

## DETERMINATION OF TARGET PROFIT IN INSURANCE FIRMS "PROFIT MAXIMIZATION APPROACH"

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### SUMMARY

In this article, mainly, the factors affecting the determination of target income in insurance companies are discussed. While determining the target profit according to profit maximization in insurance companies, the equilibrium conditions in the insurance markets are examined, as a requisite.

### INTRODUCTION

Profit planning requires the definition of the profit which is essential in this process. This definition is not easy in insurance firms due to some technical problems which are related to the definition of the periodical income. Thus, before going into details of how to define the target profit in insurance firms, it is useful to deal with the problems faced while defining the periodical income and the relationship between the target profit and the periodical income.

#### I. The Relationship Between the Periodical Income and Target Profit in Insurance Firms

According to their own structure and functioning characteristics, insurance firms have to determine the financial results which they obtain while exercising the functions known as financial coverage pro-

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duction and portfolio investment management that are quite different

from other companies. One of the main reasons of this differentiations is that the result of the portfolio-investment actions can be defined within the limitations put forward by the legislation. What is important here are the selective features set forth by the financial coverage production process while determining the business income from the viewpoint of different periods.

It is quite difficult to find a relationship between the activity period and premium income which is earned as a result of financial coverage production. Moreover, stating the activity period as the calendar year can cause some problems to the insurance firms (Greene, 1968; 806-807). Since, especially taking into consideration the long-term policies, the production activity shows a continuity without interruption till the end of the production, like ship and building construction. Here, "period" is an abstract concept. In situations when the "period" is shorter than the calendar year, the important point is that the production should continue uninterruptedly, and the concept of time should not be limited. Another characteristic is that it cannot be foreseen when the risks under coverage will turn into a loss.

This brings uncertainty to the time concept which affects the gross period income. Thus, the periodical income of a certain period cannot be determined soundly. Insurance firms tend to solve this problem by the help of "technical reserves".

As it is known, while calculating the period income, insurance firms take into consideration three different technical reserves, which are "current risk reserves", "unearned premium reserves", and "mathematical reserves".

"Mathematical reserves" have a bearing on life insurance branch (Pekiner, 1974; 260-262). "Current risk reserves" are the discount from the premium income of the policy. This kind of a discount whose purpose is to determine the net profit of the period is followed by "unearned premium reserves" discount which is exercised in order to differentiate the damage segment of the period.

The means which are benefited to determine the periodical income are, in fact, based on certain calculations and estimations (Çaldağ, 1979; 175). Thus, whether the measure to determine the periodical income in insurance firms should be the cash principle or the accrual principle is still under discussion. For this reason, both principles are used in some practices in a mixed way. In our country, the accrual prin-

ciple is accepted, but although the income is realized, this practice causes some problems in transferring the profit from the agencies to the center (Atasagun, 1987; 130). As a result, the company cannot value the periodical income as disposable income.

The difficulties in determining the periodical income of the insurance firms may loosen the relationship between the fixation of the target profit and calendar year or another type of time segment.

## II. Target Profit in Insurance Firms

As mentioned above, insurance firms produce service but show differences from other service-producing-companies at the type of their production characteristics. This peculiarity gives a different outlook and content to the concept of target profit in the insurance firms on the one hand, and affect the usage of this profit as a means in planning the profit on the other.

The target profit in insurance firms can be determined according to different goals of enterprise and as their functions (Life-Office, 1967; 9). In this study we will try to concentrate on the determination of the target profit from the viewpoint of profit maximization.

## III. The Determination of the Target Profit in the Profit Maximization Approach

Profit maximization can be shortly defined as the realization of profit in the quantity of production which equalizes the company's marginal cost to the marginal revenue in a certain period of time (Arrow, 1965; 45). This definition is valid for the insurance firms working as service industry companies.

What is important here is that marginal revenue is together with the average profit which at the same time represent market demand. Market demand is one of the essentials which determines the price or, in other words, which provides an atmosphere of market equilibrium.

Thus, determining the profit according to profit maximization requires the examination of equilibrium conditions in the insurance market (Le Grand, Robinson, 1986; 19).

### a. Establishing Equilibrium in the Insurance Market

As in all other goods and service markets, the two main factors in the insurance market are the insurance service demand and supply. However, these two factors of the insurance market show great diffe-

rence from the supply and demand factors of other markets. These differences arise from the consumption and production characteristics due to the peculiarity of the insurance service.

b. The Distinctive Characteristics of the Production and Consumption of Insurance Services

The pronounced characteristic of the service production in insurance firms is that this production is exercised in the way of "money versus money" (Doherty, 1976; 29). From this point of view, production is a kind of financial production. However, it is evident that insurance firms follow a different type of procedure from the other companies in such a way that the production in financial companies covers the processes that are related to forming and transferring the financial power to meet the liquidity needs required by the economic data and, running the companies profitably. However, in the insurance activities, what creates the need for liquidity is not the insufficiency of capital. Here, the financial power buys coverage even through its risks are realized. The liquidity need, which comes out from the realization of the risks, is met by the insurance company. Thus, the risks are transferred through insurance, and the insurance service customer exchanges his certain amount of income with a future uncertain amount of income.

The kind of usage of production or, in other words, consumption in the insurance shows some distinctive characteristics. The consumption of insurance service can be realized in two different ways, such as direct and indirect consumption. In connection with that, the satisfaction provided to the customer by the insurance service can be dealt within two ways. The utility obtained from this service is a kind of psychological coverage which is offered to the customer during the insurance contract period.

This can be accepted as direct consumption. As opposed to that, insurance service, from another point of view, is a kind of consumption activity which bears lag and indirect characteristics due to the fact that the risk turns into damage. But these two kinds of satisfactions which show the utility obtained from the insurance service are concentric and cannot be viewed separately during the calculations.

As it is known, the production of all kinds of goods and services is defined as "supply" and the consumption of them as "demand". Thus, it is wise to examine the distinctive characteristics related to the production and consumption of insurance services and how these services are

reflected to supply and demand factors of the insurance market (Gae-deke, Tootelian, 1983; 44-45).

### c. Supply of Insurance Services

Insurance companies are different from other companies from the viewpoint of supply, distinctions in production factors and processes, and limitations due to all these circumstances.

Since the insurance firms are the economic units which buy and produce coverage against the financial results of the risks, the insurance service supply bears a different characteristic from the viewpoint of the firm, in such a way that basing their estimations on statistical calculations, the insurance firms try to figure out the loss expenses which may be caused by the risks owing to the quality of the services. If there are deviations from the realization of the estimations, the premium which is received in return for the sold coverage may not cover the expenses. This situation is defined as "insurance risk" in insurance parlance (Söndürmez, 1977); 9). Here the one who supplies the insurance service is, at the same time, the one who demands some of the services basic to insurance activities. As a result of this, insurance firms have the legal right to ask from their customers to obey the precautions taken for damage prevention. Moreover, it is accepted as a requisite in the insurance activities for an insurance buyer to participate in the expenses of damage even though after taking all kinds of precautions, he suffers from damage faultlessly. This sort of a situation can never be seen in any other supply concept of goods and services.

Another characteristic of insurance service supply which arises from supply process is that there is no period of time between the production and the sale of the insurance service. Moreover, the insurance coverage is sold before the service is produced.

A different factor which affects the supply in insurance firms is that it is difficult to increase the capacity of both the amount of insurance and the number of premiums (Farny, 1965; 182). But the technical limitations related to the production, procedure and tradition, keep the usage of this possibility at a certain level.

As a rule, the insurance coverage is not sold to everyone who demands it. From this point of view, the production and supply of insurance service is a risk distinction. It is supposed that insurance firms transfer coverage within production limits as much as they take over

the risk. In that case, the choice of the approved risks comes out as a supply limitation peculiar to insurance firms.

The ability to expand the insurance company's production, and in connection with that its supply, is due to the relationship between premium and equities (capital and surplus). This relationship is fixed at different ratios in various countries. The ratios which are derived from the past data and tendencies are accepted as both indicative values by the analysts and a base to the legal arrangements (Akat, 1971; 11).

This practice of the above mentioned relationship in Turkey is arranged in such a way that it should set the top limits of the premium portfolios depending on the by-laws in technical organization. Since this limits the enlargement, the purpose of the expansion of the insurance firms has a special importance. From this point of view, the capacity of insurance amount in insurance firms comes as a result of functions and equipment (Otto, 1961; 51-55).

#### d. Demand of insurance service

The most prominent characteristic of the demand for insurance service is that it is more related to the subjective factors than any other services. At the same time, this characteristic influences the demand estimation of the insurance producing companies differently from the demand estimation of other goods and services.

The subjective side of the demand in insurance services expresses the importance of the behaviours of the person who demands the service. These behaviours are formed by the habits of the person, insurance tradition of the society one lives in, and the existence of a safe political atmosphere. The familiarity with the insurance services and the insurance traditions of the society are closely related to the level of the economic and social development.

The main expectations of the insurance service buyers are to straighten the borders of vagueness. The buyer demands a clarity for this vagueness, in other words, a financial coverage against this uncertainty. This shows that insurance demand has more of a psychological side than any other service demands.

Since the insurance service demand is closely related to the value of the object and / or interest which will be insured, this demand, at the same time, has a notion of derivative demand. Apart from that, as in other goods and service demands, insurance service demand depends on

the price (premium ratio) and the income of the buyers. It is possible to accept the price and the profit in response to demand as objective factors and handle these as the same indicator in real meaning. Thus, while analyzing the insurance market, it might seem sufficient to deal only with the price-demand relationship as in the markets of goods and services. \*

#### e. The Characteristics of the Insurance Market

The distinctive characteristics related to the supply and demand of insurance services differentiate the formation of the equilibrium in insurance markets from the other service markets. In fact, the insurance market is, on a large scale, a subject to the legal arrangements. The price in this market is fixed either by the companies or by the government. This gives a price-agreed oligopoly feature to the insurance market. In order to exhibit this, it is necessary to mention that insurance market does not carry the real competitive conditions theoretically.

Although showing differences among the countries, the abundance of buyers and sellers which is the most important indicator of the competitive market is not of question in the insurance market because the number of sellers is small. As a matter of fact, insurance market is one of the widespread markets in which firms agree on prices and which has intensification among companies.

It is not possible to declare that insurance market has a full competitive characteristic from the viewpoint of entry and exit freedom which is the second condition of the full competitive market, because, since the entry to the insurance market requires legally a certain amount of equities, it is limited in an economic context (Leverett, 1971; 16).

Besides and in connection with these economical limitations, nearly in every country, there are some other legal limitations, but it is also mentioned that in the United States, this condition, like the abundance of buyers and sellers condition, is partly possible beyond some limitations.

Since the insurance service production requires a special mastery at our everyday economical conditions, the buyers of this service do not have much opportunity to get the knowledge on price and other market indicators when they want to. This shows that transparency condition has not fully realized in insurance market.

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\* Since the changes in prices affect the real profit of the buyer negatively, the changes in the profit are not taken into account.

On the other hand, as seen in the combination of insurance contracts and clauses, since the risks are concentric due to the quality of the product, the divisibility condition does not work without limitations.

Thus, insurance market has a characteristic of imperfect competition where none of other full competitive conditions are realized, except the homogeneity condition, and it is also a price-agreed oligopolistic market due to the fact that the price is set before (Lazer, Culley, 1983; 19 and 553).

## CONCLUSION

As it is seen, insurance market is a kind of market which does not structurally have a full competitive market, and due to the characteristics of its supply and demand concepts, it has a different appearance compared with other service markets. It is the number of buyers and sellers as a factor which determines what sort of a market it is. According to that, leaving aside some exceptions in developed countries such as the United States, the insurance market has characteristics of an oligopoly market. In such a situation the market equilibrium is determined by the degree of intensification and internal dependence within the cartel, depending on the tendencies of economy's development and recession.

The above mentioned explanations on the characteristics of insurance market are in the form of theoretical explanations, without taking into account the legal arrangements and limitations. However, nearly in every country, the government interferes with the market at different degrees in order to protect both the customers and producers, taking into consideration the relationship between insurance service and capital and capital market. The interference which is closest to the market equilibrium is set by the organizations like "premium rating committees" or "rating offices", according to legal bases of price fixation. Moreover, the entry to the insurance market or insurance service production is on a large scale subject to legal arrangements.

In most countries in Europe, the entry into the market depends on whether the necessity tests come up positively. Besides this, the practices like the fixation of the number of companies acting in the insurance market, such as issued by the government or by the necessity to keep reserve in a certain amount against the production of premium, are typical examples to legal arrangements on that subject.



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# SİGORTA İŞLETMELERİNDE AMAÇ GELİRİN BELİRLENMESİ

## KÂR MAKSİMİZASYONU YAKLAŞIMI

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