Chapter Three

Measuring the Financial Performance of Insurers

OBJECTIVES

- **After studying this chapter, you should be able to know the following:**

- Describe the sources of income for a property-casualty insurer.
- Describe the types of expenses that a property-casualty insurer incurs.
- Explain how an insurer's gain or loss from operations is determined.
- Describe the three types of liabilities found on the financial statements of insurers.
- Describe the typical items found on the balance sheet of a property-casualty insurer.
- Describe the typical items found on the income statement of a property-casualty insurer.

OBJECTIVES

- Given an insurer's financial statements, calculate and explain the significance of the following profitability ratios:
  - loss ratio
  - Expense ratio
  - Dividend ratio
  - Combined ratio
  - Investment income ratio
  - Overall operating ratio

- Given an insurer's financial statements, calculate and explain the significance of an insurer's capacity ratio.

Insurer Profitability

- Like any other business, an insurer must manage its revenues and expenses to produce an overall income (revenue minus expenses) gain from its operations and to ensure the profitability on which its survival depends.

INSURER PROFITABILITY

- ***Insurers receive income from two major sources***:

(1)***The sale of insurance***: it generates underwriting income (gain or loss) which is the amount remaining after underwriting losses and expenses are subtracted form premiums.

(2)***The investment of funds***: it generates investment income (gain or loss) is the amount remaining after investment expenses are subtracted from the gross amount earned on investment during the period.

INSURER PROFITABILITY

- ***Written premiums***: "they are the total premiums on all policies put into effect, or "written", during a given period."
- ***Earned premiums:*** " they are the portion of the written premiums that apply to the part of the policy period that has already occurred."
- ***Unearned premium:*** " they are the portion of the written premiums apply to the part of the policy period that has not yet occurred."

UNDERWRITING INCOME

- “It is the amount of income (gain or loss) after losses and expenses are subtracted from premiums that are earned.”
- The premiums are the revenues from the insurer’s underwriting operations.
- The losses paid by the insurer’s policies plus the expenses associated with controlling and adjusting those losses are the primary underwriting expenses.

Investment Income

- Because an insurer collects premiums from its policyholders and pays claims for its policyholders , the insurer handles large amount of money.
- Insurers invest available funds to generate additional income. Investment income can be substantial, particularly during periods of high interest rates or high returns in the stock market.

INVESTMENT INCOME

- ***An insurer has investment available for two reasons:***

First: the insurer is legally required to maintain a certain amount of funds, called the policyholders' surplus, so it can meet its obligations even after catastrophic losses.

Second: the insurer usually receives premiums before it pays claims on the corresponding policies.

The insurer when settles claims, it must have funds readily available to meet its obligations

Investment Income

- Insurers have investment departments whose objective is to earn the highest possible return from investments while ensuring that funds are always available to meet the insurer's obligations.
- Thus, the investment department must select high-quality investments that are relatively secure and that can be readily converted to cash.
- One investment strategy may involve buying long-term bonds that are scheduled for maturity to match expected claim payment needs.

Investment Income

- ***For an insurer to be profitable:***
- ***Profit*** *= Revenue - expenses*

Where:

- **Revenue** = earned premiums + investment income
- **Expenses** = total loss payments and other expenses

EXPENSES

- An insurer's expenses fall into 2 broad categories:

1) <u>expenses associated with underwriting activities</u>, include: payment for losses, loss adjustment expenses , dividends to their policyholders salaries and other underwriting expenses.

2) <u>expenses associated with investment activities</u>, include: other general expenses related to running the investment department.

1- Losses

- The major expense category for most insurers is payment for losses arising from claims.
- **Claims** " are demands for payment made by insureds based on the conditions specified in their insurance policies."

1- Losses

- Claims are not necessarily settled immediately after a loss occurs. Sometimes the loss is not reported right away. When the loss is reported, the insurer’s claim representative investigates the loss and verifies whether the loss is covered before the insurer pays the claim.
- Liability claims may involve lengthy legal proceedings.

1- LOSSES

- In any given year, an insurer knows only the amount of losses it has paid so far, but not a definite amount it will ultimately have to pay.
- To compare revenue and expenses, an insurer must calculate not only its paid losses but also its incurred losses for the period.

1- LOSSES

- **Paid Loss**: **"**A claim payment that an insurer has made."
- **Loss reserves**: "amounts designated by insurers to pay claims for losses that have already occurred but are not yet settled."
- **Incurred losses =** Paid losses **+** Changes in loss reserves
- Changes in loss reserves **=** loss reserves at end of period **-** loss reserves at beginning of period

2- Loss Adjustment Expenses

- Insurers also incur loss adjustment expenses related to investigating and settling insurance claims.
- For property insurance claims representative must identify the cause of the loss and decide whether the loss is covered by the policy, then determine the covered amount.
- For liability claims, the claim representative must determine whether the insured is legally responsible for the bodily injury or property damage that is the basis of the claim and if so how much.

2- Loss Adjustment Expenses

- Liability insurers often pay the costs to defend the insured in the event of a lawsuit, regardless of whether the insured is ultimately held responsible for the damages. Thus, loss adjustment expenses associated with a liability claim can be substantial.

3- OTHER UNDERWRITING EXPENSES

- ***<u>3-1 Acquisition expenses</u>***: "are the expenses associated with acquiring new business. All property-casualty insurers have a marketing system to market and distribute their products. This system includes individuals involved directly with sales.(agents, brokers, producers or sales representatives) and the administrative staff that managers and supports the sales effort.

3- OTHER UNDERWRITING EXPENSES

- Many people who directly generate insurance sales for insurers receive a commission, salary or a combination of salary and commission and sometimes a bonus based on sales, profit or other measure of productivity. Advertising expenses can also be a significant component

3- OTHER UNDERWRITING EXPENSES

- ***<u>3-2 General expenses</u>***: they are not related directly to activities such as claims, marketing and underwriting but they are crucial to the insurer's operations. They are associated with staffing and maintaining departments such as accounting, legal, statistical and data management, actuarial, customer service, information technology and building maintenance.

- ***<u>3-3 Premium taxes, licenses and fees</u>***.

4- Dividends

- Some insurers choose to return a portion of premiums to policyholders as dividends, which may be paid out on a regular basis or may be associated with a special circumstance.

- They may also be paid as a marketing technique.

5- Investment Expenses

- The investment department is responsible for a careful and thorough accounting of all invested funds in addition to devising investment strategy and implementing it through the purchase and sale of stocks, bonds and other investments.
- Investment expenses include staff salaries and all other expenses related to the activities of the investment department.

5- Investment Expenses

- **Net investment income** = investment income - investment expenses

- **Net investment gain or loss** = net investment income + insurer’s gains or losses from the sale of invested assets

GAIN OR LOSS FROM OPERATIONS

- **Net underwriting gain or loss** = insurer's earned premiums - its losses and underwriting expenses for a specific period

- **Overall gain or loss from operations** = net investment gain or loss + net underwriting gain or loss

Gain or Loss from Operations

- This overall figure gives a more complete picture of an insurer's profitability than net underwriting gain or loss because net investment gains generally help to offset underwriting losses.

Gain or Loss from Operations

- **Net income before taxes = total earned premiums and investment income - its losses and other expenses in the corresponding period**

- Like any other businesses, insurers pay income taxes on their taxable income.

Gain or Loss from Operations

- After an insurer has paid losses and reserved money to pay additional losses, expenses and income taxes, the remainder is net income which belongs to the owners of the company. The owners may receive a portion of this remainder as dividends.

INSURER SOLVENCY

- ***Assets:*** are types of property, both tangible and intangible, owned by an entity, include cash, stocks and bonds, property(buildings, office furniture and equipment), accounts receivable from policyholders, agents, brokers and reinsurers.
- Regulators create 2 types of assets which reflects the conservative view that insurance regulators take when evaluating an insurer's financial strength.

Assets

Admitted assets	Nonadmitted assets
-Types of property, such as cash and stocks, that regulators allow insurers to show as assets on their financial statements. -They could easily be liquidated, or converted to cash, at or near the property’s market value.	-Types of property, such as office furniture and equipment, that regulators do not allow insurers to show as assets on financial statements because these assets cannot readily be converted to cash at or near their market value.

LIABILITIES

- "They are financial obligations, or debts, owned by a company to another entity, usually the policyholder in the case of an insurer."

<u>1- Loss reserve and Loss Expense Reserve</u>:

Loss Reserve is "the amount estimated and set aside by insurers to pay claims for losses that have already occurred but are not yet settled."

- Insurers also set up the loss expense reserve to estimate the cost of settling the claims included in the loss reserve.

LIABILITIES

<u>2- Unearned Premium Reserve: </u> “the total of an insurer’s unearned premiums on all policies at a particular time.”

<u>3- Other liabilities:</u> there may be other liabilities that are much smaller.

POLICYHOLDER'S SURPLUS

- **Policyholder's surplus =** total admitted assets - total liabilities
- While premiums may include a margin for error, that margin might not be sufficient to offset unexpected losses, particularly catastrophic losses. If losses exceed expectations, the insurer must draw on its surplus to make required claim payments. It also provides the necessary resources if the insurer decides to expand into a new territory or develop new insurance products.

Monitoring Insurer Financial Performance

- Insurers as well as regulators, investors and others monitor the financial performance of insurers.
- Insurers must record and report financial information in a consistent manner, using various financial statements.
- They must prepare accurate financial statements that describe the company's financial position in an objective, standardized format.

1- Balance Sheet

- "It is a financial statement that shows a company's financial position at a particular point in time. For an insurer it includes the insurer's admitted assets, liabilities and policyholder's surplus."

2-Income Statement

- "A financial statement that shows a company's revenues, expenses and net income for a particular period, usually one year."

Financial statement analysis

- Analyzing the relationship of different items that appear on insurers' financial statements helps determine how well insurers are performing.
- Insurers use them to identify strengths and weaknesses in their companies' operations. Investors analyze the ratios to identify the insurers that are most attractive as investments.

PROFITABILITY

<u>1-Loss Ratio</u>: ”it indicates what proportion of earned premiums is being used to fund losses and their settlement.”

- **Loss Ratio = incurred losses(including loss adjustment expenses) / Earned premiums**

PROFITABILITY

<u>2- The expense ratio</u>: “it indicates what proportion of an insurer’s written premiums is being used to pay acquisition costs, general and premium taxes.

- ✓ **Expense ratio = incurred underwriting expenses / written premiums**

PROFITABILITY

<u>3-The dividend ratio</u>: “ it indicates what proportion of an insurer’s earned premiums (if any) is being returned to policyholders in the form of dividends.”

- ✓ **Dividend ratio = policyholder dividends / earned premiums**

PROFITABILITY

<u>4- The combined ratio :</u> it is used to compare cash inflows and outflows from insurance operations.

- ✓ ***Combined ratio = loss ratio + expense ratio***

- While the combined ratio is considered the accepted measure of an insurer’s underwriting performance, this ratio does take into account the insurer’s investment income and thus does not measure the insurer’s overall financial performance. Overall financial performance includes the results from both the insurer’s underwriting activities and its investment activities.

PROFITABILITY

- For insurers that pay dividends (not the stock dividend) , the ratio will be as follows:

✓ ***Combined ratio = loss ratio + expense ratio + dividend ratio***

- Most insurers consider a combined ratio under 100 to be acceptable, because it indicates a profit from underwriting even before investment income is considered.

PROFITABILITY

- In fact many insurers experience a combined ratio over 100 and attempt to offset underwriting losses with investment income.

PROFITABILITY

<u>5-Investment income ratio</u>: "indicates the degree of success achieved in the insurer's investment activities. "

- The activities are successful when the ratio is high.

✓ **Investment income ratio = net investment income / earned premiums**

PROFITABILITY

6-The overall operating ratio: it is the most complete measure of insurer financial performance.

- It can be used to provide an overall measure of the financial performance of the insurer for a specific period. While to obtain a true picture of an insurer's profitability, overall operating ratios for a number of years should be analyzed.

PROFITABILITY

- ✓ **Overall operating ratio = combined ratio − investment income ratio**

- A ratio of less than 100 percent indicates an overall operating gain because revenues are greater than total expenses, and vice versa.

Growth

- An important concern for an insurer is also its capacity to write new business and thus to grow.

✓ ***Capacity ratio = written premiums / policyholders' surplus***

- If losses and expenses exceed written premiums and investment income, an insurer must use its surplus to meet its obligations.
- Insurance regulators use it as a benchmark to determine whether an insurer may be headed toward financial difficulty.