LOSS RATIOS AND HEALTH COVERAGES

Loss Ratio Work Group

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INTRODUCTION

This paper is written for the benefit of all who use or make reference to loss ratios for any of the purposes described below. Sometimes, based on loss ratios, conclusions may be drawn and actions taken that are incorrect or inappropriate. This is because the meaning of a particular form of loss ratio is not understood or the loss ratio is calculated inappropriately for its intended use. Comparisons of loss ratios between companies and products can often mislead where the methods for calculating the ratios vary.

The purpose of this paper is to describe the many different ways in which loss ratios are currently used by different audiences, and to identify some of the issues inherent in methods of valuation employed. Alternative approaches that address some these issues are suggested where appropriate.

Loss ratios for health benefit products have been employed as a measure by a broad range of users for diverse purposes. Insurance companies, managed care companies, legislators, regulators, investors, lenders, consumer advocates and others have used the loss ratio for their particular purposes. These include the evaluation of an organization's performance by management and investors, providing consumers with information on the relative quality of competing health plans, projecting future earnings growth of HMOs, and testing products against minimum loss ratio standards.

Loss ratios have been proposed as a method to compare and evaluate insurers and managed care organizations in a variety of ways. Proposed uses include health insurance illustration requirements, accounting standards, consumer quality measures and solvency regulation. As these concepts are developed, it is important to understand the nature of the loss ratio, and some of the issues that impact on its use.

Health coverage encompasses a broad range of products which often have very different characteristics. For this paper, we have classified the various health coverages into the two categories of "short term" and "long term" products.

Short term products include coverages which have short rating periods and are primarily sold on a one year renewable term basis to both individuals and employer groups, such as medical, dental, prescription drug, group disability and credit insurance. While rating periods may extend beyond twelve months, the general characteristic of these products is that rates are frequently modified to reflect changing demographics, emerging experience and changes in cost levels.

Long term products include coverages which are sold on a rating basis which incorporates level premium principles, or have level rates. For these products, the increasing morbidity costs attributable to increasing age and/or duration are anticipated in the setting of the premium. Further, the period for which the premium is calculated extends beyond one year, often to age 65 or for life, and often is expected to remain level unless morbidity experience emerges at a level that is unfavorable when compared to the pricing assumptions. Active life reserves are often established over time, increasing with interest earned on the assets backing the reserves. Examples of long term products include individual disability, long term care, dread disease coverage, certain Medicare supplement policies, and hospital indemnity policies.

There are many types of organizations providing health coverages. These include traditional insurance companies, both multi-line and specialty, some of whom offer limited product portfolios. Also included

are HMOs, PSOs and other managed care companies, as well as not-for-profit service corporations such as

many Blue Cross organizations. This paper will refer collectively to all such entities as "carriers".

This paper will first discuss issues that apply to loss ratios in general, followed by more specific discussions of issues applicable to short term products, and finally to long term products. Many of the issues described under short term products also apply with long term, but are covered in less detail. The reader is encouraged to look at the short term product discussions for more information.

DEFINITION OF LOSS RATIO

The National Association of Insurance Commissioners' (NAIC's) annual statement blank defines loss ratio as "a measure of the relationship between A & H (accident and health) claims and premiums." While this definition is simple on the surface, we must carefully examine the factors that influence both the numerator and denominator of this ratio. Furthermore, not all loss ratios are determined in accordance with NAIC definitions. Comparing those that are with those that are not may be misleading, especially in comparing ratios among various carriers.

There are a number of different loss ratios that can be produced. For example, the annual loss ratio from the blank is the incurred claims divided by the earned premium for the calendar year. This loss ratio includes changes in reserves for active claims and for claims incurred but not reported.

An experience loss ratio is frequently determined after much of the claim run-off is completed. For short term products, this means that essentially all claims are paid, although small reserves may be included for any remaining unreported and unpaid claims. Most short term products reach this status after six to twelve months.

For longer term products, it is not possible to know the final experience until decades in the future when the last claim obligation is paid. When a long term product is issued, its lifetime loss ratio is the present value of expected claims divided by the present value of expected premiums projected over the life of a new policy form. as experience emerges, the lifetime loss ratio uses both historical and projected results.
A key factor in establishing a loss ratio is the matching of items included in the numerator and denominator with respect to time. Using paid claim and premium information can produce misleading information when the exposures do not match, especially when that exposure is growing or declining. Common practice is to use incurred loss ratios where estimates are made of claims attributable to the period of incurral for which the premiums are collected.

Another factor to be considered is the nature of the product itself. Products have expense levels which are particular to themselves, as administrative costs can vary widely. Another consideration is that

different carriers use different distribution methods, with varying costs for the same or similar products, which result in different expectations for loss ratios and different premium levels.

The volume of business included in a loss ratio is important. The impact of fixed expenses on the loss ratio decreases as the size of the block increases. Further, the larger the block, the more fluctuation in loss ratios over time is minimized.

The morbidity costs of the group covered can influence the premium level, which in turn can result in different expected loss ratios. These costs can vary based on underwriting standards, guarantee issue

requirements and rate guarantees. Depending on the nature of the product, the expected morbidity can also vary over time.

Items included as claims can vary by carrier. Such items might include expenses which directly influence the amount of claim dollars, such as case management, rehabilitation services, and capitated services. In addition, the treatment of reinsurance for high amount and catastrophic situations, as well as quota share arrangements, may vary by carrier.

The benefit component of the loss ratio can be paid claims, incurred claims or incurred claims plus changes in contract reserves with or without interest credited on the reserve. The premium component can be collected premiums, collected plus due premiums, earned premiums, or earned premiums less changes in contract reserves. Additional reserves such as stabilization reserves and reserves held for rate guarantees may also be included in the benefits.

Premium definitions may also vary. Some differences occur because of practices with respect to due and unpaid premiums and unearned premiums paid. Also, the use of stabilization reserves to reduce premiums on a product will influence the loss ratio. Furthermore, participating contracts often use higher premium levels in anticipation of dividends or refunds, which will also produce lower loss ratios.

Health benefit products are provided by a variety of carriers, including insurance companies, health maintenance organizations, provider organizations and associations. These entities may be for profit, policyholder owned (mutual company) or not-for-profit service corporations. The nature of the carrier can influence loss ratio expectations due to the structure and methods of overhead allocation and to the return on equity requirements of the carrier.

The list of issues described above is not exhaustive, but gives an idea of the multiple factors which can influence a loss ratio. Clearly, a detailed understanding of how a loss ratio is determined is essential before conclusions about results can be drawn over time and in comparison with other carriers. A more detailed analysis of these issues is included in the balance of this discussion.

USERS OF LOSS RATIOS

Loss ratios are currently used by legislators, regulators, investors, lenders, rating agencies, investment analysts, consumer advocates and insurance companies. The media may use loss ratio in the reporting and analysis of issues to the public.

Legislators are concerned with making sure that a reasonable amount of each premium dollar is allocated to the cost of benefits. Legislative agendas often can be influenced by consumer advocates and the media when loss ratios are cited as a measure of the profitability and high administrative expense of insurance companies.

Regulators also use loss ratios to monitor insurance companies. Certain products are subject to a minimum loss ratio requirement with the intent of preventing excessive profits and high administrative expense. Loss ratios are often used in the evaluation of rates for initial filings and subsequent rate changes. Regulators may monitor ongoing loss ratio experience, and in some instances, may require

refunds to policyholders or abatement in prospective rates based on that experience. Some regulators may use loss ratios as an indicator of potential solvency problems.

Investors and investment analysts use loss ratios to track trends in a company's earnings. This practice is most often used with HMOs and health insurers and appears in investment reports. It is less often used with multi-product, multi-line insurance companies. Lenders may use similar techniques.

Rating agencies such as A.M. Best, Standard & Poor's and Moody's provide analysis of some carriers providing health coverages. These entities often use proprietary methods to quantitatively assess carriers, and sometimes include reference to loss ratio trends in their analytic reports.

Insurance companies and managed care companies often use loss ratios in the company management process. Loss ratios are used to set target premiums and to determine rate increase needs. Expected loss ratios are often used to assess new product viability and the performance of existing products. Loss ratios can be used to compare results with other companies. Loss ratios can also be used to evaluate performance and to manage incentive compensation programs for employees, brokers and agents.

Consumer advocates often attempt to use loss ratios to compare the performance of companies. Companies with low loss ratios may be deemed bad for consumers since their profits or administrative expenses are too high. Companies with high loss ratios may be deemed best for consumers, as they return the highest proportion of premium dollars in benefits. A loss ratio may not recognize that other items such as customer services, care management, and rehabilitation that should also be taken into account in determining value to the consumer.

The loss ratio is a useful tool for all of these entities. However, extreme caution must be used in evaluating how each organization is determining and interpreting the loss ratio before drawing any conclusions. The following discussion describes some of the uses of loss ratios for specific product types and the considerations and limitations for such use.

Any loss ratio analysis must consider the period over which the rates will be effective, sometimes referred to as the "pricing horizon." For short term products, the period is often twelve months or the rate guarantee period, if different. For longer term products, the period can extend for many years.

USES OF LOSS RATIOS - SHORT TERM PRODUCTS

Short term products are those which have short rating periods and are sold on a renewable term basis to individuals and groups. Rate increases, tracking increasing claim costs, are anticipated on a regular basis. They typically include products such as medical, dental, Medicare supplement, group disability and vision care.

Regulators

States, which have the primary responsibility for regulating the insurance industry, have enacted legislation which empowers a state insurance department with certain consumer protection responsibilities. Traditionally, these responsibilities are linked with the concept of solvency oversight, ensuing that licensed carriers have the financial resources to pay claims and continue as a going concern. Also, insurance departments are charged with ensuring that consumers get a fair deal. Regulators' responsibilities include the approval of rates that are neither excessive, inadequate or unfairly discriminatory, and of products with benefits that are reasonable in relation to the premiums charged.

This authority is often limited to certain products, types of customers or companies. Legislatures have often reasoned that larger purchasing entities have the leverage and trained resources that are familiar with insurance products and terms, and are better able to arrange a fair deal. Smaller firms and individuals are generally considered not to possess these abilities and therefore are believed to require more government protection.

The growth of managed care organizations has resulted in other state agencies regulating certain health products. For example, state health departments may have jurisdiction over HMOs, even though certain types of HMOs are similar in risk profile to an insurance company.

The Federal government has entered into the regulation of health coverages through mandated benefit and coverage rules, including the mandatory maternity requirements of the 1978 amendments to the Civil Rights Act of 1964, the Health Insurance Portability and Accountability Act of 1996 and the Mental Health Parity Act of !996.

Prospective Rate Review

Rates are filed and reviewed on a prospective basis, both before the initial introduction of a product and, for certain jurisdictions and products, when premium increases are submitted. The loss ratio is often an important consideration in the review process.

While the requirements vary from state to state, policies which are subject to rate review are usually individual policies, policies issued to small groups of up to fifty employees, voluntary group products, fully contributory group products, and credit insurance.

Minimum loss ratio standards have been established as a "safe harbor" for the rate review requirement. If the filed premium rates result in an expected loss ratio above the minimum standard, then the rates can be "deemed" to bear a reasonable relationship to the benefits provided and not to be excessive. On the other hand, if the expected loss ratio combined with the expense ratio exceeds one, then the rates may be found to be inadequate. Expected loss ratios may also be reviewed by rating cells, and the results compared. If wide variations are observed, the proposed rates may be determined to be unfairly discriminatory.

The durational loss ratio pattern is an important part of the initial rate filing. This is critical in instances where a certain amount of prefunding is inherent in the product, such as the durational claim patterns expected in individual and small group medical products. The expected loss ratios reflect the extent to which claims are lower relative to premiums in the earlier durations in anticipation of less favorable results at longer durations.

Retrospective Review and Refund Calculations

Once a block of business is in force, companies will request rate increases from time to time. These increases may be a result of a predetermined strategy to regularly review and change rates. The request

may also arise where the experience results are different from those anticipated in the initial rating and are required from a solvency or earnings standpoint.

Carriers requesting rate increases on existing products may be required by regulation to meet two distinct

loss ratio requirements.

- The accumulation of past experience and anticipated future experience must result in a loss ratio which exceeds the minimum standard; and

- The loss ratio based on anticipated future experience must also result in a loss ratio which exceeds the minimum standard.

Some states do not permit companies to increase rates to recover prior year losses. This standard is difficult to apply when the only guideline is the minimum standard loss ratio. One way to accomplish this is to strictly enforce the second requirement above.

Certain statutes include a requirement that a carrier guarantee that the medical loss experience for a policy form will exceed a standard loss ratio. These forms include certain Medicare Supplement business, and, in some states, small group or individual policies. Some of the states allow the company an option in exchange for less rigorous prospective rate reviews.

In conducting a retrospective review, actual experience is used to develop and test the loss ratio. Even though actual experience is used, some assumptions need to be made in calculating the experience loss ratio. Most notably, these assumptions include the definition of incurred claims and the factors used to estimate unpaid claims. The resultant change in claim reserves is usually included in the loss ratio.

Claim administration and processing expenses are seldom included as part of incurred claims. However, certain "care management" expenses should be included. These expenses would include fees for provider network management and access, capitation fees for covered services, and pre-certification expenses. Generally, these are expenses associated with obtaining and providing of services and are considered part of the benefit, and not the administration of the benefit itself. Some states limit the inclusion of these charges.

Credit Insurance

Credit insurance is typically purchased by the lender and its cost is borne by the borrower. There is little incentive for either the lender or the insurer to limit the price. Therefore, many states establish a rate level representing the maximum that an insurer can charge without demonstrating a need for higher rates. In other words, a carrier charging prima facie rates or less is presumed to be charging rates that bear a reasonable relationship to the benefits provided. The prima facie rates are typically determined from time to time based on the total state experience. Any significant deviations from the target loss ratio would seem to indicate that an adjustment in the rates is warranted.

Risk Pooling and Transfer

Some states have enacted mechanisms which provide for the transfer and pooling of risks to account for guaranteed issue, guaranteed access and rates subsidies through community rating. In these markets, there is concern that risks will not be uniformly distributed among the participating carriers. A risk transfer mechanism among the companies helps to ensure a uniform distribution of financial risk. Incurred losses are all shared, or the portion of losses in excess of a pre-determined threshold, as measured by comparison of a carrier's loss ratio to the loss ratio of all carriers combined, are shared by all participating carriers.

Some states have enacted high risk pools with rates that are less than the anticipated loss experience of the pool. Other states require carriers to write high risk individuals at a subsidized rate. These rating inadequacies are made up by assessments to carriers writing products in other markets.

Minnesota operates such a high risk pool. A standard claim cost is calculated based on the loss experience of the underwritten market. Assumed administrative loads are established, and an anti-selection factor is added to encourage carrier participation. Losses in excess of those supported by the premiums are assessed against all carriers in the fully insured market.

New Jersey provides for a "pay or play" mechanism. Carriers in the group market must either write a fair share of individual business, or pay an assessment to cover the losses of those who do. Individual carriers with a measured loss ratio in excess of a target recover their losses from a pool funded by assessment to the non-writing carriers.

Investment Analysts

There are a number of organizations and individuals who analyze insurance companies and HMOs for the purpose of recommending stocks for investment purposes. The purpose of these analyses is to establish whether or not a particular stock should be bought, held or sold depending on the objectives of the investor.

A simplified loss ratio is often used as part of the investment analysis. The typical ratio used is calculated from the incurred claims and premium revenue, and is often not well defined. From the investor's perspective, the lowest loss ratio is best because it means more risk margin to provide for profit and for potential adverse experience fluctuations. In addition, the analysts may consider other items such as assets, surplus, investment income and taxes, as well as reported quality evaluations. These analysts may meet with company staff, and incorporate company projections of growth in their analyses.

The principal concern of the analyst is the prospect for earnings growth over various time horizons, and the risk of earnings fluctuation. These earnings growth projections can significantly impact emerging profits when items such as fixed expenses are taken into account.

Lenders

Lenders may also use loss ratio analysis. While investment analysts generally are limited to publicly traded corporations, lenders and venture capitalists are generally interested in a broader range of companies. Lenders will often consider the same issues as investment analysts related to earnings stability and growth. A main difference is that internal rates of return will be subject to more scrutiny, and meetings with company management are essential. A number of organizations that seek capital are not publicly traded and information is often only available from the company.

Rating Agencies

Some rating agencies produce ratings which are intended to serve as a guide for investors and lenders. These ratings are similar in content and scope to those described in the above sections on those users. Examples of this type of rating would be Moody's and Standard & Poor's.

In addition to that type of analysis, agencies produce ratings to gauge the effectiveness of operations and the financial strength to meet contractual benefit obligations. These ratings can help the consumer judge

the relative merits of a company compared to others in their field. Ratings of this type are produced by companies such as A. M. Best, Weiss and Standard & Poors'.

These ratings are based on data provided by the companies, interviews and detailed analysis of reported data. Loss ratios are included in the evaluations, but are only one of the considerations when conclusions are drawn and ratings are assigned.

Consumer Ratings

Another type of agency that commonly rates insurance companies is based on the consumer perspective. These ratings typically encompass consumer satisfaction, benefit designs, complaints and cost of coverage. They typically look at the highest loss ratio as being of the best value to the consumer. Using loss ratios for this purpose may be misleading because of different methods of reporting among the types of companies, and from the different operational characteristics and business purposes of those companies.

Company Management

Companies use loss ratios for many purposes. These include product management, new product development, performance measurement, reporting to group policyholders, determining rate actions and compensation.

Product Management

Companies use loss ratios to measure the performance of a product. On short term products such as medical and dental, this performance is typically viewed by sub-category. For example, a company might track products sold to individuals separately from products sold to small employer groups and from those sold to large employer groups. Tracking might be separated based on benefit design, such as $5 copayment plans versus $250 deductible with coinsurance plans. Separate analysis might be done based on the presence of a prescription drug card. On dental, plans with orthodontia benefits and plans with incentive coinsurance might be tracked separately. Other categorizations might be made by network type, such as HMO, PPO or POS. Loss ratios might be analyzed by method of distribution, such as brokerage versus direct, or versus association plans.

Companies will also track results separately depending on the nature of the financial arrangements with the policyholder. Pooled products where there are no provisions for dividends or refunds are tracked separately from those where refunds are made when experience is favorable. This would generally include policies with minimum loss ratio requirements. Policies with stabilization reserves are also separately considered. Policies with full and partial self insurance, such as Minimum Premium and Administrative Service contracts, also should be considered separately.

Companies will monitor performance of a product by comparison to a target loss ratio in an annual plan, as well as a target loss ratio determined when premiums were established. The resultant performance will then often be used to adjust the premiums to the targets. Performance of a business segment may be monitored apart from other business segments where the loss ratio is expected to vary due to likelihood of higher morbidity and the ability to vary premiums might be limited.

Loss ratios are also used in prospectively managing arrangements with care provider groups. For example, capitation levels are often evaluated in light of loss ratio experience and adjusted as appropriate. Target loss ratios for this purpose are often negotiated based on expense assumptions and profit expectations

which are quite different than insurance companies. These differences reflect the expense profile of service rather than indemnity benefits, particularly with regard to processing expenses.

Projections

Companies prepare business plans which project earnings for periods ranging from a few months to many years. These projections are often based on premium or inforce growth forecasts with loss ratios being used to forecast the emerging claim experience over the projection period. These projections generally take into account the impact of inflation on revenue, claims and expenses by projecting the loss ratio over time. Based on the projections, changes in the method of operation may be made to adjust unit premiums and expenses and produce a viable and reasonable business plan.

These projections are often part of a prospectus prepared to obtain capital, either through debt or equity markets, for expansion or a new company. They may also be used in an application for license for a new company or for an expansion of authority to operate in new jurisdictions or new product lines.

Loss ratio based projections are used to support filings for new or renewal rates. Such projections are also used to support policy form applications for new or updated products.

Reporting to Policyholders

Larger customers expect substantial information concerning results on short term plans. Most employers of this size share in the emerging experience of their plans and want to have regular information on the impact to their companies. Information is also needed by employers for budgeting purposes. The loss ratio can be used as a monitoring device to report emerging experience. An emerging loss ratio can be used to explain the need for rate increases, particularly where case experience directly impacts a renewal.

Compensation

Loss ratio performance versus target performance can be used in management and employee compensation plans. Loss ratio based projections are usually used to set the incentive target earnings, which are typically expressed as net profit or earnings targets.

Many companies use independent brokers and agents to distribute their products. In most instances, these agents and brokers are licensed to place business with a variety of companies. Some companies have introduced compensation plans which compensate agents and brokers based on loss ratio. This method is decreasing in use because it may encourage implicit underwriting contrary to the intent of availability and accessibility legislation.

For arrangements where providers within a group are subject to a profit sharing arrangement, possibly subject to a withhold, loss ratios may be used to trigger payment to both provider organizations and individual providers. This sort of arrangement is also coming under increased scrutiny in the public arena with respect to the potential impact on the quality of care, and some states have taken action to prohibit the practice.

Association and Third Party Administered Plans

Some health plans are written through third parties, where an administrator performs many of the functions required to operate the plan. These plans may be offered to associations or multiple employer groups.

Insurance company involvement is usually limited, with the carrier often acting only as a risk taker, or providing a reduced group of services.

Some plans are fully insured, and the insurer may perform some administrative functions. However, the association or administrator will often perform most functions, with the insurer having little control over the cost levels and, sometimes, the price charged to the customer. In some cases, the carrier provides a rate based on its pricing requirements, and the price is marked up to reflect the administrator's revenue needs. These arrangements may also exist without an insurer involved, but such plans are coming under much increased scrutiny and are not permitted in many jurisdictions.

Other arrangements have the carrier assuming risk on a specific or aggregate basis only, where the carrier essentially provides reinsurance to the plan. These arrangements subject the plan to ERISA and minimize state mandated benefits.

Loss ratios are used by carriers to monitor these arrangements. Since the carrier has limited control over expenses, the use of the loss ratio is generally limited to evaluation of the ongoing relationship and in setting prospective rate levels for the products.

PROBLEMS WITH LOSS RATIOS - SHORT TERM PRODUCTS

Legislative and Regulatory Issues

As described above, loss ratios are heavily intertwined with the current legislative and regulatory review of health products. In the current environment, the use of loss ratios often creates problems while trying to solve others. The need to deal with the issues of reasonableness, adequacy and appropriateness from the actuarial, solvency and affordability perspective in the rate setting process will remain. The following discussion of the problems with loss ratios must be understood in the context that the reasons for using loss ratios will continue. Changes, if necessary, in methods of determining loss ratios should still provide for their reasonable use.

Public Perspective

The customary focus of loss ratio regulation can present problems from the public perspective since the message inherent in the minimum standard is that only items included in the numerator have any value to the policyholder. This implies that servicing, care management, network development and risk sharing, to the extent they are not reflected in the numerator, have no value. This perspective leads to pressure for ever higher minimum standards, which reduces the potential for care management, fraud prevention and abuse protection.

The minimum loss ratio standard is often quite broad and non-specific, and is often applied across broad ranges of policy types. It does not always take into account expense differences for functions such as premium collection for group versus individual coverage, and coverage provided through commissioned agents versus client-reimbursed advisors.

This tendency toward non-specificity carries into the realm of public perception of results. Loss ratios are compared without any discussion of important differences. The need for regulators to review rate increases against a non-specific standard makes it difficult for them to consider and address these differences in the face of the public perception that increases are generally unaffordable and not justified.

Changes in Underwriting

Other problems also arise from a broad loss ratio standard and are accentuated in the current environment of underwriting reform and guaranteed issue requirements, coupled with rating reforms. These changes have introduced elements into the loss ratio results which do not reflect
different standards for different risks. Some products must be offered in certain markets on a guaranteed eligibility basis, while others may still be subject to underwriting. Marketing and acquisition costs can be quite different and persistency patterns and durational claim expectations can vary. Further complicating this issue is the fact that older business may have been subject to underwriting selection, while more recent business has not, resulting in different morbidity expectations.

Rate increases based on experience loss ratios will tend to be higher if the business does not contain any new business. This can happen when a block of business is closed to new issues, as a result of policyholder terminations skewed in an anti-selective way. Some states have begun to require the combining of experience so that policy forms currently being written are included in the reported loss ratios. However, there is little guidance available to regulators in this area and the methods employed can be inconsistent. The amount of mature business relative to new business will vary considerably among companies. The loss ratio experience of a relatively large inforce may not be reduced if new issues are mostly not subject to underwriting and are expected to experience some anti-selection in early years.

Data Reporting

The use of loss ratios as the basis for controlling rate increases has created some problems in defining the loss ratio and its components. Additional regulation defining the period of reporting and the amount of data is required. For example, Florida requires annual reporting of accumulated and projected experience expressed in loss ratio and "actual to expected" terms. The annual period may not correspond to a calendar year. Missouri requires the filing of experience by calendar year for broad types of business.

Another reporting approach has been used for Medicare supplement policies. In this method, a single set of actuarial assumptions was used to develop a set of expected cumulative loss ratios over an expected lifetime of fifteen years. The actual cumulative experience is adjusted for credibility and compared to the expected, with refunds required if the adjusted actual loss ratio is lower than expected.

Actuarial Considerations

Reporting of information to regulators with respect to loss ratios must address a number of actuarial issues in order to produce a sound basis for analysis. This is critical if the loss ratio is used as the test for acceptability of rate actions or to require refunds.

The credibility of data used to determine loss ratios is an important consideration. Credibility is a measure of the predictive value that an actuary attaches to a particular body of data, and represents the degree to which actual results are an accurate reflection of the expected underlying experience. Smaller blocks of business and even smaller companies may not have fully credible experience because of a limited number of exposure units. A simple credibility standard based on the number of claims or inforce exposure would need to vary by type of coverage, benefit structure and nature of care management applied. Further, certain coverages with large, infrequent claims such as group disability, high amount medical and dread disease coverage would require different exposure standards than dental and medical coverages with frequent small claims.

The length of time considered in the actual results often reflects potentially conflicting desires. Longer periods of time increase credibility and reduce dependence on estimates of claim reserves at the beginning and end of the period. Administrative costs are reduced as the frequency of reporting is lessened. However, longer periods require companies to anticipate more fluctuation and accept greater risk with respect to the accuracy of trend, sales and persistency forecasts. Rate corrections resulting from a longer period may tend to be larger than increases based on shorter periods.

Premiums for certain coverages commonly vary by geographic area, so it is usually best to limit data for loss ratios to the corresponding geographic area. However, credibility can often suffer where the experience is limited, and might require state-wide or multi-state data. Some states require that data be specific to that state, and not be blended across a wider area.

The use of claim and contract reserves in determining loss ratios is another important consideration. Loss ratios generally include estimates of claim and contract reserves at the beginning and end of the period chosen. This is particularly important with an annual evaluation period, but is significant for any period. The use of paid loss ratios generally is misleading and inappropriate, as inflation and changes in business volume would not be properly handled. The claim reserve can be critical in the case of a new or rapidly growing block of business.

Some loss ratios do not permit the use of reserves, such as for Medicare supplement policies, where the federal law excludes active life reserves. Here, the expected loss ratios should be determined in a consistent manner and are likely to increase with duration.

Comparability Issues

When comparing the loss ratios of one carrier with another, or even business units and products within a single carrier, it is important to consider the nature and mix of the business and the impact of those factors on the loss ratio.

Plan and Benefit Design

For example, there is a wide range of benefits available under medical products. Products are sold with deductibles ranging from as little as $100 to $5000 or more. The monthly premiums for these products can vary by a factor of three or more. Certain administrative expenses are fixed dollar amounts, and do not vary with the amount of benefits. These would include such items as billing and collection, booklet expenses and issue costs. Such expenses will be a smaller proportion of a high benefit product's cost. When comparing loss ratios, these factors should be considered and adjusted for.

The type of managed care offered will also influence expense ratios and the resultant loss ratio expectations. Loosely managed care, such as PPO, will generally have lower expenses than intensely managed care, such as HMO or gatekeeper POS plans. The loosely managed products will also tend to have higher expected claims and higher premiums. Therefore, the expenses as a percentage of the premium tend to be are lower, and the loss ratio target higher, for the loosely managed product. Loss ratios on tightly managed products will tend to appear lower, reflective of higher expenses.

Similarly, companies offering products in different geographic areas often observe different levels of benefit costs. Since some administration costs are level dollar amounts, the expected loss ratio for a low cost region is likely to be lower than for a high cost region in order to provide for these level dollar expenses. This also should be taken into account in comparing loss ratios.

Consider the following example, where the benefit costs for Product A are higher than the costs for Product B:

Product	Premium	Benefits	Expenses	Loss Ratio
A	$100.00	$80.00	$20.00	80%
B	$ 95.00	$70.00	$25.00	74%

These results can occur if Product A is loosely managed and Product B is tightly managed, even with identical benefit plans. Product A will likely experience higher claims, while Product B, having higher expenses for managing the benefits, will likely experience lower benefit costs. As a result, lower premiums can be charged for Product B.

Financial Arrangements

Carriers often sell products to employers which are non-refunding. If the insurance company assumes all the risk, the product is said to be "non-refunding", or "fully insured." Individual and small group products are generally non-refunding. If the insurance company shares the upside risk with the policyholder by refunding premium when the emerging claim experience is favorable, the product is said to be refunding. In mutual companies these policies are usually called "participating", or "dividendable."

When the loss ratio is defined as the incurred claims divided by the earned premium, we need to consider the difference between refunding plans and non-refunding plans. Since the refunding business will return premiums to the policyholder, there is a refund liability determined which, under insurance accounting, is usually shown as a reduction adjustment to premium. The impact of this refunding provision is to smooth the loss ratio experience. When claim experience deteriorates, the numerator of the loss ratio increases As the refund liability decreases, the denominator increases. Thus, if two companies, one with refunding business and the other with non-refunding business experience the same unadjusted loss ratio, the adjusted loss ratios may indicate very different results.

The following example illustrates the impact of the financing arrangement on the loss ratio:

Product	Premium	Benefits	Expenses	Refund Liability Increase	Loss Ratio
Refund	$100.00	$75.00	$20.00	$5.00	79%
Non-Refund	$100.00	$75.00	$20.00	0	75%

Here, the expected claims were $80.00. The favorable experience is to be returned to the refund product policyholder, and the denominator of the loss ratio is reduced to $95.00, resulting in a loss ratio of 79%. This appears less favorable than the non-refund contract, but it was the intended result, and is reflective of the risk that was transferred to the policyholder. Care needs to be exercised when looking at loss ratios for these different financial arrangements.

The evaluation of loss ratios by product where contractholder experience is directly assignable to the customer needs to take into account the fact that each case stands on its own. That is, gains on one case do not offset losses on others. Plans of this type include refunding plans, plans with stabilization reserves, administrative services plans (ASO) and minimum premium plans (MPP).

For refunding plans, margins are typically included in the price components. Thus, with higher premium, loss ratios may appear lower. If a plan has established a stabilization reserve from favorable experience in prior years, current premiums are typically set lower than on other plans because these additional funds can offset adverse experience. Since the premium is lower, loss ratios may appear higher. For ASO and MPP plans, a margin is usually reflected in the attachment points.

For plans where policyholders participate in experience, margins and stabilization reserves need to be taken into account in evaluating loss ratio results.

Expense Differences

Managed care organizations and commercial insurers often exhibit significant differences in the treatment of certain expenses. HMOs, particularly staff model plans, will often treat expenses associated with medical care as claims. This would include utilization review (UR) and case management, as well as certain expenses associated with quality of care. Furthermore, staff model HMOs may treat administration associated with salaried medical staff as claims, whereas commercial carriers will treat the cost of making such payments to providers as administrative expenses.

These factors will cause the loss ratios for HMOs to be higher than for commercial carriers. There are no defined standards for items that should be included in claims and administrative expenses, and the different nature of the two types of carrier tends to result in different treatment. These issues need to be considered in comparing loss ratios of the two types of companies.

The following example illustrates how differences in loss ratios can arise:

Carrier	Premium	UR Expense	Claims	Total Benefits	Total Expenses	Loss Ratio
HMO	$100.00	$5.00	$80.00	$85.00	$15.00	85%
Insurer	$100.00	$5.00	$80.00	$80.00	$20.00	80%

While the fundamentals are the same, the HMO loss ratio is higher. These differences can result in different interpretations for the two companies. If the loss ratio is looked at without considering expense treatment, the results can be deceiving.

Insurance companies incur very different costs in distributing and administering their products. These costs can vary by type of business. For example, companies that sell to individuals have higher distribution and administration costs than companies that sell to groups. Further, expenses will vary by size of group.

Distribution costs represent a larger percentage of premium for small employer groups than for large groups, resulting in lower loss ratio targets for small groups, When one compares the loss ratios of carriers, the mix of business by case size needs to be considered. Loss ratios are also affected by the way indirect expenses of multi-line companies are allocated to different lines of business.

Credibility and Pooling

Experience evaluation generally needs to be carried out using cells or blocks of business that are relatively homogeneous, as the above discussion indicates. However, when this is done, the size of the cells may become so small that the experience in the cell is not credible and is subject to significant fluctuation over time. This problem is often handled by combining cells.

When cells are combined, loss ratio analysis runs the risk of misleading when different products, distribution and administrative models and geographic areas are involved. Pooling of high amount claims can help smooth the experience by preventing unusual events from distorting the results. The selection of pooling points should be determined by the size of the cells being pooled, and can vary by cell. Claims above the pooling point are removed from the cell's experience, and a charge over all pooled cells is substituted.

There are some issues that arise when pooling of experience is used. First, geographic claim cost levels, based on both utilization patterns and unit costs, can vary by a ratio of nearly three to one. Furthermore, because of different volumes of business in geographic areas and regional expense differences, administrative costs as a percentage of premium can vary. Type of coverage can also influence the method of pooling. For example, supplemental coverages such as Medicare supplement and prescription drug will have different frequency patterns for high amount claims.

Another issue is the reluctance of states to have experience combined with other states. For example, Medicare supplement business requires that loss ratios be calculated on a state basis, and pooling is not generally permitted for rating purposes. This can be problematic where experience is limited relative to catastrophic claims. Florida has moved to have carriers remove catastrophic claims from experience in a given service area and substitute an average charge over a wider area.
However, this pooling is limited to Florida only.

The actuarial profession's standards for determining credibility and pooling methods recognize that the models that may be appropriately selected for determining credibility vary depending on the application. Credibility procedures require that the actuary apply informed judgment to relevant information in making a determination. In analyzing loss ratios, comparability is difficult when methods vary, and misleading conclusions can be drawn if the methods used are not understood.

Reinsurance, Guarantee Funds and Market Assessments

Reinsurance transactions can influence the determination of loss ratios. HMOs typically include reinsurance premium as a claim expense, and the reimbursements are subtracted from the claims. Insurance carriers also remove reinsured claims from claim experience, but reinsurance premiums are deducted from premiums. Thus the amount included in the numerator of an HMO loss ratio is the reinsurer's retention and the difference between actual and expected claims. The denominator does not change. For an insurer, the numerator and denominator are both reduced for reinsurance transactions.

There are also a number of states which operated risk sharing pools or assess carriers based on results for certain market segments. For example, New York operates a pool designed to smooth experience between carriers based on demographic distribution of lives covered under small group plans. New Jersey assesses carriers who do not participate in the individual market for the losses of carriers in that market.

States also operate guarantee funds to provide for claims in the event a carrier fails. These losses are typically assessed against all carriers, or carriers participating in the same markets. Assessments are usually based on a carrier's volume of business.

Each of these transactions needs to be recognized in loss ratio analysis. These items should be considered in setting target loss ratios. Some of them can have a large influence on results. Reinsurance transactions can be significant, particularly for a company with limited volumes of business or limited risk capital. The New York fund is a cost of doing business in that state's small group market, and can impact loss ratio requirements by a significant amount.

Conservatism

Companies often include margins in their prices to cover anticipated fluctuation. As discussed above, margins are included in refunding products and self funding arrangements such as MPP. In determining expected loss ratios, the margins in the premium and the potential for refunds should be considered.

Conservatism also enters the picture in establishing reserves for claims and for active lives. Reserves for incurred but not reported claims (IBNR) can change markedly over time. Some of this occurs in the early years for a product, while the block of business is growing and before submission patters have stabilized. Fluctuation can also occur when the volume of business involved is relatively small.

Both of these issues can be important for a company just entering a business or a market. In these situations, a greater degree of conservatism typically is called for, and will result in higher levels of incurred claims and in higher loss ratios.

In practice, most IBNR determinations include some margin for conservatism. If the reserve level is stable, this margin has little impact on the calculation of the incurred claims used in the loss ratio. However, where the reserve level is changing, the impact can be significant.

ADDITIONAL CONSIDERATIONS FOR LONG TERM PRODUCTS

Long term products are those which are priced based on level premium principles and have terms extending beyond one year, often to age 65 or over a lifetime. These products anticipate using a portion of premiums from early years to offset increasing morbidity costs in later years when the premiums are no longer adequate. Typical long term products are individual disability income, long term care, cancer and other specified disease policies, hospital indemnity and certain Medicare supplement policies.

Product and Pricing Characteristics

Morbidity costs for long term products increase with age. With the exception of Medicare supplement

products and for some specified disease products, benefits are fixed and do not depend on actual incurred expenses. For most specified disease coverage, benefits are fixed and do not depend on actual charges, although some benefit structures have elements which vary depend on actual charges, and may be subject to inflation. For Medicare supplement, benefits increase as deductibles and copayments under Medicare increase. Some long term care and disability income plans have indexed benefits tied to the Consumer Price Index, Average Wage Index or some other measure.

The premium methodology used produces a level premium over the selected term. The determination of the premium reflects an increasing morbidity scale, interest, expenses and persistency. Limited benefit policies will have broad age bands for rating which also require assumptions as to issue age distribution. Where the product contains benefits subject to inflation, minimal recognition is often given to expected increases because of competitive considerations. Premium adjustments are made as inflation emerges in the claim experience. Premiums for Medicare supplement plans are typically increased annually to provide for the benefit changes, but do anticipate the aging aspects of the morbidity claim slope through a leveled approach.

When benefits are fixed, premiums are not anticipated to change. Premiums can be increased if there is an unfavorable variance from expected benefit utilization, persistency or issue age distribution.

Under the terms of the contract, premiums for non-cancelable disability income products cannot be changed. For guaranteed renewable disability products, premiums can be increased with increases in disability rates. Medicare supplement policies are generally changed each year. Premiums for long term

care coverage, cancer and other specified disease coverage, and hospital indemnity coverage can be changed should claim experience be unfavorable, but are expected to be stable.

Reserving and Pre-funding

The combination of level premiums over a long pricing term and an increasing claim cost slope results in considerable pre-funding of claims costs. Underwriting practice will tend to steepen the slope even further, resulting in an even greater level of pre-funding.

The pre-funding of claims inherent in the pricing methodology creates the need for contract or active life reserves.

Statutory reserves are usually calculated using a modified reserving methodology, either a one or two year preliminary term method. This is necessary because all of the first (and sometimes second) year premium is needed to pay acquisition expenses and claims. There are no funds available to accumulate reserves in the first (or second) year. Under a preliminary term method, policy reserves are established at the end of the second (or third) year. Under GAAP accounting, full net level reserves are established in accordance with the premium structure of the product. However, to provide an offset to these first year acquisition expenses, a deferred acquisition cost asset is established and is amortized as future premiums are earned.

Statutory reserve assumptions are generally conservative. Interest rate assumptions are usually considerably less than current yields, and lapse assumptions, where permitted, are severely restricted. Morbidity assumptions tend to be based on outdated tables. Because of the modified reserving methodology and the conservative assumptions, the amount and timing of reserve accumulation can differ significantly from the actual flow of funds provided for by the premium.

GAAP reserves are generally based on realistic assumptions. The pricing assumptions, with provision for adverse deviation, are often used. The reserve accumulations correlate closely with the timing of the funding inherent in the premium payments.

The pre-funding characteristics of these products require the loss ratios to be adjusted to reflect the nature of the reserving. One cannot simply look at the incurred claims to premium ratio when measuring performance of the product against a lifetime target loss ratio. The pre-funding element should be considered in determining the loss ratio. This is usually done by using the increase in the GAAP benefit reserve adjusted to remove the portion of the reserve attributable to investment income.without the interest component. Alternatively, a separate set of reserves can be calculated based on the same assumptions as were used in the determination of the gross premiums. The GAAP benefit reserve is often a reasonable approximation of this calculation.

For long term products, loss ratios provide a general indication of the portion of premium that will be returned to the block of policyholders over the life of the policies. It is only a general indication because of the long term nature of the coverages.

The reserves, both for active and disabled lives, that are incorporated into the incurred claims used to calculate the loss ratio contain many assumptions concerning experience over the extended period of the policies. These critical assumptions include claim frequency, claim severity, interest, morbidity, mortality, recovery rates and persistency.

Loss ratios for long term products provide a general aggregate view of the experience for large blocks of business. They are, at best, a tool with limited analysis value when experience is broken into smaller, elementary pieces, as the reserving assumptions often become less reliable and stable.

Regulators

Prospective Rate Review

Loss ratios are used as a tool by regulators in the rate filing process in order to determine if the premiums are reasonable in relation to the benefits provided. The filing of initial premiums for a new policy form often includes the calculation of expected lifetime loss ratios based on the pricing assumptions. When this loss ratio equals or exceeds the required level, the product is assumed to provide reasonable benefits in relation to the premium charged. For long term contracts, these filings are closely scrutinized by regulators since the selection and application of assumptions are critical to the determination of this loss ratio.

Loss ratios are often used in a similar manner in applying for rate increases. Here, the historic loss ratios are combined with future expected loss ratios, accumulated and discounted with interest, to determine a new lifetime loss ratio. Assumptions for future periods may be revised based on the emerging experience. The level of this expected loss ratio is then used to determine the premium increase required. Again, a great deal of analysis is usually required in order to establish the reasonableness of the assumptions used to project cash flows.

Retrospective Review and Refund Calculations

Some products are required to determine refunds based on the loss ratio. Medicare supplement policies are the prime example of this type of arrangement. The calculation is based on the comparison of actual to expected experience for various assumptions that vary by policy duration. The calculation must be done on

a state-by-state basis for each policy form. As a result, the experience is split into relatively small cells, many of which are not truly credible. Companies with large blocks of business are more likely to have credible experience in their cells. For smaller companies, the lack of credibility can result in fluctuating levels and frequencies of refunds.

Solvency

Loss ratios and the trend in loss ratios can be an indicator of potential solvency problems for health insurers. A loss ratio, combined with a company's expense ratio, can be an indicator of the profitability and solvency of an insurance company. Active life reserves for long term products are critical to this calculation, as it is nearly impossible to properly consider the impact of future morbidity levels without them.

Company Management

Company management often uses loss ratios as a general way of tracking the experience on various blocks of business. This can be useful when the blocks are large enough to be credible. When the composition of the blocks is relatively stable over several reporting periods, a comparison of actual to expected loss ratios will allow a quick analysis of the change in morbidity levels. An increase in loss ratio could be an indication that a potential problem is emerging. However, the assumptions inherent in the reserve calculations should be tested to determine the actual existence and magnitude of the problem.

Management may also evaluate the performance of cells of business, such as single policy forms. geographic groupings and distribution systems. Smaller blocks tend to produce less stable results and may make the analysis less meaningful. For this reason, caution must be used when drawing conclusions. An increase in loss ratio may not mean deteriorating experience. The claim frequency, severity and persistency must be examined to understand the nature of the problem and to develop any corrective actions. Furthermore, the maturing of a block of business will tend to result in an increasing loss ratio.

Conversely, a falling loss ratio may not mean experience is improving. A distortion in experience versus the assumptions may be the cause, and may actually be hiding the increasing morbidity expected as the policy matures. For example, a high level of lapse could result in the release of significant active life reserves, which are based on average morbidity. If the lapses are anti-selective, higher morbidity can be expected on the remaining policies. In this case, the loss ratio is not a good predictor of future experience.

A falling loss ratio may also arise when substantial amounts of new business are being written. The select business in early durations will tend to have a strong downward impact on the loss ratio.

PROBLEMS WITH LOSS RATIOS - LONG TERM PRODUCTS

Legislative and Regulatory Issues

Loss ratios for long term health products have been subject to a variety of uses. These various applications have produced diverse definitions of the loss ratio and its construction. This inconsistent approach has made the use of loss ratios for monitoring and compliance confusing and challenging.

Public Perspective

The primary purpose in the regulatory use of loss ratios is to ensure that the policies provide value to the policyholders. Current statutory requirements prescribe minimum loss ratios for this purpose. These minimums are often established without due consideration being given to the economic value of the policies. For example, a company that provides assistance with nursing home access or assistance in obtaining government benefits provides extra value to the policyholder. These services result in higher expense provisions and therefore lower target loss ratios.

Company Perspective

From the company perspective, items such as surplus investment, DAC proxy tax and distribution expenses are often not considered. These items can vary substantially by company. When minimum loss ratio levels are set too high, margins for fluctuation and profit are squeezed, and rate instability may result.

As an experience monitoring measure, durational and cumulative loss ratios alone do not display a complete picture. They may not be reflective of the claim pattern that is expected, especially in early policy years. In order to deal with this issue properly, an actual to expected loss analysis is a better indicator of premium adequacy than a simple loss ratio.

Finally, the loss ratio formula links benefits and the provision for expenses. This linkage represents an implicit assumption that expenses and profits vary directly with benefits. If benefits increase, the loss ratio will increase. By maintaining the loss ratio and increasing premiums, the result is to increase expense and profit provisions as well.

Comparability Issues

Definition of Loss Ratio

The simple definition for the loss ratio is the benefit cost as a percentage of premium. For long term health policies, this definition can be unclear. Depending on the intended purpose, loss ratios can be viewed at any point in time over the life of a cohort of policies, either prospectively or retrospectively. At the time of issue, the loss ratio is based on the expected experience. When the last claim is fully paid, the loss ratio is fully based on actual results. At times in between, the lifetime loss ratio is based on a blend of actual and expected results.

Durational loss ratios, which reflect the experience at a given point in time, can be effectively used when compared to expected loss ratios for the measured time period. If they are compared with lifetime loss ratios, the results can be misleading. A clear definition of the periods represented by actual loss ratios and by expected loss ratios is critical if durational loss ratios are to be accurately understood.

Actuarial Considerations

Treatment of Reserves

Reserves are a significant element in long term products. They can also give rise to distortions in loss ratios depending upon how they are used for analysis purposes.

One problem which is often encountered with long term products is that the annual flow of claims as

measured by claim ratios is compared to a lifetime benchmark. The long term product priced on a level premium methodology anticipates low claim ratios in the early years, below a lifetime benchmark. As the policyholder ages, high claim ratios in later years will be in excess of the lifetime benchmark. The comparison of annual claim to premium ratios to expected lifetime loss ratios can be misleading.

To obtain a meaningful comparison to a lifetime benchmark loss ratio, the change in reserves must be added to the annual claim ratios. The reserve to use can be problematic. The statutory reserve, being a modified reserve and being based on conservative and often unrealistic assumptions, does not properly reflect the timing of cash flows available for funding the reserve and the actual reserve accumulation. The GAAP reserve based on the same premium structure as the product and on realistic assumptions, usually does appropriately reflect those cash flows. The GAAP provision for adverse fluctuation can distort the cash flow timing, however. If this provision for adverse fluctuation is removed, the cash flow timing match would be even closer.

The lifetime benchmark loss ratio anticipates that investment income is earned on reserve accumulations. The change in reserves should be adjusted by the amount of investment income assumed to be earned in the reserve determination when computing the actual loss ratio. The differences between the actual loss ratio so calculated and the lifetime benchmark would then be attributable to differences between actual and expected experience.

A clear definition of the items included is necessary to make a comparison of loss ratios valid.

Assumptions

The streams of benefits and premiums are typically discounted or accumulated at interest. The interest rates used may be the statutory valuation rate for contract reserves, rates that are consistent with the pricing assumptions, or other supportable rates.

Assumptions for the emergence and level of future claims can be critical. In addition, persistency or lapse assumptions generally will have great influence on loss ratios. The impact of these assumptions on the reserves can be significant. When comparing actual results with lifetime benchmark loss ratios, attention typically must be given to assumption differences, if any.

Benefits Provided

Different coverages can have quite different characteristics that will influence emerging loss ratios. Certain types of policies have high frequencies of claim, such as Medicare supplement.

Low claim frequency is the rule for disability income plans. Within the same policy type, differences can exist based on benefit features such as the deductible level. There may also be regional cost differences.

Many of these items also influence short term products and are discussed in that section in greater detail. The key is to have a thorough understanding of how the loss ratios were determined, and to make sure that adjustments are made to ensure consistency when comparisons are made to other companies or blocks of business.

Expenses

The influence of expenses on loss ratios of long term products is somewhat less significant as a percentage of premium than on the short term products, because expenses tend to be a smaller dollar amount for virtually all long term products, with the exception of commissions and other acquisition costs. For long term health products, expenses for claim adjudication, including the provision for these items in the reserves, are not considered to be benefits. With short term products, especially in managed care organizations, it is sometimes difficult to distinguish claims administration expenses from the actual benefits.

Pooling, Reinsurance and Credibility

Pooling can be used to smooth loss ratio results, by replacing actual claims with an average charge. This can help especially for small cells of business, with limited credibility. Pooling can take the form of high amount claims, or it can take the form of proportional pooling to reflect appropriate credibility ratios. Valid comparison of loss ratios requires an understanding of the credibility and pooling methods used.

Reinsurance may be used, particularly for companies with limited capital. Again, it can be claim specific, or it can attach based on emerging loss ratios. The treatment of the reinsurance transaction can have significant impact on the loss ratio.

CONCLUSIONS

There are many users of loss ratios, with different purposes for their use. Many of these entities use loss ratios as part of some overall larger objective. For these uses, it is important to recognize the potential for inconsistency in using loss ratios. The loss ratio, when used and interpreted correctly, does represent a valid method of observing trend in a business over time, and should not be discarded as an important evaluation tool.

For company management, analysis of loss ratios must be supplemented with other analysis that doesn't necessarily generate the same inconsistencies. For example, return on equity (ROE) measures are probably more valid than loss ratios, as they are based on earnings results and invested capital rather than a percentage of premium. The actual to expected analysis is also a critical tool for assessing results.

Other measures of emerging loss experience, such as claims per member, frequency of claims, persistency and risk adjusted exposure can also be valid tools for monitoring trends.

Investment analysts, rating agencies and lenders would do well to use similar methods to evaluate and compare results. The information necessary to ensure consistent analysis among companies should be obtained, and the differences in information should be understood before reaching any recommendation or conclusion.

Regulators usually have two primary interests. The first is to ensure that benefits to the policyholders are reasonable in relation to the premium charged. The second is to ensure that companies remain solvent and are able to pay promised benefits.

For medical coverage, market reforms have done much through limits on underwriting and guaranteed issue rules to level the playing field and limit differences in rating to factors which are not predictive of experience. In this environment, one could argue that market forces should be relied upon to accomplish the goal of reasonable benefits in relation to premium, but such an outcome is unlikely. Mandated refunds

based on loss ratio results might provide some measure of protection, but those methods may require ongoing monitoring and may be subject to some of the same consistency issues.

Loss ratios, when used to evaluate performance of carriers, can be misleading if their components are not understood. Care must be exercised to avoid situations where decisions to enter or leave a market are based on loss ratio standards which are not truly reflective of the nature of a business.

Thus, it is important that consistent definitions and standards be used for determining loss ratios. These definitions should address time periods, credibility, treatment of expenses and inclusion of various reserves, and should allow for sufficient flexibility to appropriately treat differences in business mix, product and distribution system. The standards should apply to all entities offering health plans, including insurers, managed care companies and provider based organizations.

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