for anticipated claims that have yet to be reported.

Casualty Actuarial Society (CAS) – The CAS is the professional organization of property casualty actuaries. The CAS administers a series of examinations to qualify actuaries for professional designation and for membership in the American Academy of Actuaries. The CAS also holds regular meetings ("proceedings") in which current research in actuarial methods and issues is presented and discussed. The overwhelming majority of the CAS membership is employed directly or indirectly by insurance companies. Another sister organization – the Actuarial Standards Board – produces

Actuarial Standards of Practice designed to guide the work of actuaries.

Class Relativities – The difference in rates between various rating classes is a rate relativity. For example, if the consumers in one part of the state are paying 20% more for auto insurance, all else equal, than consumers in another part of the state, the territorial rate relativity of area one is 1.2 compared to 1.0 for area 2.

Commissions and Brokerage – payments made to agents and/or brokers.

Credibility – refers to the amount of weight given to various estimates of losses or loss trends. Stated another way, credibility is the measure of the statistical significance of estimates produced from various data sets. An estimate produced from a larger data set will generally be a more reliable predictor than an estimate from a smaller data set. Actuaries rely on certain standards to determine if the data underlying various estimates are sufficient for purposes of the ratemaking estimates. If a particular set of data has 100% credibility, then the data is considered to be of sufficient volume that the estimate of claim costs can be based 100% on those data. If the data volume is not 100% credible, the actuary must supplement the estimate from the data set with another data source and/or estimate.

Exposure – Exposure is the basic unit of coverage provided by an insurer. For private passenger automobile, an exposure unit is a car-year – one vehicle insured for a full year. For coverages related to value of the vehicle or property, the exposure may be more specific — a car year or a house year per $1,000 of insured value.

Fiscal Accident *versus* ***Calendar Accident Years*** – Calendar accident year data refer to accident year data for a given calendar year, i.e., the accident year from January 1 through December 31. Fiscal Accident year data refer to accident year data for a twelve-month period other than from January 1 through December 31. For example, a fiscal accident year may be the accident year data for the period July 1 through June 30.

General Expenses – administrative expenses, including senior management.

Investment Income – Insurers have significant funds to invest. The source of funds includes equity (or surplus) and policyholder-supplied funds. Policyholder supplied funds available for investment include the various reserves – unearned premium, loss and loss adjustment expense. Because insurers are continually selling new policies as older policies come to the end of their term, insurers have a steady flow of revenue. Thus, insurers are able to invest fund amounts greater than the amount of equity in longer-term financial instruments. Insurers earn more investment income with coverages

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for which claims are paid out over a longer period of time. For example, insurers earn more investment income on bodily injury liability than on collision coverages because it will take years for all the bodily injury claims in a given period to be settled and paid, while it will take a much shorter period for all the collision claims in a given period to be settled and paid. Thus, the insurer holds bodily injury reserves longer than collision reserves and will earn more investment income on the bodily injury reserves because the reserves are invested for a longer period before being needed to pay all claims. For some coverages, investment income is so significant that the insurer pay out more than $1.00 in claims and expenses for each $1.00 in premium received and still make a reasonable profit. Investment income generally refers to dividend and interest income and not to capital gains.

Loss Adjustment Expense – Expenses associated with settling claims, distinct from the actual claim payments to consumers. LAE includes cost of investigating and litigating claims.

Loss Development – Loss development is the pattern of claim occurrence and payment over time. Property coverages typically have a shorter development pattern ("tail") than liability coverages. See description in section 4.

Loss Trends – Loss trends are changes in loss frequency (number of claims per thousand vehicles insured) or loss severity (average payment per claim) over time. The combination of frequency and severity is called *pure premium*, which is an insurance term for average claim payment per insured vehicle. Loss trends are used to adjust historical loss data as part of the process of estimating future losses in the ratemaking process.

Other Acquisition Expenses – expenses other than commissions or brokerages associated with acquiring business.

Paid versus Incurred Losses – paid losses refer to the actual dollars of claim payments made by an insurer to policyholders in a specific time frame. Paid claims may be related to policies from any number of earlier periods. Incurred losses are paid claims plus changes in loss reserves during a given period. Incurred losses better reflect the loss experience associated with exposures during a given period because of changes in loss reserves, which may have been established from earlier periods.

Premium Trends – Premium trends refer to changes in average premium per exposure over time. For property coverages, premium can increase – even if rates do not change – because consumers regularly trade in older cars for newer cars or because insurers regularly increase the amount of insurance on a home. Thus, for certain automobile insurance coverages – collision and comprehensive – insurers earn more revenue each year without

increasing rates, all else equal.

Rate *versus* **Premium** – A rate is the charge per unit of insurance coverage. A premium is the result of applying a rate to a particular consumer's set of coverages and circumstances. An insurer's rate filing contains rates – base rates and additional factors for specific characteristics of the consumer, vehicle, or property. For example, a good driver may get a discount from the base rate, while a bad driver might have a surcharge factor applied to the base rate.

Rating Factors *and* **Rating Classes** – Rating factors are characteristics of the consumer, vehicle, or property used by insurance companies to determine different premiums for different consumers. A rating class is the group of consumers with identical rating factors. For example, automobile insurance rating factors include age, sex, and marital status of the driver, geographic location, and driving record. Homeowners insurance rating factors include type of property construction, year of construction and geographic location. Every discount or surcharge represents a rating factor. For example, a discount for a clean driving record creates rating classes of people with clean driving records. Rating factors may also be used in underwriting. An important issue for consumer advocates is the use of rating factors (including underwriting guidelines) that unfairly discriminate against consumers by causing consumers of essentially the same risk to be charged different rates. The premise behind redlining is that some consumers are charged higher rates for factors that are not related to risk.

Reinsurance - Insurance purchased by the insurance company. Insurance experience is typically reported on either a direct or net basis. *Direct* refers to the initial insurance company experience as if there was no reinsurance. *Net* refers to experience after the effects of reinsurance – direct experience plus reinsurance assumed less reinsurance ceded. *Reinsurance ceded* means that part of the insurance portfolio laid off to another insurance company. *Reinsurance assumed* means that part of another company's insurance portfolio accepted by the reporting insurance company.

Reserves – insurers receive significant amounts of money up front in exchange for the promise to pay future claims. Insurers establish unearned premium reserves for premium received but not yet earned by the insurer, loss reserves for claims made and to-be-made but not yet paid, and loss adjustment reserves for claim settlement expenses not yet paid but expected to be paid on claims made and to-be-paid. Insurers invest reserves and earn investment income.

Short-tailed *versus* **Long-tailed lines** – The pattern of claim filing and settlement varies across coverages of insurance. For some coverages, the claims associated with policies in a given period will take years to be reported and settled. Lines of insurance with long development of claims are

called long-tailed lines. Lines and coverages in which the pattern of claim filing and settlement is measured in months are called short-tailed lines. Short-tailed coverages include private passenger automobile physical damage and, generally, residential property coverages.

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Statistical Agents *and* ***Advisory Organizations*** – A statistical agent is an organization designated by a state insurance department to collect insurance statistical data on behalf of the insurance department. An advisory organization, by collecting data from insurance companies and providing reports to insurance departments, acts as a statistical agent in many states. However, an advisory organization's principal activities are to analyze the information collected from insurance companies and provide recommendations to insurance companies on policy forms and rates (technically, "prospective loss costs"). Advisory organizations are only able to provide joint decision making services for insurance companies because insurance companies are exempt from federal anti-trust statutes.

Symbols – Symbols are rating factors used to determine the price of automobile insurance. Symbols combine information on the new cost of the vehicle, the susceptibility of the vehicle to damage, and the relative cost to repair the vehicle. Thus, two vehicles with the same new cost may have different symbols – and, consequently, different automobile insurance premiums – because one vehicle is more susceptible to damage in a low-speed crash or costs more to repair a damaged bumper, for example.

Taxes, Licenses and Fees – insurers pay taxes, license fees, and other fees, in addition to federal income tax. Federal income tax is considered elsewhere.

Written *versus* ***Earned Premium*** – An insurer is said to "write" business when it sells and issues a policy. *Gross written premium* is the sum of the premiums for all the policies sold in a particular time frame. *Net written premium* is gross written premium less premium returned for cancellations or other reasons. An insurer typically sells a private passenger automobile insurance policy for six or twelve months and a residential property policy for twelve months. An insurer "earns" the premium over the term of the policy. For example, if the written premium on a six-month policy is $600, then the insurer earns roughly $100 for each month of the policy. Thus, if a consumer cancels his or her policy before the end of the term, the insurer must refund the unearned premium. Written premium provides a good measure of the business activity of an insurer during a particular time frame, while earned premium more accurately reflects the exposure faced by an insurer during the period.