“Evaluation of pricing strategies for life insurance with focus on bank interest rate changes”

AUTHORS	Mohammad Saleh Torkestani Elham Jamshidi Borujerdi

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Mohammad Saleh Torkestani (Iran), Elham Jamshidi Borujerdi (Iran)

Evaluation of pricing strategies for life insurance with focus on bank interest rate changes

Abstract

From the 1980s, insurance activities have been developed around the world. In the industrial countries, insurance plays a key role in economic stability conditions. In developing countries, social and economic advantages of insurance have been recognized and insurance operations have been developed gradually. This study evaluates pricing strategies of life insurance in view of bank interest changes. In this regard, some hypotheses have been tested in this study. Strategic view on pricing issue is essential, since making mistakes in pricing can even make out of cycle essential and cost effective products or services and make them out of access. An applied questionnaire in this study is distributed among 100 customers, managers, and staffs of life insurance industry in Iran. Then, collected data through questionnaire is analyzed using SPSS software. The findings indicate that there is a significantly positive relationship between life insurance rate and bank interest rate changes (interest rate of short-term, mid-term, and long-term deposits).

Keywords: pricing, life insurance, exchange rate, bank interest, insurance industry, capital market, premium, insurer

Introduction

Today, insurance industry is one of the most important factors for development of countries. Along with other economic sectors, insurance plays a key role and enhances motivation for investment through covering probable losses induced by economic activities. Enhancement of investment can play also a key role in development of countries. Insurance is an available instrument in economic sector and since it is a factor of production, it has possessed the term "industry" and can be considered as one of the main components of financial market. Emergence of insurance industry would be originated in international commerce, urban development, and enhancement of events such as fire and Industrial Revolution, where fire can be a disaster. It should be mentioned that financial system in every economic system depends on three main elements including banking industry, insurance industry, and stock market (Sharku et al., 2011). Among effective institutions in monetary and financial markets, probably insurance industry plays the main role in the economic growth of the country. Life insurance considers individuals and economy as a basis with large amount of important financial services (Beck and Webb, 2002).

Considering the main aim of this study, it can be stated that pricing strategies of life insurance have been evaluated in view of bank interest changes. Strategic view on pricing issue is essential, since making mistakes in pricing can even make out of cycle essential and cost effective products or services and make them out of access. Moreover, in regard with interest rate, it should be mentioned that interest rate or money and credit cost (loan) is a focus point of economic activities as the pulse of economic performance. Financial policy makers have tried to provide economic growth and control inflation, so that they can achieve the mentioned goal through different solutions such as interest rate determination.

In regard with recent studies in the area of interest rate and life insurance, study of Papadamou and Siriopoulos (2014) can be named. The subject of the mentioned study has been interest rate risk and developing of Monetary Policy Committee. The study has considered documents of banks and life insurance companies in England and has investigated the effect of MPC on interest rate risk and insurance companies in the UK. In the mentioned study, stock interests were modeled on pricing models of CAPM and Fama-French using GARCH-M method. Then, they have been enhanced through interest rate risk factors referring to long-term and short-term rates. Obtained results indicate that as Bank of England (BoE) received operational authority, fluctuations of interest rate affected significantly stock returns of the companies (Papadamou and Siriopoulos, 2014). Further, study of Buchardt (2014) has been related to dependent interest rate, and transitional rate in life insurance. Buchardt stated that considering interest rate and transitional rate as randomized processes for authorities of life insurance that have been modeled in a multiple cycle of Markov would be significant. At this study, a model has been proposed, in which dependent forward rates have been estimated and market value and investment (Solvency II) for a saving contract have been investigated.

1. Insurance

From the 1980s, insurance activities have been developed around the world. In the industrial countries, insurance plays a key role in economic stability of economic conditions. In developing countries, social and economic advantages of insurance

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Mohammad Saleh Torkestani, Ph.D., Assistant Professor of Business Management, Faculty of Management and Accounting, Allameh Tabataba'i University, Iran.

Elham Jamshidi Borujerdi, Master of Business Management Student, Faculty of Management and Accounting, Allameh Tabataba'i University, Iran.

have been recognized and insurance operations have been developed gradually. Over the decade, social insurance institutions that are under authority of the state play a key role in development of pension insurance, life insurance, and personal events for staff, workers, and other employees. First, emergence of social insurances led to relative stagnation of this kind of insurances; although, conflicts between social and commercial insurances were removed gradually, since recognition of one type of insurance led to gaining attentions of individuals toward other types. Insurance companies are active in three types of insurance including life insurance, property and loss insurance, and accident and health insurance, regarding that this classification represented for insurance has been for facilitation in addressee's mind so as to get to know about the topic of interest (Neal and Peterson, 2005). Figure 1 illustrates insurance rate in Europe that has been divided into two groups of life insurance and other insurances (Sharku et al., 2011).

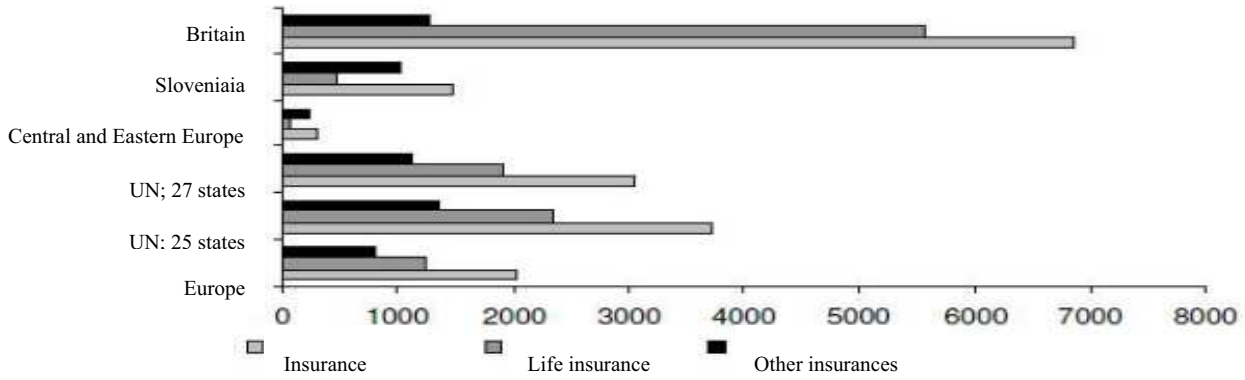

Fig. 1. Diagram of insurance compression rate in Europe

2. Life insurance

Life insurance is one of the most common insurances around the world. Since people face many different events and problems everyday and an uncertain upcoming future, they should be under coverage of insurance, so that it can keep them safe and remove their concerns in regard with financial resource supplement in future. In fact, life insurance can be considered as a kind of investment that is used by individuals to remove any concern and anxiety of changes in income and economic situation of family (Asto, 1999).

Development of insurance depends on comprehensive development of economic activities in the country. On the other hand, the most important economic interests of life insurance include: collecting savings, investment and development of capital markets, and helping income systems. Hence, life insurance industry usually plays a key role and many states transfer the load of some pension payments to this sector. In general, due to financing of such insurances, some new companies are established. Due to different investments in different parts of industry, agriculture, etc. insurance can lead to enhancement of employment and also enhancement of life standards in economy (Sawant, 2010). Comparing to other countries in 2008, and considering life insurance per capita of 370$ in the world, Iran has been in a very low rank with life insurance per capita of 3.9$ and about 6.7% stocks in insurance stock market (Sigma, 2009). Hence, regarding to the necessity of insurance development in Iran, especially life insurance, there has been no good reception for this kind of insurance in this country (Sawant, 2010).

Life insurances would support insured individuals in order to preserve their families and generally those individuals that are financially depended on them. Even if individuals have no financial dependence, some other insurance would be useful for them. Life insurance is a kind of contract for future supply that is based on thinking for facing results of risks and is relied on possibilities like other kinds of insurance. In general, it could be mentioned that the lower the income and asset level of individuals in a state is, the higher the generalization of insurance would be necessary in the country (Shojaei, 2010). Life insurance includes also some supplementary features including death financing, income financing for family in certain ages, housing loan supply, higher education cost supply, capital supply for specific purposes (clinics, school, or mosque), and business applications (Dastbaz, 2005).

Life insurance is divided into three total groups as follows (Palav, 2000; Leimberg, 2004):

- Death benefit insurance (death benefit insurance is divided into two total groups of "full life insurance" and "term insurance").
- Living benefit insurance.
- Endowment insurance (saving).

Companies would invest in life insurance in order to achieve their goals. Holding companies are the most common example of such companies that organize insurance services in the center. Insurance holding companies have certain structure and refer to insurance operations in such structure. Paetzmann (2011) has categorized structure of insurance holding companies as follows.

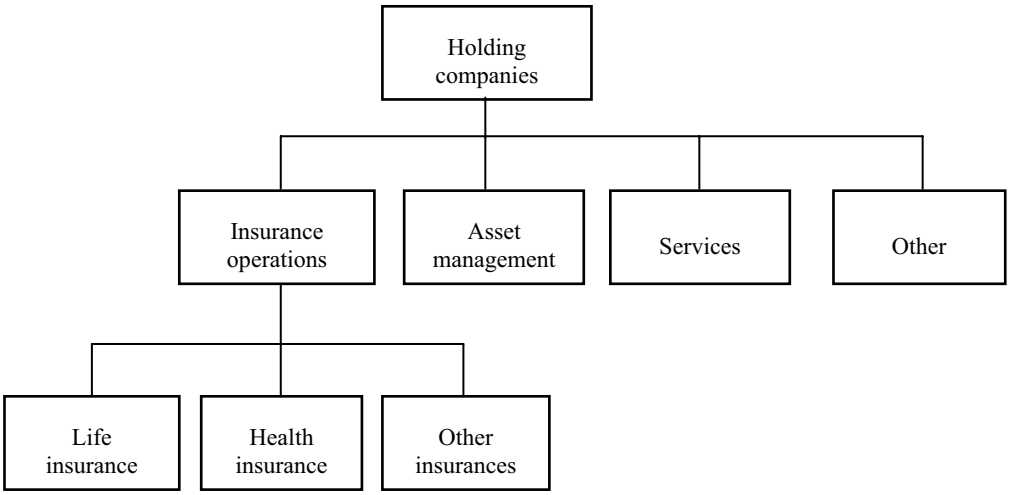

Fig. 2. Diagram of insurance operations in holding companies

3. Performance of insurance companies

Over the years, many different studies have been conducted in regard with competitions among insurance companies. Some studies aimed at measuring competitions in microeconomics and company level. Studies by Hardwick and Dou (1998) have indicated that Britain, France, and the Netherlands have possessed the most competitive insurance industries; although the most part of insurance market is available for South European states like Spain, Portugal, and Italy.

Insurance resources are divided into 4 groups including commercial services, workforce, foreign capital (loan), and rights of shareholders. Commercial services would be considered as payment of agents. Workforce variable is considered as total number of staff. Foreign capital of insurers includes capital that has been borrowed from insurers. Capital of rights of shareholders is considered as the return of shareholders, general saving, saving doubtful reachable loans, loan of home properties and assets (Tone and Sahoo, 2010). Insurance companies follow 3 goals through taking benefit of their savings and deposits. The mentioned goals include paying probable losses, development of insurance in the market, and gaining more benefit. Entering and developing in the current markets is under consideration of insurance around the world. Growth rate of insurance industry among emerging markets, in many developed countries is high. Until the time that such growth guides emerged companies toward such markets, managers of companies face making strategic important decisions in regard with starting or expanding their activities in emerging markets. The mentioned decisions may include selecting a degree that diversifies products of a company, determining amount of focus on life insurances against other insurances, determining acceleration of business, determining financial leverage, and determining optimal size of company (Berry-Stolzle, 2010).

4. Pricing in insurance

Insurance is an intangible commodity and would not become tangible until being sold. Premium rate is price per unit of insurance that is sold and like other prices is depended on production costs including financial and official costs, inspector cost, insurance savings, and insurance interests. It should be noted that pricing in insurance industry and determining final price of insurance, contrary to other products, is based on risk designing, statistical estimations, and predictions (Zare, 2010).

Pricing refers to determination of premiums that should be paid for insurance services. In fact, premium is price of insurance per unit, which is paid for each exposure unit and in fact for each unit of endangered property or authority. Since every insurance company is considered as a commercial unit, clearly expected price should cover desired profit of company in addition to covering losses and costs. In general, all states make some rules, based on which all receivables of insurance company are determined and as a result, policy making goals are achieved in addition to meet the needs of the mentioned industry. The main goal of the industry is receiving suitable premium in order to cover losses and costs and also achieve benefit; otherwise insurance company would not be successful. Net premium is in fact the cost that can be determined through actuary investigations and would be included in that part of premium that loss payments and costs are paid. Over-

head cost is a part of premium that is essential for covering other costs, especially selling costs and can make benefit for the company. Gross price is in fact the same net premium in addition to overhead costs per endangered unit. Gross premium is also the premium that is received from insured endangered units. Ratio of overhead cost to gross price is equal to expense ratio. Simplification of pricing structure is another commercial goal of insurance industry.

5. Pricing strategies in life insurance

Contrary to power points of scientific approach in this regard, it seems that using just the proposed strategy is not sufficient because of presence of some limitations. In addition to exact methods of achieving proper price, different financial and non-financial variables and their relations to environmental factors, judgments, and experiences should be evaluated and examined. Being successful in competitions on prices is totally depended on personal judgment and experience and is less considered in academic studies. However, scholars of management and marketing believe that following academic principles and rules in domain of pricing can enhance possibility of victory and success. In general, literature of pricing is relied on 3 main axes and it could be mentioned that all methods, approaches, and strategies of pricing are resulted from one of the mentioned axes or elements. The mentioned factors can be illustrated in two forms and is also called as 3C pricing (Mansuri et al., 2007).

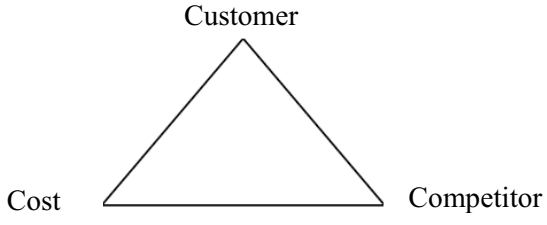

Fig. 3. Three main elements or axes of pricing

It seems that in order to have more possibility of success in pricing domain, many different factors are considered while determining policy of pricing. Figure 4 illustrates pricing process and different strategies and methods that may enhance probability of success in pricing competitions.

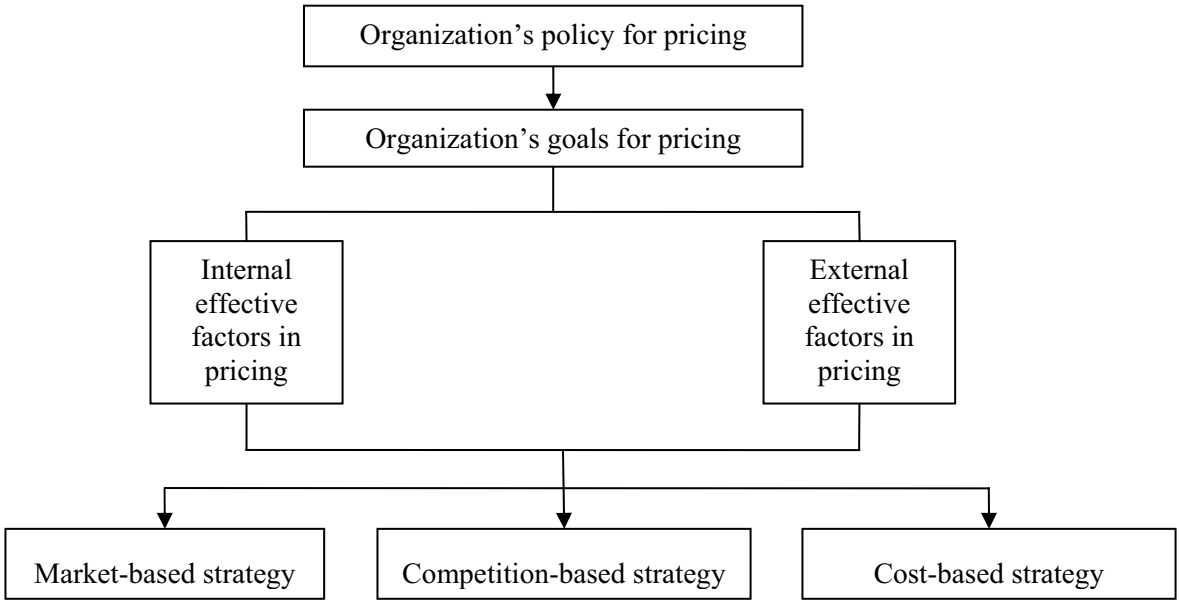

Fig. 4: Pricing process

6. Research hypotheses

The main hypotheses of this study are as follows:

H1: There is a significant relationship between life insurance price and bank interest rate changes.

H2: There is a significant relationship between life insurance and bank short-term interest rate.

H3: There is a significant relationship between life insurance and bank mid-term interest rate.

H4: There is a significant relationship between life insurance and bank long-term interest rate.

7. Methodology and data analysis

The research method has been a kind of descriptive method and type of correlation. In order to collect required data, library and field methods have been applied. Library method is used in order to collect the data for literature review. Required academic and relevant journals have been also collected through studying works of other researchers and authors. Moreover, in order to collect required data in this area, a questionnaire was distributed among 100 managers, customers, and staffs of life insurance industry. These data were collected during the

month of January, 2014, in Iran. The present study has applied questionnaire instrument for data collection considering its subject and methodology of the study. It should be mentioned that SPSS software has been also applied for data analysis purpose and also to evaluate significance level of hypotheses.

8. Hypotheses testing

H1: There is a significant relationship between life insurance price and bank interest rate changes.

Table 1. Linear relationship between life insurance price and bank interest rate changes based on regression

Criteria	Pearson value	Significance level
Life insurance price and bank interest rate changes	0.410	0.00

According to Table 1, standardized coefficient of regression for life insurance variable and bank interest rate changes is 0.410 with $P < 0.01$. It could be mentioned that relationship between the variables is significant at confidence level of 99%. In other words, H0 is rejected and alternative hypothesis would be confirmed. Pearson value between two variables indicates that relationship between the two variables is relatively significant and positive.

H2: There is a significant relationship between life insurance and bank short-term interest rate.

Table 2. Linear relationship between life insurance return rate and bank short-term interest rate based on regression

Criteria	Pearson value	Significance level
Life insurance rate and bank short-term interest rate	0.676	0.00

According to Table 2, standardized coefficient of regression for life insurance variable and bank short-term interest rate is 0.676 with $P < 0.01$. It could be mentioned that relationship between the variables is significant at confidence level of 99%. In other words, H0 is rejected and alternative hypothesis is confirmed. Pearson value between two variables indicates that relationship between the two variables is relatively significant and positive.

H3: There is a significant relationship between life insurance and bank mid-term interest rate.

Table 3. Linear relationship between life insurance and bank mid-term interest rate based on regression

Criteria	Pearson value	Significance level
Life insurance rate and bank mid-term interest rate	0.508	0.00

According to Table 3, standardized coefficient of regression for life insurance variable and bank mid-term interest rate is 0.508 with $P < 0.01$. It could be mentioned that relationship between the variables is significant at confidence level of 99%. In other words, H0 would be rejected and alternative hypothesis is confirmed. Pearson value between two variables indicates that relationship between the two variables is relatively significant and positive.

H4: There is a significant relationship between life insurance and bank long-term interest rate.

Table 4. Linear relationship between life insurance and bank long-term interest rate based on regression

Criteria	Pearson value	Significance level
Life insurance rate and bank long-term interest rate	0.511	0.00

According to Table 4, standardized coefficient of regression for life insurance variable and bank long-term interest rate is 0.511 with $P < 0.01$. It could be mentioned that relationship between the variables is significant at confidence level of 99%. In other words, H0 is rejected and alternative hypothesis is confirmed. Pearson value between two variables indicates that relationship between the two variables is relatively significant and positive.

Conclusion

According to conducted investigations and evaluations, it could be mentioned that pricing strategies in life insurance are reactive. In other words, feedback of market conditions determines price of services and managers of the insurance industry decide to change their pricing strategy after evaluation of market effect. Hence, insurance companies can determine their pricing strategy due to predicting market conditions and risks of activities. The strategy is known as proactive strategy in strategic issues. However, the applied strategy is a reactive strategy that can affect both customers and investors negatively. In general, pricing can be based on 3 factors and it could be mentioned that all pricing methods and strategies are resulted from one of the 3 outlined factors. The factors include customer, cost, and competitor. The axis is also known as 3C pricing strategy. In order to have more success probability in pricing domain, many different and effective factors in this regard should be considered such as organizational goals and external and internal factors. The present study has evaluated pricing strategies in life insurance in viewpoint of bank interest rate changes and has also examined some hypotheses. The analysis of the collected data has found that there is a significantly positive relationship between life insurance rate and bank interest rate changes.

The paper makes some suggestions:

- Those managers that are responsible for decisionmaking on received premium of insurers in insurance organizations should conduct pricing due to effective variables such as bank interest rate, industry return rate, prediction of future conditions, and average risk value of life insurance.
- Insurance managers should review their pricing strategies and loss payment and also they should have desirable evaluation of risk value of their customers' activity.
- Executive managers of insurance industry should have control on their services in terms of portfolio management and completing insurance service package. They should also use some insurance branches in benefit of marketing for other units and branches.
- Researchers in future studies should consider comparative study of insurance industry in Iran and other countries.
- Essential variables should be considered and studied in the future studies including interest rate in neighbor countries, total return of insurance industry, return rate of other units of insurance, and conditions of economic inflation and improvement in the country.

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