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Risk management in the Algerian insurance companies An Empirical Study

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ABSTRACT

The objective of this study is to identify the reality of risk management in the Algerian insurance companies. The results of survey showed that Algerian insurance companies still suffer from several difficulties as the risk management , the use of traditional methods in identifying , measuring risks, and even in the selection of the best way to face unexpected risks.).

Keywords:-Risk management, Insurance, Algerian insurance companies, Risk, Traditional methods, Scientific methods

1. INTRODUCTION

Financial institutions play an important and vital role in consolidating the bonds of stability and economic progress in modern societies, without exception. Where the activity to collect savings from large segments of the community members to be reinvested in a beneficial manner interest on society as a whole. Insurance companies is one of financial enterprises that aims to support the economic and social stability in the country by investing the savings of individuals insured, in exchange for these individuals against risks and losses faced.

However, these companies are facing the risk of becoming required to fulfill the obligations exceed the financial capacity and here highlights the role of risk management.

Algeria, among developing countries suffered after the independence of many of the economic problems that stood in front of progress in the field of development, and perhaps the most important of these problems, low growth and high unemployment rates, which paid to adopt reforms in many sectors including the insurance sector, through the issuance Order No. 95 / 07 dated 01/25/1995 amended and supplemented by Law No. 6/4 dated 20/02/2006, which included the abolition of the state monopoly of the insurance sector..

2. OBJECTIVES OF THE STUDY

The objective of this paper is to recognize reality of risk management in the Algerian insurance companies through a sample study of these companies have been selected according to the average market part for the period between 1995 and 2013, in order to test the hypothesis that one of the difficulties faced by the majority of Algerian insurance companies in the field of risk management is the problem of determining risks and how to adress them as a result of reliance on traditional methods in identifying and measuring risks and choosing the appropriate policy to face them.

3. Risk management in insurance companies

a-History of risk management

The study of risk management started after World War II. Risk management has long been associated with the use of market insurance to protect individuals and companies from various losses associated with accidents such as : natural disasters. Other forms of risk management, alternative to markent insurance , surfaced during the 1950s when market insurance was perceived as very costly and incomplete for protection against pure risk.The use of derivatives as risk management tools arose during the 1970s, and expanded rapidly during the 1980s, as companies intensified their financial risk management. International risk regulation began in the 1990s , and financial firms developed internal risk management models and capital calculation formulas to hedge against unanticipated risks and reduce regulatory capital. In the same time, governance of risk management became essential,integrated risk management was introduced and the first corporate risk officer positions were created(George Dionne ,2013).

We can summarize the history of risk management in the following table (George Dionne ,2013):

TABLE 1. MILESTONES IN THE HISTORY OF RISK MANAGEMENT

1730	First futures contracts on the price of rice in Japan
1864	First futures contracts on agricultural products at the Chicago Board of Trade
1900	Louis Bachelier's thesis "Théorie de la Spéculation"; Brownian motion
1932	First issue of the *Journal of Risk and Insurance*
1946	First issue of the *Journal of Finance*
1952	Publication of Markowitz's article "Portfolio Selection"
1961-1966	Treynor, Sharpe, Lintner and Mossin develop the CAPM
1963	Arrow introduces optimal insurance, moral hazard, and adverse selection
1972	Futures contracts on currencies at the Chicago Mercantile Exchange
1973	Option valuation formulas by Black and Scholes and Merton
1974	Merton's default risk model
1977	Interest rate models by Vasicek and Cox, Ingersoll and Ross (1985)
1980-1990	Exotic options, swaptions and stock derivatives
1979-1982	First OTC contracts in the form of swaps: currency and interest rate swaps.
1985	Creation of the Swap Dealers Association, which established the OTC exchange standards
1987	First risk management department in a bank (Merrill Lynch)
1988	Basel I
Late 1980s	Value at risk (VaR) and calculation of optimal capital
1992	Article by Heath, Jarrow and Morton on the forward rate curve
1992	Integrated Risk Management
1992	RiskMetrics
1994-1995	First bankruptcies associated with misuse (or speculation) of derivatives: Procter and Gamble (manufacturer, rates derivatives, 1994), Orange County (management funds, derivatives on financial securities, 1994) and Barings (futures, 1995)
1997	CreditMetrics
1997-1998	Asian and Russian crisis and LTCM collapse
2001	Enron bankruptcy
2002	New governance rules by Sarbanes-Oxley and NYSE
2004	Basel II
2007	Beginning of the financial crisis
2009	Solvency II (not yet implemented in March 2013)
2010	Basel III

b- Definition and objectives of risk management in insurance companies:

Insurance companies make money by managing various types of risk for individuals, municipalities and corporate entities- the risk of dying too young, experiencing a loss due to man –made or natural disasters ,outliving your assets, losing income capacity through business interruption , and so on.Where there is risk, there is uncertainty , and where there is uncertainty , there is exposure volatility (Criteria , 2013).

Risk management is the process by which companies systematically identify , measure and manage the various types of risk inherent within their operations(S. Travis Pritchett, 1996).The fundamental objectives of risk management are :

- To manage the organization's exposure to potential earnings and capital volatility.
- To maximize value to the organization's various stakeholders.

However , it is important to note that the objective of risk management is not to eliminite risk and volatility , but to understand it and manage it. (Criteria , 2013).

c-The role of risk management in insurance companies :

Risk management plays an important role in insurance companies by :

- The composition and nature of the company's portfolio in terms of the different types of insurance and its constituent and in terms of size and homogeneity of coverage in each type , and thus interfere with the risk management to determine the direct underwriting policy in the company (Jean Claude Serres, 2006).
- Divisions of acceptable risks on technical grouds in full awerness of the seriousness of this process , which live up to the level of financial decision that results in determining the obligations of the insurer and reinsurer (The Chartered Insurance Institute, 2014).
- Determine the percentage of the insured retention of each type of insurance , and each acceptable risk.
- Review of estimations prepared by technical reserves department and ensure their adequacy to cover future obligations of company, using the scientific tools and experience in the analysis (The Chartered Insurance Institute, 2014).
- Help reinsurance department to evaluate reinsurance agreement.
- Propose new insurance coverage that can be submitted to the insurance company according to the needs of the market and the studies that have been prepared for the risks to the insured (The Jakson Bale and others, 2014).

d- Risk management steps in insurance companies

Risk management process includes many steps : risks identification , risk assessment, selection of appropriate means to counter the threat , and finally evaluation and review of risk management policy used (White Paper, 2008/2009).
The identification of the risks in insurance compagnies is the first and the most important step , without the detection of risks, Incident that may happen as a surprise to the managers in the company. And check loss without prior planning harms may cause the company's bankruptcy.
The main method in identification risks is the analytical method . (Département fédéral des finances DFF, 2004).
Risk identification according to this method is a comprehensive and detailed inventory of risks. It runs from bottom to the top of the hierarchy, in other words, it is up to administrative units. The risks identified are listed in (⇒) Risk catalogs department of the company (Département fédéral des finances DFF, 2004).
Risks, classified according to their causes and their consequences, are presented so homogeneous. The criteria for the classification of the causes are :

- Financial and Economic Risks.
- Legal Risk and Compliance.
- Physical hazards, technical and basic.
- Risks to people and organization.
- scientific and technological hazards.
- Social and Political Risks.

The criteria for the classification consequences are divided into two categories (Département fédéral des finances DFF, 2004):

- Financial impact: bodily injury, heritage values, assumptions for damages,....
- Non-financial consequences: disruption of the functioning of the administration in company, negative impact on the company reputation. For the identification of risks, administrative units use instruments currents as document analysis, interviews, inspections, questionnaires, technical scenario and workshops (Département fédéral des finances DFF, 2004).

The risks identified are listed in a risk catalog, presented in the form of tables and containing at least the following information for each listed risk: administrative unit assuming the risk, risk categories,description of risk, critical but realistic scenarios, control measures and current control, description of financial consequences and nonfinancial considering security measures and existing control (White Paper , 2008/200).
The risk catalog presents the situation in risk comprehensible. It forms the basis for risk assessment.
Then comes the second step of measuring the risks that have been identified using one of the methods to measure risk, such as: the method of potential material loss, and calculate probabilities. (The Jakson Bale and others, 2014).
The results of the assessment are used to develop a list of risks, ordered according to their importance.
In other words, these risks may be very important leads to the bankruptcy of the company, may be important so that this company should get loans to cover the resulting losses, or these risks are not significant.
After that comes the selection of appropriate means to counter these threats stage, through reached at the previous steps of information, where the use of the scientific methods in hazard identification and measurement will help to a great extent in choosing the best policy and least expensive to face every risk, whether prevention or retain risk or transfer of it(Francisco Pérez , Hayong Yun, 2013).
After selecting the best policy to deal with the threat, the implementation of the resolution according to the program specified time(Jakson Bale and others, 2014).
Finally comes the assessment and review step, where the director of risk management must evaluate the risk management program and review it constantly, because the risks are changing, and the actual implementation of the policy of the face of danger may appear flaws and mistakes can be avoided in the future (Jean Desquilbet, 2014).

4. Insurance sector in Algeria

The insurance sector in Algeria has witnessed two important terms are: the colonial period and the independence period(Boualem Tafiani ,1988). The later period can be divided in two major phases:
Pre-reform phase (including the pre-state monopoly, as well as the monopoly of the state), and the phase of reforms that characterized the abolition of the state monopoly of the insurance sector through the issuance Order No. 95-07 dated 25/01/1995, which spent the abolition of Article No. 278 among the relevant laws monopoly, opening the field of national and foreign private companies to exercise all insurance operations in Algeria, and amended by Law No. 06-04, dated 20/02/2006.(Revue Algérienne des Assurance).
Now , Algerian insurance market includes 18 companies, six companies operate before the issuance of the order 95-07 dated 01/25/1995, namely: Algerian Insurance Company (SAA), the Algerian company of Insurance and Reinsurance (CAAR), the Algerian Insurance Company transportation (CAAT), the Central reinsurance Corporation (CCR), National Fund for Cooperation on Agriculture (CNMA), Algerian and collaborative to ensure the education and culture

workers (MAATEC). The rest of the companies have been established at the issuance Order No. 95-07, including: Algerian company to ensure exports (CAGEX), the Algerian company to ensure that the mortgage loan (SGCI), the Algerian company to ensure the investment loan (AGCI), Trust Algeria Company (Trust Algeria), international Company for insurance and Reinsurance (CIAR), Algerian Company insurance (2A), securing fuel company (CASH), safety Company (Assurance SALAMA), the General Company for insurance Mediterranean (GAM Assurance), and the company Alliance insurance (ALLIANCE assurances)(Rapport sur la situation générale de secteur des assurances en Algérie , 2014).
There are various Algerian insurance sector products including: auto insurance, insurance of various hazards, transport insurance, insurance people.
The most important characteristic of the Algerian insurance sector during the period from 1995 to 2013 are (Rapports sur l'activité des assurances en Algérie, 1995-2013):

- An increase in the production of the insurance sector from 13 224 million dinars in 1995 to 54 159 million dinars in 2013, an increase of 3%.
- The dominance of three products represented in: Branch auto insurance by an average of 41.60%, a branch of the various insurance risks by an average of 35.60%, and a branch of Transport Insurance by an average of 12.11%, while the other branches remains less sophisticated private insurance subsidiary internal loans and export-oriented.
- The dominance of the public insurance companies on the Algerian insurance market by an average of 73.2%, and ranked first is the company's Algerian Insurance (SAA) market average of the share of 27.7%, followed by the Algerian company of Insurance and Reinsurance (CAAR) market share with an average of 18.1 %, the company's Algerian Insurance transport (CAAT) average of 18%, followed by the insurance company with a market share of hydrocarbons (CASH) market share and an average of 8.7%. In addition to mutual societies which are estimated market share of moderation to 8.2%. While the private insurance companies are estimated market share of moderation to 18.6%, and come in the forefront of Trust Algeria Insurance and Reinsurance (Trust Algeria) market average of part of 4.8%, International Insurance and Reinsurance (CIAR) market average share of 4.2%, followed by the Algerian Insurance Company (2 A) and the General Insurance Company of the Mediterranean (GAM assurance) market share and an average of 3.7% and 3.6% respectively.

5. EMPIRICAL STUDY

a- methodology of the study

We chose the quantitative method; in our study it is the only method capable of identifying the risk management reality in insurance companies, our sample consists of six insurance companies, which have been selected according to the average market share for the period between 1995 and 2013, as these companies cover a total of 80.8% of the Algerian insurance market.
Were selected randomly sample included so that employees who work in these companies, and the estimated size of the sample of 200 interrogator.
we recuperated 150 questionnaires .The questionnaire was according to the face to face method.

b- The components of the questionnaire:

Rubric 01 : Metadata interrogator.
Rubric 02: Informations about insurance company (company experience, company revenues, and insurance procedures in the company ...).
Rubric 03 : Reality of risk management in insurance company(the existence of risk management department, objectives of this department, methods used in identifying risks, methods used to measure risks, type of risks facing the company, methods used in selecting the best policy to face the risk,....).

6. THE RESULTS OF THE SURVEY

a- Principal hypothesis

Our questionnaire was designed to test the following main hypothesis : one of the difficulties faced by the majority of Algerian insurance companies in the field of risk management is the problem of determining risks and how to adress them as a result of reliance on traditional methods in identifying , measuring risks and choosing the appropriate policy to face them.

b- The results show that

The results obtained from the questionnaire to substantiate the hypothesis that shows that the difficulties faced by the majority of the Algerian insurance companies as a result of reliance on traditional methods in detecting threats and measured and selection of appropriate policy to address them.

c- Data analysis

The study concluded group of the results can be displayed as follows:

- Concerning the experience of companies, we found that all the staff of insurance companies (100%) assert that these companies have long experience in the field of insurance exceeds seven years.
- Concerning companies revenues, we found that half of staff of insurance companies believe that the revenues of these companies are accepted at the rate of 52%, and some believe that this is a good revenues at the rate of 37%, while the rest see that company's income is weak.
- Concerning insurance procedures, we found that the majority of staff believe that the procedures are acceptable at the rate of 65.8%, as some staff believe that these procedures are simple and increased by 27.4%.
- Concerning the existence of risk management departments in insurance companies; staff confirms their presence (93.2%), then the objectives of these departments are mainly in reducing the costs of addressing the risks (57.5%) and maintain the company's survival class (28, 8%) .
- Concerning difficulties, the majority of employees of insurance companies, equivalent to 67.1% face many difficulties by 32.9% during the conduct of insurance, which consist principally of: organizational difficulties (35.6%), primarily, legal difficulties (30.1%), second place and difficulties in information collect (23.3%), third place. In addition to that insurance companies do not provide financial coverage for its customers, in some cases due to the lack of a good appreciation of the risks insured, and despite the fact that these companies include customized risk management departments, but these sections mainly rely on traditional methods (experience) in the identification and measurement of risks increased by 72.6%, as well as selecting the appropriate policy to address these risks by 79.5%.
- Concerning type of risks facing the insurance companies, we found that most of these companies are exposed to normal risks by 61.6%, and significant risks may lead them to borrow at the rate of 30.1%, and serious risks that may lead to bankruptcy at the rate of 8.2%.
- Concerning methods used in identifying risks, we found that these companies use traditional methods (experience) by 72.6%, compared to 27.4% of modern scientific methods of mainly in the analytical method.
- Concerning methods used in measuring risks, we found that these companies use traditional methods(experience) by 67.1%, compared to 27.4% of modern scientific methods mainly in the method of potential material loss by 17.4% and calculate probabilities of 10%.
- Concerning methods used in selection of best policy to face the risk, we found that these companies use traditional methods(experience) by 79.5%, compared to 20.5% of modern scientific methods mainly in the lowest cost method of 10% and a matrix of risk management by 10.5%.

7. CONCLUSION

Despite the reforms , the Algerian insurance sector is still suffering of several difficulties , including the length of compensation in some cases, non-payment of compensation payable to the owners at other times, due to adoption of the companies in this sector to traditional methods (experience) to detect and measure the risks as well as the selection of appropriate means to counter these threats ,while it should have to rely on scientific modern methods.
At the conclusion of our study, we made a number of proposals, including :

- The development of insurance services offered by insurance companies of Algeria improved to the level of services offered by international insurance companies through:
- To care of the compensation as a sensitive element in the relationship between the insurance company and their customers by facilitating procedures for obtaining it, as well as speed in the payment of compensation.
- Rehabilitation and training of the staff of a Algerian insurance companies, specially officials including the discovery and evaluation of the risks and choose the appropriate way to face them.

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