



## Investigation the Effect of changes in interest rates and inflation on life insurance sales (case study: central Insurance Experts)

Mahmood, Rezaee <sup>1\*</sup>, Mohammad Ali, Mambeygie <sup>2</sup>, Hamed, Sareban <sup>3</sup>

[1] Associate professor Department Management, Islamic Azad University, Tehran, Iran.

[2] M.A of Manegment, Islamic Azad University, Tehran, Iran.

[3] M.A of Manegment, Islamic Azad University, Tehran, Iran.

\*Corresponding author's E-mail: dr.rezaeezadeh@gmail.com

### Abstract

*The current study was aimed at investigating the effect of changes in interest rates and inflation on life insurance sales via descriptive analysis methods. The population under study was consisted of all the 513 experts of central insurance in Tehran. Using Stratified Random sampling, a number of 220 experts were selected as the sample population in the study. A researcher-made questionnaire was used to collect data. The validity of the questionnaires was confirmed by the experts in the field. The reliability of the questionnaire was measured by using Cronbach alpha. It showed that the reliability of s questionnaire was 0.86. To analysis the data the researcher used descriptive method of investigation as well as inferential methods (such as one-sampled T test and Fridman test). The results indicated that a change in interest rates, inflation and demographic variables on the development of life insurance is above average, which was statistically significant. Furthermore results of Friedman test showed that ranking factors influencing on development of Life Insurance include: inflation rates interest rates and demographic variables.*

**Keywords:** Economical Factors, Development of Life Insurance, Central Insurance Experts



## **1. Introduction**

In today's world which economic growth and development of each country marks its international standing, countries try to improve their economic development indicators in order to be able to have a position in the international arena and strengthening the economy and play an influential role on the world stage through this cycle of economic recovery and thereby increase its role.

Insurance industry as one of the indicators of development on the one hand is as one of the major economic institutions and the other hand, supports the activities of other entities. In other words the insurance industry has a role in economic development by collecting received premiums and on the other hand with creating safety and security for service activities, production and ... facilitate progress in the process of building (Zare Khalili, 2011). So today's, the importance of insurance is raised in to dimensions of economic in macro level of social and economic community for families. Developed countries invest these financial resources in economic efficiency sections and even grant its profits to policyholders. In some developing countries this industry is in the hands of the state and its interests will be added to general revenue because of the stakes involved. However, this segment of the insurance industry have not been able to make significant progress over the years since its inception in Iran and while the development of life insurance closely associated with prosperity and power of the country's economy, but our country has been negligible progress as well as the dynamism in comparison with developing countries (Zaribaf et al., 2013).

The Effect of changes in macroeconomic variables in any industry is of particular importance. Now we are faced with the phenomenon of changing interest rates and inflation and the insurance industry to communicate directly and intimately associated with monetary and financial markets and also in terms of interest rates and inflation in the calculation of premiums and technical interest rate, has to assess the effects of this phenomenon on its performance (Talebnia and Pirveysi, 2007).

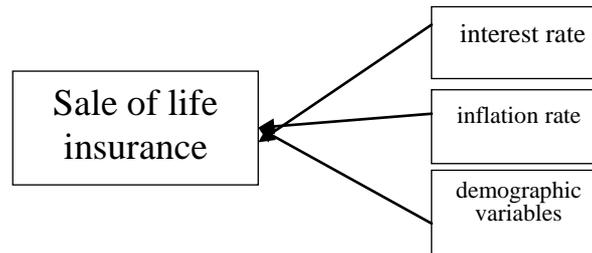
## **Literature of review**

The researches that have been done on the subject include: Khaja Salehani (2013) in his research entitled identify and prioritize the factors affecting the economic and financial Life insurance achieved the results that interest rates, taxes, wealth, personal debt, financial sector development, personal income, inflation and access to liquidity have a positive impact on the life insurance purchase but the rate of return on foreign assets, cash, commodity markets, the landlord is entitled to life insurance and banking sector development have a significantly negative impact on the life insurance purchase. Furthermore, the results of exploratory factor analysis showed that 5 factors of the income, the macroeconomic situation, the level of persons' income from the investment, the level of persons paid for the investment and being the landlord have effected on life insurance purchase in order of priority economic and financial factors. Malek Motiei (2013) study on the effect of income distribution on life insurance demand in Iran and found that the distribution of income has a positive and



negative significant impact on the demand for life insurance. In fact, more balanced distribution of income leads to a reduction in the demand for life insurance. Also the inflation rate is significant and negative impact on demand for life insurance had. National income per capita and literacy rates had a direct and significant impact on life insurance demand. The results showed that the dependency ratio will have a negative impact on demand for life insurance in Iran that are not statistically significant. Ebrahimnasab (2013) in a study entitled, institutional and economic factors on the development of life insurance in selected developing countries achieved these results that institutional variables and economic variables including financial development, GDP per capita and the unemployment rate have a significant positive effect on the development of life insurance. However, economic indicators of inflation has a significant negative effect on the development of life insurance. Quarks and colleagues (2013) in a study entitled impact of socio-demographic factors in the development of life insurance in Croatia showed that age and education are factors that affect the development of life insurance, but marital status, family size and gender does not play a significant role in the development of insurance life. Jane Van (2010) in a study, has investigated on organizational, marketing and social - cultural factors on development of the life insurance and concluded that increasing economic costs, delays in repayment of loans, the number of loan recipients, the number of women borrowers, the penetration rate life insurance and family size have an impact on the development of life insurance.

Given the importance of the subject and despite the development of insurance services in the country and welcomed the Iranian community of some fields of insurance, including auto insurance, life insurance is still not in a position to expect. Some factors that affect all countries in the development of life insurance, including improving the level of income for many segments of society, people familiar with insurance and its benefits are provided in our country, too. But life insurance still has a long distance with the level of development that the economic and social condition of our society's demands and it is not a new problem (Shakriyan, 1997). According to the data issued by the insurance authorities of the country, unfortunately life insurance both in terms of insurance density and also to share in GDP of the country are at a low level compared to other developed countries and even peers. Being in the low level of received premium or contribution of GDP is not limited to this field, but also in the all insurance industry there is such a weakness. However, this weakness is most striking in this insurance field. Thus, according to this, that insurance policies are considered as an indicator of social welfare and any society that have good growth in its life insurance, is considered to be economically advanced and considering the lack of development, the need to develop this type of insurance is necessary. Life insurance, in today's world is one of the most important economic tools and used for many purposes. Also, life insurance funds are a source of huge investment, so that life insurance companies, are considered as the main source of investment in the world. Over the years of the launch of the industry in Iran, there is not still a considerable progress (Mehrara and Rajabian, 2006). Therefore, it is necessary to change impact of interest rate and inflation on the sale of life insurance to be examined from the perspective of insurance experts. In this regard, the conceptual model is as follows:



**Figure 1 - Conceptual Model Research**

Source: (Kelishami and Majed, 2011, Abbasi and Derakhshide (2012), Malek Motiei (2013), Ebrahimnasab (2013) and Talebnia and Pirveisi (2007)).

Based on the conceptual model the questions of research include:

1. Does the interest rate has an impact on the sale of life insurance?
2. Do changes in inflation rate have an impact on the sale of life insurance?
3. Does the demographic variables have an impact on the sale of life insurance?

Every dimension of economic and demographic factors has the same effect on the sale of life insurance.

### **3. Methodology**

The research method is practical in term of purpose and is descriptive and survey in term of method. The population is all employees of Central Insurance of Iran in 2014, with volumes in the last count 513 people. The sample size is determined 220 people based on Cochran formula that were randomly selected. The methods of data collection are library and survey method and measurement tools was a researcher made questionnaire with Likert scale. In order to assess the validity of the questionnaire, content validity was used and Cronbach's alpha coefficient was used to assess the reliability. For this purpose, a prototype including of 30 questionnaire were pre-tested and then by using the obtained data and statistical software of SPSS, the reliability for component of inflation, interest rate components, components of demographic variables and for the entire questionnaire was gained 0.87, 0.89, 0.84 and 0.86 respectively, which represents the desired level of reliability of the questionnaire. To analyze the data one sample t-test and Friedman were used.

### **4. Findings**

To analyze the data one sample t-test and Friedman were used that the results are as follows:

**The first sub-question:** Does the interest rate has an impact on the sale of life insurance?



**Table 1:** Comparison of the effect of changing interest rates on the sale of life insurance with the hypothetical average 4

Component	Mean	Standard Deviation	t	Degrees of Freedom	P
The impact of the interest rate on the sale of life insurance	3.52	1.07	-6.46	219	0.000

The mean score of the impact of interest rate changes on the sale of life insurance is 3.52. The calculated T is larger than the table t. So the score of the impact of interest rate changes on the sale of life insurance is higher than the average level which is statistically significant. As a result, we can say that the interest rate has an impact on the sale of life insurance.

**The second sub-question:** Do changes in inflation rate have an impact on the sale of life insurance?

**Table 2:** Comparison of the effect of changes in inflation rate on the sale of life insurance with the hypothetical average 4

Component	Mean	Standard Deviation	t	Degrees of Freedom	P
The impact of the changes in inflation rate on the sale of life insurance	3.34	0.982	-.986	219	0.000

The mean score of the impact of interest rate changes on the sale of life insurance is 3.34. The calculated T is larger than the table t. So the score of the impact of inflation rate changes on the sale of life insurance is higher than the average level which is statistically significant. As a result, we can say that the inflation rate has an impact on the sale of life insurance.

**The third sub-question:** Does the demographic variables have an impact on the sale of life insurance?

**Table 3:** Comparison of the effect of demographic variables on the sale of life insurance with the hypothetical average 4

Component	Mean	Standard Deviation	t	Degrees of Freedom	P
The impact of the demographic variables on the sale of life insurance	3.18	1.00	-11.95	219	0.000



The mean score of the impact of interest rate changes on the sale of life insurance is 3.18. The calculated T is larger than the table t. So the score of the impact of the demographic variables on the sale of life insurance is higher than the average level which is statistically significant. As a result, we can say that the demographic variables have an impact on the sale of life insurance.

**The fourth sub-question:** Every dimension of economic and demographic factors has the same effect on the sale of life insurance.

**Table 4:** Specify the ranking of economic and demographic factors on the sale of life insurance

Variables	Average Rating	Priority	df	Chi	sig
Interest Rates	2.02	Second	2	8.61	0.013
Inflation Rate	2.13	First			
Demographic Variables	1.85	Third			

In inferential analysis Friedman test was used to assess the impact of economic factors and demographic ratings on the sale of life insurance. Friedman test showed that respondents ranked in the economic and demographic statements on life insurance sales, respectively, including inflation and interest rates and the demographic variables that test results showed is meaningful.

### 5. Discussion and Conclusion

Research findings indicate that the effect of changing interest rates is higher than average on life insurance sales, which is statistically significant. As a result, we can say that the interest rate has an impact on the sale of life insurance. As you can see, rising and falling interest rates could affect the life insurance product that these changes influence from two completely opposite direction. For example, by reducing the interest rate, policyholders are more welcome to purchase life insurance due to differences with the implicit interest rate applied in life insurance. As a result this increase in sales can increase the efficiency of insurance companies.

The findings also showed that changes in inflation rate has an impact on the sale of life insurance. Persistent inflation in the economy leading to the depreciation of the insurance funds and reduce buyer power. Therefore, long-term life insurance contracts become precarious and unstable. As a result, people turn away from the demand for life insurance and leads them toward safer or shorter investments. The effect of demographic variables on the sale of life insurance also confirmed, in this context, the results of this research is consistent with the findings of Kelishami and Majedi (2011), and quarks and colleagues (2013); and in



the end offered to insurance companies having more fringe benefits such as accident insurance, health insurance, etc. in order to create diversity in the life insurance, each life insurance contracts should compensate the reducing of purchasing power due to possible inflation. To solve this problem, it is recommended that premiums and insurance funds accordingly be adjusted by inflation each year and the process of sale insurance and studies on compensation procedures should be simplified as much as possible. In other words, the existing administrative procedures and bureaucracy, both at the stage of sale or the payment of compensation should be reduced.

The practical recommendations of this study are:

- Creating the major changes in payment methods and life insurance funds and using alternative payment methods to increase public interest in life insurance, so that in this way can help both the well-being of society and families and a source of great savings for the country's underlying economic activity.
- Due to the effect of income on life insurance demand and low per capita income of countries seems that insurance companies should encourage the low-income people to buy their life insurance through the establishment of life insurance with low premiums.
- Accurate and complete information about life insurance and train qualified individuals for selling and promoting life insurance in the country in order to increase the levels of people's awareness of this type of insurance and its benefits.
- Variations in the amounts of capital and premiums as well as provide different benefits for high earners more interest towards life insurance.

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