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ABSTRACT
of the PhD thesis entitled:

LIFE INSURANCE MARKET IN THE CONTEXT OF GLOBAL CRISIS

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SUMMARY

2. KEY-WORDS: life insurance premium, insurance density, insurance penetration, insurance market, unit-linked product, product traditional, investment program, simulation of insured benefit, financial crisis, income, proposal, efficiency, prognosis, regression models, claims paid, technical reserves, insurance company, risk, database, variable, correlational analysis, univariate analysis, factor analysis, economic growth.

3. SUMMARY OF MAIN PARTS OF THE PhD THESIS

The single element considered insubstitutable and which has not a price in our society is "life". Human care for the present, and especially for the future, gave birth to the insurance, its purpose is to ensure protection against uncertain or sure events.

Today, when nothing is imagination, except insurances, every house, every car, every loan, and every new life automatically imply buying an insurance policy, because a modern thinking is based on the natural sense of prevention, on education, on the natural way of thinking in perspective, and even on instincts.

Insurance is a complex notion with multiple meanings, and that is trying to deal with a complicated and varied risks system. With all its complexity, risk bearers were those who had inferred the insurance need, they assumed the protection and they validated in practice this concept. Through the functions achieved, the insurance has become not only a component of the financial market but also a component of the economic market, given the crossing from an autochthonous activity, strictly specialized on insurance, at an active conglomerate, where operates insurance companies, banks and other entities with a varied profile. The insurance field is characterized by a reversing of classical business: insurance companies collect premiums, representing remuneration for services performed, before paying the claims, or before provide the service for which they are paid. The money is invested by the insurer and subjected to various risks, for which responds or not the insurer, depending of the type of insurance product. Also, insurance companies have to deal with specific risks to their activities: undercutting of insurance premiums, miscalculation of the technical reserves, unpredictable changes in the frequency of claims, catastrophic damage, and inadequate reinsurance.

The natural process of implementing the new concepts and rules in this area requires involvement, responsiveness and education of all protagonists' insurance market. All these improvements should settle on a stable legislative framework, in an economic environment favorable to the development of the market and its components, on the equidistance and impartiality of imposing rules on the market, considering that for the best interests of the client, using the stricter rules he will have major benefits in the longer term. The events that have occurred recently on the global insurance and reinsurance market revealed that the financial markets volatility and the increasing dynamics of the business environment have placed a strong imprint on the financial security of insurance companies.

The worldwide insurance evolution proved the opportunity of protection against risks and especially the need to transfer risk from bearers to specialized companies. In developed countries, the life insurance sector is considered very important, and his influence on economic development is obvious, and vice versa, this marks the complex interdependence between the concepts of "welfare" and "insurance". For this reason, the resources of this area reach in some countries, significant values compared to GDP, because there is the belief that the insurance investment, returns in at some point in the economy. In other states, the polarization of population income had the effect of reducing demand for these products although they have diversified.

Nationally, over the past two decades there have been significant changes in the insurance market, highlighted by: the increasing number of market operators, increased need for insurance protection, increased of the insurance and reinsurance companies turnover, increased competition between insurance companies, put in a position to adjust their insurance offer to customers' demands and opportunities; low level of population income and even of other public and private entities; demonopolisation of some companies through mergers and acquisitions of companies, national insurance market is evolving toward a different kind of monopoly, to the multinational companies, becoming largely a captive market. For a country like Romania, located in the middle of a wide, deep and complex transformation process (economic, financial, social and political), establishment of strategic and precise objectives in insurance, to which should be concentrated all efforts and exact knowledge of the steps that must be done to achieve these objectives, are two important directions to follow. The problems faced by life insurance in the economic, financial and social aspect, at each person individually, and in generally, are extremely numerous, varied, consistent and very important.

The individual actions of this study focused on influencing the awareness and implicitly the stimulation of desire as a result of knowledge, but we cannot influence human desire, financial possibilities to purchase a life insurance policy, and from here derives the need and timeliness of this paper. The development of life insurance sector needs that the people understand the utility of life insurance products and want to purchase them, and the paper aims is to make an effort consistent in this direction.

The life insurance sector can only develop if efforts, as results of science, people desire and people income are concentrated together, down to up, from individuals to specialized companies, because the concerns of the insurers to develop and promote high quality products, can be useless if the people does not realize the usefulness of a life insurance, do not want and / or cannot afford them because they do not have enough money. The aim of this study was to make a critical analysis of the life insurance market, under the imprint of global economic crisis, worldwide, European, national and local, we have identified the items that can be used for development of life insurance in Romania.

The first chapter entitled "**Theoretical approaches of insurance**" was made a conceptual analysis of the insurance notion from the perspective of various currents of thought. The insurance is a system of economic relations that occur between risk bearers, individuals and businesses, requesting and accepting the transfer of risk, on the one hand and entities who assumes the risk effects, of course, not for free, and also the relations between insurers and state entities, banks. Insurance is a practical activity that is part of a service provider sector, an activity of sale of invisible, intangible products, on a market that is based on risk and protection, and only in the background, on territorial boundaries. The insurance meaning, being a financial intermediary, lies in his dual character, the offer, on the one hand, as a lever of protection against the risk accepted through the insurance policy, on the other hand, as a saving tool, especially in life insurance but even in non-life insurance. Then, as a financial asset, the insurance reflects the convergence between the nominal and real value of the accumulated amount.

Based on various specialist studies, insurance concept has been studied in legally, economically and financially, because insurances are dependent on the monetary factor. The traditional functions of finances cannot be ignored in the insurance sphere, the distribution and the control function but we can talk about other specific functions: the function of covering the claims; the function of prevention the claims and financial function. The issue of risk and of uncertainty preoccupied over time, the insurance specialists and will preoccupy us too, in this paper, because without risk there is no insurance. The concept of risk has a quasi-general framework approach, and in insurance it is used to mean "hazard against which it ensures" or the meaning of "person or property protected by the insurance." Life insurance companies cannot take any type of risk, only those who meet cumulatively the characteristics of insurable risks. Besides the traditional risks: the risk of death, survival risk, the risk of loss of working capacity, risk of injury, risk of illness, there is also a special category of these events, namely the risk of the modern world, seen as a new threat to individuals.

In this chapter we studied the historical landmarks of insurance, origins and developments, worldwide as well as in Romania. After studying the specialized insurance papers, emerges the idea that they cannot be identified accurately in space and time; however, the first written document was discovered in Genoa around 1424. Regarding insurance in Romania, they have existed since the seventeenth and eighteenth centuries, both within guilds and village communities, through various forms of mutual aid. The first important step in the development of insurance in Romania has been the emergence of the first insurance company in 1844, nationalization of insurance companies in 1948 was the second step and the third step was the creating ADAS, entirely with Romanian capital, specialized in insurance and reinsurance transactions. Democracy in our country after 1989, led to major changes in the insurance and reinsurance field, through insurance company reorganization, the improvement of tools and techniques of insurance and changing the legislative framework in the insurance field.

At the end of the first chapter it is treated the socio-economic insurance need and their influence on economic growth. The feeling of insecurity underlies the desire for protection from potential losses and unwanted events, and that is a good motivation for buying insurance. Gives people security, some consolation, a support or an alternative when they were confronted with special events in their existence. The economic growth can be influenced by the insurance industry, but this assumption is not generally valid. This idea emerges from the chronological analysis that we made, comparing the results obtained by other researchers who have studied this issue, and have used various research methods: regression models, statistical correlations, tests of causality, cointegration tests, statistical analysis, and sectional cross. In Romania there is no correlation between insurance market, measured by insurance penetration and density and degree of economic growth as measured by GDP per capita.

The second chapter "**Comparative analysis of life insurance products sold on the insurance marke**t" describes the types of life insurance, the characteristics of these products from the most representative and most common: survival insurance, death insurance, mixed life insurance, followed by the most recently type of life insurance product, unit-linked insurance, with investment component. Unit-linked insurances are considered to be modern in the insurance worldwide, with great acclaim in the United States and into Europe, where investment are associated with insurance protection. These products are complex, and combine protection with investment component, but also have great flexibility regarding: the choice of insurance premiums, choosing the sum insured, the choice of investment, choosing the part of the investment and the risk share. The portfolio managing is carried out by professionals through investment programs created and managed by the insurer, by experts in investment, because they are the ones who best understand the risks and benefits of an investment, but this job is difficult because the holder of insurance is entitled to make changes.

Regarding traditional life insurance, the investment risk belongs to the insurer and contractual liability is very high. In these circumstances, the insurer will be obliged to invest money prudently, usually in bank deposits and government bonds, although not lead to achieving great benefits, there are safe investments. Regarding unit-linked product, the situation is different because the investment risk belongs to the insured, and this is the fundamental difference between a unit-linked product and traditional insurance product. The insurances have common elements, they involve a number of factors, including individuals and legal entities, are established some relationships or legal relationships under the law.

In this chapter we made a comparative analysis, using Eviews 8.00 between traditional insurance products and unit- linked products, depending on the premium paid by the policyholder, single or annual premium. It reviewed the situation when the insured survives till the end of the insurance contract and then he receives the account value, or the sum insured, depending on the type of insurance product. We presented the contract evolutions through three different investment programmes. There were considered three different risk investment programs 2, 4, 6, on a scale from 1-6:

- 100% premium investment in shares, risk very high 6;
- 50% premium investment in bonds, 50% in shares, risk 4;
- 100% premium investment in bonds, risk 2.

Regarding the unit-linked product, the equation of return value, considering the invested premium and the insured sum, regarding traditional product considering the amount for survival component are determined using regression models. Classic linear regression model is one of the most commonly used statistical techniques in economic analysis.

The easiest way to specify a linear regression equation is to specify the list of variables that need to be used in the equation. Having specified the equation further the estimation method must be chosen. In the classic regression model estimation is performed using least squares. Analysis was performed using systems with one input variable and one output variable (SISO), the dependence between the two variables is direct one, linear, almost in all cases analyzed.

The focus of this chapter is to determine the best insurance product, the most financially advantageous for the insured. Due to developments analyzed products, the product with the best financial results, at the end of the contract, if the insured survives till the end of the contract, is the unit -linked product, unique premium, and using the investitional program, investing 100% shares. The risk assumes by the insured to obtain these results, is the biggest, and also must have the money to pay the entire insurance premium at the beginning of the contract. We have shown that buying a traditional product is the best for insured, located somewhere between UL single-premium products and UL annual-premium products, in terms of the financial result achieved by the insured. There are three arguments to support this: the insurer assumes the risk for investments, the insured pays an annual premium, sum assured at the end of the contract is substantial and similar to the results obtained by buying a product UL with annual premium and using a risky investment program, 6 on the scale.

At the end of the second chapter we analyzed the efficiency of insurance products, from the insured's and the insurer's point of view, using various indicators of evaluation.

In Chapter III " **The financial crisis impact on life insurance market** " we treated the concept and general characterization of the insurance market by focusing on the fact that we cannot talk about a single insurance market, there are several markets, each of them being different through the preponderance of certain types of transactions, through existence of certain insurance companies, customs, operational mode, trading rules.

The actors of life insurance market are grouped into two main categories: insurers, they are issuers of insurance policies, after studying the market, "producing" products and services according to the identified needs, and insureds, the underwriters; they can be both individuals and legal entities (companies). Life insurance product can be defined as an intangible object, sustainable, circumscribing physical, mental and symbolic attributes that make it necessary for the insured, to protect his family income in the event of the insured risk, as well as creating opportunities for a financial accumulation, necessary to cover the needs that are not foreseeable in the future. There were highlighted the main features of insurance products: intangibility durability, flexibility, standardization, materialization / dematerialization, complexity and customization. Each insurance company promotes on the market more products, with differences more or less relevant, so that it can optimally satisfy customer needs.

Particular attention will be paid to the particularities of the business of selling life insurance. The process of selling the insurance products is conducted differently than in other types of selling products. Unlike other products, insurance is something impalpable, abstract, non-familial for the client, insurers sell an intangible product and not a physical one. So, in order to sell such a service is needed to have the customer belief in this product. How insurance, can help, must be explained through a theoretical mechanism of functioning and the benefits gained are insecure , the "consumption" of the product cannot be demonstrated, the sale of insurance is based on a relationship of trust between the insurer and the customer, so before selling the insurer must have the customer confidence .The process of selling a life insurance starts with prospecting the market, which is followed by contacting potential customers, for setting a meeting to identify their needs, and later, based on the information collected must be developed solutions and be recommended product insurance matched to needs in of the customer. Also we identified the characteristics of "ideal model of a sales agent".

Analysis of insurance market continues with the imbalances presentation caused by the global crisis (economic, moral, intellectual, managerial, political, and psychological) reflected through various indicators. Signs of global crisis occurred at end of 2007, but became an important phenomenon in 2008, in the US, where it has spread, then quickly, across the globe. 2009 is the year of maximum intensity and extension of the financial and economic crisis worldwide. Synthetically, we presented the global and national consequences of economic crisis and its effects on the insurance market worldwide and in Romania.

The organization and functioning of international insurance market has been analyzed through the sizing indicators, analyzed period was divided into three decades: pre-crisis, during the financial crisis and post-crisis. In the analysis of the insurance market in the major regions of the world: America, Europe, Asia, Africa and Oceania were used following indicators: volume of gross premiums, insurance density and insurance penetration.

The analysis was made over the whole insurance business (life and non-life) worldwide by determining the volume of premiums and their share in total insurance market, in the major regions of the world in three periods analyzed, creating an overview on this field. Then study was deepened by the analysis of the same indicators for life insurance activity, highlighting their importance in the insurance business. Worldwide insurance market concentration has been demonstrated by compiling the top ten countries that dictate the course of insurance, and finding the place our country in this context.

The global insurance market, before the financial crisis is characterized by dynamism, with a strong concentration, worldwide market being dominance by European markets, that are continuously rising, is also characterized the by the decline of America and the Asian markets. The effects of the financial crisis were visible and strong, but Europe is still the largest market representing 39-40% in global market. The main idea that emerges from the analysis made, studying insurance activity under the influence of the financial crisis, is that the American market was the most affected by the financial crisis, being surpassed by Asian market. From the analysis in the post-crisis can be seen that the global market is on the road to recovery after the financial crisis, it is noted significant growth market in Asia, which became the biggest worldwide insurance market in life insurance in 2011 and 2012. American market begins to recover and is on an upward trend after the crisis, European market is in a continuing decline both during the crisis and post crisis period, and only in the last two years of analysis this market is recording insignificant increase.

The prognosis of indicators sizing international life insurance market , it is another strong point of the study, using models autoregressive and sliding average. The evolution of the volume of gross premiums, insurance density and insurance penetration was studied over a period of 15 years. The models that we used for this prognosis were monovariabile models, specific for economic systems, with one input variable and one variable output (SISO). The prognosis of indicators show that there will be not major fluctuations on the worldwide life insurance market, that it sees not a spectacular future, even the indicators will record a slight decline in the coming years.

In this chapter has been analyzed the European insurance market for the period preceding the crisis, under the influence of the crisis and post-crisis. Other indicators were used for dimensioning: the number of insurance companies, paid claims, and the structure of insurer’s portfolios. The idea of creating a top ten countries was maintained and also the idea of determining the place occupied by Romania in the framework analyzed. European insurance market recorded rapid change, especially as a result of plans and strategies developed by the European Union, which aims to extend the insurance transactions. The financial crisis has seriously affected EU countries since 2007, the most affected being the UK market.

Romanian insurance market was analyzed through the equity of insurance companies, the contribution of foreign investors, technical reserves, by determining the share of gross written premiums on life insurance in the total premiums collected of the ten most important companies operating on this market. Romanian insurance market has experienced the effects of the crisis, not very different from other countries, but of course, weighted by his size: reduced sales, canceled insurance policies, insurer's reorientation towards alternative solutions on new products, new facilities for the policies already sold, new distribution channels, and another communication ways with the customers.

At the end of chapter III we expressed our views on future trends of insurance market, presenting the strengths of the insurance market that will help to the development of this activity in the coming years and, also the weaknesses that will reduce the development of this sector.

In chapter IV, entitled " **The analyze of life insurance demand on Jiu Valley insurance market** " was performed the analysis of proposal in towns of Jiu Valley depression: Petrosani, Vulcan, Petrila, Aninoasa, Lupeni, Uricani. We justified the choice that we made regarding studding the insurance activity, considering this atypical area of mining. Data were collected directly from subjects by applying a questionnaire on a sample of 450 subjects using sampling by stratification. In our the analysis, we used the IBM SPSS Statistics 20, we created a database using this program, made up of several variables: types of insurance known by the interviewed (death, mixed life insurance, unit - linked insurance, health), the need for these types of insurance, the existence of insurance policies already concluded, the year that the policies was concluded, the intention to ensure, the probably year when the subjects intends to buy a life insurance, the reasons for not buying a life insurance, the insurance company preferred by the subjects, the amount that subjects would allocate monthly for insurance premium payment, the subjects income, the number of family members, age, sex, city, and level of education. The database has been verified regarding outlier, normality distributions by processes Q-Q Plot graphs.

The study begins with univariate analysis followed by analysis of dichotomous responses on the number and percentage that insurance are known depending by a nominal variable: sex, city. Also in analyzing the responses dichotomous are studied the opinions regarding the insurance company preferred by the subjects for buying an insurance policy life, depending on the amount allocated for premium payment and also depending by their level of education. The subject's intention to buy an insurance product of and type of product desired are studied by age and monthly income of subjects. The next step in our study is correlational analysis of the variables considered. Most of the variables are nominal or ordinal on a Likert scale, so it could be calculated Spearman correlation for any two ordinal variables and ρ - Spearman correlation coefficient. Depending on significant correlations ($p < 0.001$) will be determined the factors that influence the life insurance demand in the Jiu Valley, after Cohen's criteria. The study was deepened by applying nonparametric tests, binomial test and $\chi 2$ test adjustment. Binomial test allows comparison of proportions seen with a specified value, i.e. whether the test is based on a representative number of dichotomous variables such as sex, the intention to buy an insurance, education level. X2 test was used to discovery the preferences, the opinions for a particular insurance product, or a preferred insurance company. Another objective of our study is to determine the "reasons for not buying a life insurance" like disinterest, lack of information on these products, their high price, are some obstacles in the process of purchasing a life insurance policy.

The most important association is the monthly subject's income with other variables. Correlated with any of them is a significant correlation, the indicator Cramer after Cohen's criteria indicate this. The effect obtained by this combination is unlikely to have occurred by accident the effect seems to be quite important from a practical standpoint, moreover, the effect is statistically significant. In fact, by hypothesis testing does not check if the effect exists or not, but rather the effects have or not have a value that worth considering it.

Chapter IV concludes with exploratory factorial analysis of the most important variables considered in this study. Correlation matrix is composed by ten essential variables, with value 1 on the main diagonal. Factorial analysis is a technique for synthesizing data used, to reduce a large number of variables to a small set of factors that express essential information contained by the observable variables. The factorial model chosen is valid and stable, the conditions were tested, and the results are satisfactory. Test KMO (Kaiser-Meyer-Olkin) shows the same thing, the index KMO measures the sample of items adequacy to the factorial model, there was calculated the determinant of correlation matrix , and its value must be more than 0.00001. The extraction method used is PCA (Principal Component Analysis) which seeks to reduce the number of variables to a small number of factors. To determine the number of factors considered was applied to Kaiser's criterion, being detained of all factors having eigenvalues (eigenvalue) over 1.

The factorial model grouped the variables by interdependence between them, highlighting the factors influencing life insurance demand:

- subjects income is the main factor influencing life insurance demand in Jiu Valley, age is another important factor which influences the proposal;

- the number of family members in literature affects the insurance demand, in our case is not verified this hypothesis;

- the education level should positively affect the life insurance demand because a higher level of education is associated with a greater desire to protect the family members and keeping the standard of their life, but even with this hypothesis is not verified in our study, the number of those with higher education is lower than those with secondary education taking into account the intention to buy a life insurance;

- it is expected that the areas with a high level of financial development to generate big sales of life insurance products, in Jiu Valley the level of poverty is quite high so the insurance activity in this area is not an encouraging one.

At the end of the paper for not being just a theoretical study, we made a set of proposals and suggestions:

- - granting certain fiscal facilities to companies operating in this sector and to customers interested in such a financial instrument, could increase the number of insureds, even now would be a fiscal relaxation in life insurance activity, that will translate into a decrease of the revenues to the government budget, the effects that will occur in the medium and long term, after this "attitude", will fully recover the initial "losses" to the government budget revenue and this would be a concrete proof that the state supports the development of this sector;
- organizing extensive information campaigns to population about the risks to which every individual is exposed daily to the physical and financial distress caused by the occurrence of unwanted events, awareness of the need for life insurance as an optimal solution to protect against personal risks. Financially supported by the resources of the government budget, without making any reference to an insurer or another, or to a specific product, in time, such a move will be a good one, people will analyze the opportunity of purchasing the insurance life, becoming customers of companies offering such products;
- the supervising highly accurate, professional, and thorough of all insurance companies, reinsurance companies and brokers operating on the life insurance market, is another important aspect and the authorities must give a big attention to this problem;
- the development of life insurance products to cover the basic needs of a client and at the same time be sufficiently simple and transparent as to be understood by customers;
- creation of a basis of customers who have defrauded life insurance companies;

when the client deciding to purchase a life insurance policy, must see the financial insurer safety, experience and reputation which won on the market over time, how they honored the obligations to the customers, the product proposed by the consultant is or is not an optimal product, covering personal financial needs, the premium value, the professionalism and morality of life insurance consultant help the client to make a good decision;

Suggestions for insurers in the crisis period:

- permanently maintain solvency legal limits;
- avoiding risk-taking above the permissible limits and maintain sufficient liquidity;
- maintaining existing client portfolio;
- increasing communication with customers;
- product development by introducing big differences between them;
- protecting the market position by exploring niche areas for life insurance;
- standardization of professional persons selling insurance;
- entering new markets and selling insurance products at prices much lower than in periods of economic growth;
- greater attention to risk management;
- return to financial stability and regain consumer confidence remains the most important objectives.