

Ecole des Hautes Etudes Commerciales EHEC ALGER

**Thesis Submitted in Fulfillment of the Requirements for Master's
Degree in commercial Sciences**

Major: International Affairs

Topic:

**The strategy of reducing costs through the creation of a captive
reinsurance company**

Case study: SONATRACH Ré

Submitted by:

Abdelkrim BENKHELIFA

Chaima KASSAH LAOUAR

Supervised by:

Doctor, GUECHTOLI Widad

MCA HEC Alger

6th Promotion

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Abstract:

Considered as one of many Risk Management tools, this reinsurance captive has allowed SONATRACH to position itself as one of the largest oil companies of its size with innovation in this field.

By acquiring its own captive, the national company wanted to improve its risk management, reduce the level of charges related to reinsurance, be more specific in the choice of reinsurers and ensure better defense of the interests of the group.

It remains clear that the captive is called to play a more important role in the coming years to assert himself more and demonstrate his contribution to lowering the cost of insurance for the SONATRACH group than in the role of assistance to the group in matters risk management and insurance solutions.

Finally, it is important to note that, in addition to the financial gains that this company has been able to bring to the Group, the capital acquired by its staff since its creation remains invaluable.

This captive should have with the support of his management beautiful exploits to achieve and a multitude of objectives to achieve. Its financial alliance will enable it to cover a maximum of risks and transfer the minimum capital. By offering innovative services, in keeping with the logic of progress, it supports sustainable development.

Résumé:

Considéré comme l'un des nombreux outils de gestion des risques, cette société captive de réassurance a permis à SONATRACH de se positionner comme l'une des plus grandes sociétés pétrolières de sa taille avec des innovations dans ce domaine.

En acquérant sa propre société captive, la société nationale souhaitait améliorer sa gestion des risques, réduire le niveau des charges liées à la réassurance, être plus précise dans le choix des réassureurs et assurer une meilleure défense des intérêts du groupe.

Il reste évident que le captif est appelé à jouer un rôle plus important dans les années à venir pour s'affirmer davantage et démontrer sa contribution à la réduction du coût de l'assurance du groupe SONATRACH plutôt que son rôle d'assistance au groupe en matière de gestion des risques et de gestion des risques. solutions d'assurance.

Enfin, il est important de noter que, outre les gains financiers que cette société a pu rapporter au Groupe, le capital acquis par ses collaborateurs depuis sa création reste inestimable.

Ce captif devrait avoir avec le soutien de sa direction de beaux exploits à atteindre et une multitude d'objectifs à atteindre. Son alliance financière lui permettra de couvrir un maximum de risques et de transférer le capital minimum. En proposant des services innovants, dans la logique du progrès, elle soutient le développement durable.

ملخص

نظرًا لكونه أحد أدوات إدارة المخاطر العديدة، فقد سمح أسر إعادة التأمين هذا لشركة سوناتراك بوضع نفسها كواحدة من أكبر شركات النفط من حيث حجمها مع الابتكار في هذا المجال.

من خلال الاستحواد على أسيرها، أرادت الشركة الوطنية تحسين إدارة المخاطر لديها، وخفض مستوى الرسوم المتعلقة بإعادة التأمين، وتكون أكثر تحديدًا في اختيار معيدي التأمين وضمان الدفاع بشكل أفضل عن مصالح المجموعة.

يبقى من الواضح أن الأسير مدعو للعب دور أكثر أهمية في السنوات المقبلة لتأكيد نفسه وإظهار مساهمته في خفض تكلفة التأمين لمجموعة سوناتراك عن دورها في مساعدة المجموعة في إدارة المخاطر والمخاطر. حلول التأمين.

أخيرًا، من المهم الإشارة إلى أنه بالإضافة إلى المكاسب المالية التي تمكنت هذه الشركة من تحقيقها للمجموعة، يظل رأس المال الذي حصل عليه موظفوها منذ إنشائها لا يقدر بثمن.

يجب أن يكون هذا الأسير بدعم من إدارته يستغل جميلة لتحقيق والعديد من الأهداف لتحقيقه. سيمكنها تحالفها المالي من تغطية الحد الأقصى للمخاطر ونقل الحد الأدنى لرأس المال. من خلال تقديم خدمات مبتكرة، تمشيا مع منطق التقدم، فهي تدعم التنمية المستدامة.

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Liste of abbreviations :

Abbreviation	Signification
AIM	Aon Insurance Managers
CAAR	Compagnie Algérienne d'Assurance et Réassurance
CAAT	Companies Algerians des Assurances
CAGEX	Caisse Algérienne de Garantie des Exportations
CASH	Compagnie d'Assurance des Hydrocarbures
CAT NAT	Catastrophe Naturelle
CCR	Compagnie Centrale de Réassurance
CIAR	Compagnie Internationale d'Assurance et Réassurance
CMC	Conseil de la Monnaie et du Crédit
CNA	Conseil National des Assurances
CNDG	Centre National de Dispatching Gaz
CNMA	Caisse National de Mutualité Agricole
COC	Cost and Control (control de puits)
CSTH	Centre de Stockage et de Transfert des Huiles
GNL	Gaz Naturel Liquéfié
GPL	Gaz Pétrole Liquéfié
LCL	Limite d'Indemnisation Contractuelle
LSF	Loi de Sécurité Financière
NAFTAL	Entreprise Nationale de Distribution et de Commercialisation des Produits Pétroliers
NRE	Nouvelles Régulations Economiques
PFS	Provision de Fluctuation de Sinistre
PIB	Produit Intérieur Brut
RC	Responsabilité Civile
SAA	Société Algérienne d'Assurance
SONATRACH	Société Nationale
SPM	Bouée de Chargement e Gaz en Pleine Mer
TVA	Taxe sur Valeur Ajoutée
UTG	Unité de Traitement de Gaz
UTH	Unité de Traitement des Huiles

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Glossary of terms:

Assessment Mutual: an insurance company owned by its policyholders that issues policies under which the policyholders may be assessed for losses and expenses.

Book of business: A relationship management technique used by businesses in order to maintain a closer connection with high-value customers. For example, a bank might have customers who provide a large stream of revenue, and another set of customers who do not provide the bank with a large stream of revenue. A book of business contains customer data, and allows a business to break the customers into appropriate groups so that it can set appropriate sales targets. The bank would like to retain both customers, as well as to get low-revenue customers to provide more revenue, but might be inclined to focus more on its more valuable customers.

Bottomry: in the early days of marine insurance, a ship owner would borrow money on a mortgage on the ship, and the mortgage would provide that if the ship were lost, the borrower would not have to repay the loan. This was bottomry, which thus combined money lending with insurance. When cargo instead of hull was involved, it was called “respondentia.”

Capacity: The percentage of surplus or the dollar amount of exposure that an insurer or reinsurer is willing to place at risk. Capacity may apply to a single risk, a program, a line of business, or an entire book of business.

Capital market: A capital market is not a compact unit, but a highly decentralized system made up of three major parts: stock market, bond market, and money market. It also works as an exchange for trading existing claims on capital in the form of shares.

Captive Insurer: an insurance company established by a parent firm for insuring the parent’s exposures.

Ceding Company: a company that has placed reinsurance as distinguished from the company that has accepted the reinsurance

Claim: notification to an insurance company that payment of an amount is due under the terms of a policy.

Coinsurance: In property and casualty, insurance a clause or provision in an insurance policy requiring a specified amount of insurance based on the value of the property insured. Normally, there is a premium reduction for purchasing insurance to some percentage of the value of the property—if the insured fails to comply with the clause, he or she will suffer a penalty in the event of partial loss; in health insurance, a policy provision requiring the insured to share a given percentage of the loss.

Commission: In reinsurance, the primary insurance company usually pays the reinsurer its proportion of the gross premium it receives on a risk. The reinsurer then allows the company a

ceding or direct commission allowance on such gross premium received, large enough to reimburse the company for the commission paid to its agents, plus taxes and its overhead. The amount of such allowance frequently determines profit or loss to the reinsurer.

Competitive Advantage: a situation where a company is in a position to be more successful than its competitors are; something that helps a company be in this position

Consortium: Short-term arrangement in which several firms (from the same or different industry sectors or countries) pool their financial and human resources to undertake a large project that benefits all members of the group. A consortium lasts for a period that is usually shorter than that for a syndicate.

Dividend: in insurance contracts, the refund of a part of the premium paid at the beginning of a year that still remains after the company has made deductions for losses, expenses, and additions to reserves.

Exposure: unit of measurement to which an insurance rate is applied.

Franchise Insurance: a class of life insurance in which individual policies are issued to members of a group, with an employer or other body collecting and/or remitting the premiums.

Gross Premium: the premium for insurance that includes the provision for anticipated losses (the pure premium) and for the anticipated expenses (loading).

Group Insurance: any insurance plan under which a number of employees and their dependents are insured under a single policy, issued to their employer, with individual certificates given to each insured employee; the most commonly written lines are life, accident, and health.

Insurance policy: Formal contract-document issued by an insurance company to an insured. It, puts an indemnity cover into effect, serves as a legal evidence of the insurance agreement, sets out the exact terms on which the indemnity cover has been provided, and states associated information such as the specific risks and perils covered, duration of coverage, amount of premium, mode of premium payment, and deductibles, if any.

Integration: a coordination of retirement or disability benefits with benefits payable under Social Security, through a specific formula.

Join stock company: An organization that holds shares with exclusive properties.

Key success factors: are those key elements which are required for an organization to accomplish or exceed their desired goals. It is imperative that these factors be given proper attention and are adhered to attain the desired objective.

Liability: a debt or responsibility; an obligation that may arise by a contract made or by a tort committed.

Loss Frequency: the number of claims on a policy during a premium period.

Loss Ratio: the proportionate relationship of incurred losses to earned premiums expressed as a percentage.

Low cost: A type of pricing method where a business sets a comparatively low price in order to enhance the demand for its product among consumers, as well as its competitive position in the market. A low cost pricing strategy is an alternative marketing approach that a business can use as an alternative to differentiation and focus pricing strategies, and it tends to be most successful when the product is generic and high volume production is possible. Also called a low price strategy.

Morale Hazard: a careless attitude on the part of an insured that increases the chance of loss or causes losses to be greater than would otherwise be the case.

Mortgage: a deposit or conditional transfer to secure the performance of some act; the person who makes the transfer is called the “mortgagor,” the other party, the “mortgagee”; sometimes an intermediary called a “trustee” is appointed.

Pool: a risk-sharing mechanism in which the members of a group agree to be collectively responsible for losses.

Portfolio Reinsurance: In transactions of reinsurance, it refers to all the risks of the reinsurance transaction. For example, if one company reinsures all of another’s outstanding Automobile business, the reinsuring company is said to assume the “portfolio” of Automobile business and it is paid the total of the unearned premium on all the risks so reinsured (less some agreed commission).

Premium: the payment: or one of the periodical payments, a policyholder agrees to make for an insurance policy.

Premium Loan: a policy loan needed for paying premiums.

Rationalization: Selling off or closing down some plants or units to reorganize a firm's operations to be more in line with its core competencies, in the interest of efficiency, or as a cost cutting measure. Often used as a euphemism for firing employees. See also downsizing.

Retention: the act of retaining an exposure to loss; also that part of the exposure that is retained.

Retrocession: the amount of risk that a reinsurance company reinsures: the amount of a cession that the reinsurer passes on.

Rider: a document that amends the policy; it may increase or decrease benefits, waive a condition or coverage, or in any other way amend the original contract—the terms rider and endorsement are often used interchangeably.

Risk: in the abstract, used to indicate a condition of the real world in which there is a possibility of loss; also used by insurance practitioners to indicate the property insured or the peril insured against.

Securities: A financing or investment instrument issued by a company or government agency that denotes an ownership interest and provides evidence of a debt, a right to share in the earnings of the issuer, or a right in the distribution of a property.

Securities include bonds, debentures, notes, options, shares, and warrants but not insurance policies, and may be traded in financial markets such as stock exchanges.

Stock Insurance Company: an insurance company owned by stockholders, usually for making a profit.

Subrogation: Substitution of one party (called the subrosee) for another (called the subrosor) as a creditor or possessor of a legal right. Upon subrogation, the subrosee acquires the claims, interests, ownership, remedies, or securities of the subrosor. In cases where a party pays for the debts of another party, the paying party becomes entitled to the rights belonging to the debtor. See also subrogation clause.

Cover note: Summary document issued by an insurer as an interim cover for the period before a formal insurance policy is issued.

Term Insurance: insurance payable to a beneficiary at the death of the insured, provided death occurs within a specified period, such as 5 or 10 years, or before a specified age.

Underwriting the process by which an insurance company determines whether and on what basis it will accept an application for insurance.

Warranty: a statement concerning the condition of the item to be insured that is made for permitting the underwriter to evaluate the risk; if found to be false, it provides the basis for voidance of the policy.

Introduction

Insurance plays a key role in market economies through the large sums it mobilizes, in fact, it contributes to the collection of domestic savings and its channeling towards financing the needs of the economy, which explains the weight and place of the insurance sector in the modern economy, and now it represents a support for all financial activities. In addition to the guarantees it offers, insurance provides the economy with significant savings that are favorable to its development.

Reinsurance is a significant means of absorbing unexpected losses and reducing capital requirements. It affects the capital requirement and the financial result of the cedant. Nevertheless, since the insurer has ceded part of its premiums to reinsurers, the ceding company's financial result decreases.

Indeed, the setting up of an insurance or reinsurance company dedicated to a single group can only be conceived for entities with an insurance budget of a certain size, i.e. for large companies. However, until very recently, insurers have regularly and generally recorded significant losses in the large corporate market. However, the possibility of transferring losses to insurers on a recurring and significant basis has not prevented most of the world's major groups from acquiring risk retention tools. This phenomenon is justified by the strong ability of captives to optimize cost management within a group.

The captive is first the most effective tool for centralizing the insurance decisions of a multinational group, a centralization that will allow a scientific and technical approach to retention and risk coverage levels and then a reduction in costs

In order to protect its assets, the SONATRACH group uses Algerian insurance companies for insurance coverage, in accordance with current regulations.

Algerian insurance and reinsurance companies are not in a position to retain, due to a lack of financial capacity, the entire risk of the SONATRACH group in their portfolio.

This is why they are therefore forced to resort to international reinsurers for a significant part of their business, the level of which exceeds 95 percent of the insurance risk portfolio for the coverage of certain industrial risks.

This recourse to international reinsurers on behalf of the SONATRACH group is generally made through reinsurance brokers, acting as true intermediaries through direct contracts and in disorganized and often non-transparent ways due to the non-use of tenders.

From this state of affairs, it appears that the insurance conditions obtained by the SONATRACH group are set by the international reinsurance markets. i.e. the most important issue is located abroad.

Aware of this situation, SONATRACH has decided to take charge of managing the process at all levels to set up insurance coverage for its assets, by creating its own reinsurance captive abroad; like oil and industrial groups around the world, allowing it to take over the group's industrial risks behind the Algerian insurance companies in accordance with the insurance regulations in force and in the case of SONATRACH Ré, the choice was made for the Hydrocarbon Insurance Company CASH, a subsidiary of the SONATRACH group.

Through this captive, the SONATRACH group will contribute to the modernization and improvement of the efficiency of its cost management tools because it is an in-depth evolution of the designs and practices that it wants to print so that cost management is no longer only reactive but also proactive, and thus becomes one of the pivots of the group's operational strategy.

About 3000 industrial groups around the world have registered their captives on the books of Luxembourg, Bermuda or Ireland.

The increase in the number of captives created coincided with it:

- The end of the downward cycle (speculative) in the reinsurance market,
- The withdrawal or restriction of certain insurance cover (earthquake, act of terrorism, pollution, civil liability);
- The emergence of new risks (environmental damage) that are difficult to insure in the traditional market.

The objective pursued through this work on an objective assessment of the impact of the creation of this captive reinsurance company on the reduction of insurance costs.

To do this, a sound approach methodology was followed that was able to answer the following question:

How does the creation of the captive contribute to cost reduction?

Moreover, the following sub-questions:

- What is the influence of the choice of the national or international implantation of a captive reinsurance company on cost reduction?
- What is the finality of creating this captive reinsurance company?
- Which strategy adopted by SONATRACH to create this reinsurance captive?

To better understand our work, we have found it useful to introduce the following assumptions:

H1: The establishment of reinsurance captive in Luxembourg has a positive impact on cost reduction.

H2: The reinsurance captive allows the group to save significant financial resources.

H3: SONATRACH opted for the integration and internationalization strategy.

Is to answer the questions and confirm the hypotheses thus posed, the research work plan is structured around the following points:

A theoretical part composed of two chapters, the first dealing with the conceptual universe of strategy and cost management and the second chapter when its objective is to explain insurance and reinsurance and their evolution in Algeria and insurance strategies. This makes it possible to establish the link between the cost reduction strategy and the captive reinsurance.

A practical part is to present SONATRACH, its risks and SONATRACH Ré, and finally to provide feedback on the strategy for creating and implementing a captive reinsurance company and its impact on cost reduction.

Chapter one: strategies and costs reduction

When companies and industrial groups find themselves monopolized in the market, they don't opt for cost domination strategy (because they are not in a competitive market) but they opt for cost reduction strategy and this via using other strategies, like: opening its activities to the external market or/and integrate an activity.

In this chapter, we will begin our work by evoking generality on strategies, their goals and fundamentals.

The second section will focus on the strategy of cost domination and its advantages and limits. Finally, we will end our chapter with a generality on both strategies of internationalization and integration and their benefits.

Section 1: Generality on Strategy

Sub-section 1: history and goals of strategies

1.1. Strategy history:

The strategy is an ancient art, probably practiced since beginning of time. The great military theorist Chinese Sun Tzu has described the principles of war from 500 years BC. J.-C ... A few centuries later, the battle of Cannae is a superb example of a well-designed military strategy and well executed. Indeed, in 216 BC, the Roman Empire, which relies on his many legions is in trouble; the second Punic war is in progress; Hannibal, the commander Carthage is at war with the Roman Empire, and after crossed the Alps, descends from north to south and crosses the plains of Italy. In Cannae, he collides with the Roman legions, which are in numbers much larger than their own troops. He then conceives a strategy, which consists in taking, knocks the Roman legions by detaching his cavalry from each side of the legions to attack them backwards, as the shows the diagram below:

This successful strategy shows that a lasting or definitive advantage can be achieved against an adversary or an enemy without necessarily benefiting from superior resources; indeed, strategy is the art of allocating its resources, by definition available in limited quantities, so as to create a lasting advantage on the battlefield. However, the word "strategy" was little used in literature until the mid-nineteenth century. In fact, we find the word "strategy" in the Oxford Dictionary in

1810. Then at the Prussian general Karl von Clausewitz, who publishes his Treaty of War in 1832 in which he devotes part of his work to the military success of Napoleon.¹

The word "strategy" could have been applied to economic affairs from this period based on the principles of military strategy. Yet, nothing has happened. It was only in the mid-1960s that it was used in a micro-economic context, first and foremost by Alfred Chandler, professor at MIT, in his book *Strategy and Structure* published in 1963, then almost simultaneously in 1965 by Igor Ansoff, in his book *Corporate Strategy* and by Bruce Henderson, founder of the Boston Consulting Group who first, articulated the main principles of strategy in the field of business.

1.2. Goal of strategies:²

the strategy is to find a competitive advantage sustainable in an unstable environment: what a challenge! Competitive dynamics indeed create a permanent renewal of offers based on a new competitive advantage, sometimes all the more fugitive as it is minor. This increasing fugacity of competitive advantage is materialized by the disappearance of companies and the appearance of new entrants.. There are few companies that can benefit from the status of "still companies", that is, companies that have existed for a long time and that we can expect to live for a long time because they have demonstrated their ability to weather storms. These companies, often the most successful, are those that combine a clear strategy with quality operations; GE (which has more than a century of existence), Toyota or L'Oréal (more than half a century old) are emblematic of this category. This ability to last over time is the result of a very strong resource allocation process; the resources concerned are financial or human, these companies allocate a disproportionate share to the creation competitive advantage in a given area, even if give up certain activities or investments; they know that you cannot do everything and make decisions Clearly, considering that the strategic decision is dichotomous in nature: if it is yes, the bulk of the resources required for this activity or competitive advantage are mobilized; if it's not, we give up totally. For example, when Renault decided to ally with Nissan, not only the necessary financial resources were mobilized and allocated in priority to this operation but the human

¹KACHANER.(N), DUCREUX.(J), ABATE.(R), *Le grand livre de strategie*, Boston consulting Group, January 2009 P 13-14, translated by us

²LEGRAND.G et MARTINI. H : *commerce international*, 3ème édition DUNOD, Paris, 2010, P.69.translated by us

resources - engineers, commercial, financial - available at Renault and indispensable to the success of the transaction were allocated to Nissan's successful turnaround; As a result, Renault has given up on certain projects in France and has experienced a market share erosion in Europe: we cannot do everything.

The difficulty of the strategic decision is its difficulty reversible: whether it is the creation of a sustainable competitive advantage through the positioning of an activity, the creation of a factory, the acquisition of a company, the sale of an activity, the closure of a plant, the investment in a brand, the creation of a distribution network, etc., it is difficult to go back quickly; if such a decision were to be taken, it would in any case be costly. On the other hand, most operational decisions can be more easily reversed and costless: modifying an advertising campaign, readjusting a commercial network, reorganizing customer service are operational decisions that can be implemented in the relatively short term. It may be enough for a wrong strategic decision to change category and no longer be an "enclave company": such case of Daimler-Benz become Daimler-Chrysler then again Daimler; the acquisition of Chrysler by Daimler had two consequences; on the one hand a strategic consequence: the specialist manufacturer with its Mercedes range in sophisticated cars sold at a high price found itself at the heart of a heterogeneous whole with the Chrysler brand and its more banal cars as well in terms of aesthetics as mechanically. The second consequence is operational in nature: the time spent by Daimler executives trying to fix Chrysler's situation has not been on the Mercedes brand.¹

Sub-section 2: fundamentals of strategy²

For a company, the strategic objective is the creation and maintaining a sustainable advantage over its competitors. The company that will need in a sustainable manner a lower consumption of resources (often materialized by a favorable cost position) to provide a given service will ensure a favorable position in the long term. Admittedly, a better cost position is not the only competitive advantage of a company, but it is certainly the most decisive, especially in periods of growth. However, the behavior of costs in the company over a long period is predictable, it obeys a

¹HARISON.A ; DALKIRAN.E et ELSEY.E : *business international et mondialisation*, ED. Boeck, Bruxelles,2004, P 44.translated by us

²BOUGLET.J ,*La stratégie d'entreprise*, 3^e édition, Ed. Lextenso, France, 2013, P.179.translated by us

phenomenon that was highlighted and formalized in 1966 by Bruce Henderson, founder of the Boston Consulting Group.

2.1. The experience curve:

This phenomenon, known as the "experience effect" or "Experience curve" can be summarized in the following simple way: at each doubling of the cumulative production volume by a well-managed firm in the production of a clearly identified good or product, the unit production costs expressed in constant currency of this property decrease from 15 to 20%. This decline in prices and costs based on the accumulation of experience has been highlighted in many industries and sectors: this observation is universal in scope and can be seen over very long periods.

This is one of the reasons that penalized Boeing over Airbus from 1995 to 2005; the Airbus Human Resources Director has stated in public (HR 2003, Paris) that this mode of management, practiced by British Aerospace, had penalized the Airbus GIE in the mid-1990s by delays in the delivery of longer wings and higher costs. It's also one of the reasons, but not the only one, that

explains the cost gap between North American automakers and Japanese manufacturers producing in the United States: while Mitsubishi assembles a vehicle at 21:33 at its Illinois plant and Nissan announces a 15:74 vehicle assembly time at its Smyrna Tennessee plant, GM announces a time of 36 h 67, Ford 39 h 95 and Chrysler 40 h 60 (source: FT 19/06/03).

Today, many companies seek to formally capture this learning effect, especially in the retirement of employees of the company, by setting up systems of generation and conservation of knowledge.¹

2.2. The specialization:

When volumes increase, it becomes possible to specialize all or part of the production process: the specialization thus makes it possible to reduce from 10 to 15% the time necessary to produce a unit or to increase by 10 to 15% the number of units produced in a given time.

The cost advantage of the Japanese company comes mainly focus of production on a small number of product families.

¹KACHANER.(N), DUCREUX.(J), ABATE.(R), *Op.cit*; P 15-20, translated by us

Conversely, dispersion is always expensive. It is still necessary! be able to measure it and understand and capture the costs

Actuals assigned to a product. A factory-based study of a product line generating around € 10 million in annual sales showed that 23% of products accounted for 85% of sales, a situation that is likely to be characteristic of many production lines. More surprisingly perhaps, it turned out that these 23% of products realized 400% of the result of the factory, after reallocations of indirect costs, depreciation and inventory costs. The remaining 77% of the products lost money and did not cover the overheads needed to produce them. The strategic cost analysis revealed that these small volume products actually had a negative gross margin and strongly penalized the products that were the core of the business. Specialization has value, dispersion has a cost.

2.3. Investment:

The investment reduces costs. Without investment, there can be no increase in capacity and it there can be little cost reduction for constant capacity. The investment here is understood as a set of modifications in the production "process", involving both a new product design, new equipment or overhaul method of production. By definition, if an investment is profitable, the cash inflows it will make possible will be superior to the investment itself.

Section 2: strategy of cost domination

Sub-section 1: fundamentals on The strategy of cost domination

The strategy of cost dominance is to achieve, at equal quality, lower costs than competition. Through this strategy, the company aims to achieve a cost-competitive advantage by addressing a broad target. This strategy is used in sectors where products are little differentiated and where the price criterion is essential in the act of purchase. Low costs can be obtained:

- By increasing the quantity produced, the company reduces the unit cost of production because the fixed costs are spread over a larger number of units;
- By obtaining the critical size: minimum size to enter and develop in a market;
- By a technological advance or the possession of a patent¹.

1.1.The benefits of the cost domination strategy:

- This strategy increases revenue, increases market share and improves profitability;
- It eliminates the market or weakens competitors who can not practice the same prices;
- The existence of low costs is a barrier to entry for new businesses.

1.2.The limits of the cost domination strategy:

The cost domination strategy has two major drawbacks:

- If competition is strong, this strategy can lead to a price war that can be damaging for all companies in the sector;
- It requires significant investments in production which reduces the capacity for innovation.

¹Michael Porter, Lavergne, Philippe de, *L'avantage concurrentiel*, Edition InterÉditions 1986.translated by us.

Section 3: internationalization and integration strategy

Sub-section 1: Generality on internationalization

Internationalization is a strategy by which a company plans to develop beyond its national market, to gain additional competitive advantages. International openness is generally treated in two complementary ways: on the one hand, it is linked to general variables of the economic environment and to factors related to its productivity. On the other hand, the internationalization of a company is linked to its strategic constraints. Internationalization is certainly a major fact of the world economy. according to MERCIER-SUISSA.C, BOUVERT-RIVAT.C (2007), "this is by no means a passing economic phenomenon. It is an irreversible revolution in the behavior of the various actors in the face of economic and social monitoring, a behavior dictated by an awareness of the needs of the inhabitants of the planet. It is unavoidable in most activities. However, it is not done under any conditions. It claims, method, reflection, diagnosis before action. Internationalization therefore requires a long-term vision of the company and its market and its primary purpose: the competitiveness of the company.¹

1.1. Reasons for internationalization of companies:

Internationalization allows access to foreign markets, this allows the company benefits from many factors, and benefited from economic and financial development from a foreign country. As there are other reasons, companies are becoming more and more international.

1.1.1.Strategic factors:

These include:

a. Finding competitive advantages:

- Availability of natural resources (raw materials, energy) and know-how;
- Very low wage levels: appeal to industries that employ a lot of labor;
- Productivity and skilled labor attract some companies to the United States of America and Japan;

¹MERCIER-SUISSA.C, BOUVERT-RIVAT.C : *L'essentiel des stratégies d'internationalisation de l'entreprise*, Edition.GUALINO, Paris, 2007, P.104.translated by us.

- Financial and tax facilities.

b. Risk minimization:

The business may suffer several risks during the operation of these activities, and internationalization may reduce some of these risks:

- Lifecycle phase risk: the product is in the different life cycle phase depending on the country chosen;
- Business risk: the situation is not identical simultaneously in the countries
- Dependency risk: geographical diversification of outlets and Supplies;
- Competition risk: being where their competitors are.

1.1.2. Market factors:

Internationalization may be motivated by factors related to the local market or to foreign markets.

a. Factors related to basic markets:

They essentially group:

- Internationalization is sometimes imposed: the difficulty of gaining market share or the saturation of the national market, this requires companies to seek new markets;
- State The state regulations, it can be compared with conditions prevailing in other territories;
- The technical conditions of production can limit the growth of the firm.

b. Factors related to foreign markets:

These factors mainly concern:

- Competition: the development of foreign markets requires the firm to also be present in the field where the competitors are;

- Market barriers: tariff and non-tariff barriers, such as exchange rate fluctuations that drive the company to set up or install new production units in these new growth markets (Renault in India and Russia).

1.1.3. Industrial factors:

They have relation with the industrial aspect of the company:

- Achieving economy of scale: the multiplication of markets causes a large amount of production, this allows the company to reduce unit costs;
- The reduction of production costs: the company can, by strategic choice, choose to internationalize the upstream phase of marketing and internationalize its supplies in order to acquire them at the most attractive prices. It can transfer all or part of its production abroad in order to benefit from more competitive production costs, raw materials, labor, taxation¹.

1.1.4. Opportunity factors:

These factors mainly concern:

- international trade shows and fairs, where the company can find out needs abroad for these products, this encourages it to adopt an approach to conquer foreign customers;
- A surplus of production which pushes the company to resort to the export for to sell its production.

1.1.5. Environmental factors:

Internationalization of companies can be favored by the international environment and that :

- After the creation of the International Monetary System (IMS), the GATT and then the WTO, access to world markets became possible;
- Free trade agreements and the opening of countries' borders help advance the phenomenon of internationalization.

¹DJIEZION. E : « Marketing international : les raisons de l'internationalisation des entreprises », available on : <http://experts-marketing.blogspot.com> consulted 02/03/2019 at 10h35.translated by us.

1.2.The different strategies of internationalization:

In its process of internationalization, the company adopts different strategies according to its size, its structure, its means and capacities, there are four types of strategies:¹

1.2.1. The overall strategy:

In this strategy, the company adopts a global strategy centered around a standardization and resource optimization policy. The world is considered as a single market, the strategy is based on a commercial and industrial presence of The company globally, there are four types of global strategy:

a. Specialization:

The specialization is for a company to focus on a single profession in which it devolves its resources and skills. It allows the company to realize economies of scale and to have a positive image of specialist.

b. Diversification:

it leads the company to develop in several different trades from each other. It allows the company to improve profitability and to spread these risks among several activities.

c. Integration:

the integration strategy consists of internalizing complementary activities within the company,

d. Outsourcing:

outsourcing is for a company to outsource some of its activities to other companies. The logic is not to make oneself but to make do.

1.2.2. The international strategy:

"It is said that the company chooses an international strategy, when it starts expand its business to other countries, and that its decision-making center and the production system and marketing are in the country of origin. For this, the company must rely on its human, technical and

¹Jean-Paul LEMAIRE, *stratégies d'internationalisation*, 3èmeédition, Ed. Dunod, Paris, 2013, P.206, translated by us.

organizational resources to develop its strategy, she must also have solid knowledge to properly carry out her project of internationalization ".¹

1.2.3. The multinational strategy:

This strategy is characterized by a dispersion of decision-making power and insufficient coordination between activities in different countries. Contrary to the international strategy, it does not pay particular attention to the home market to approach foreign markets. It seeks to respond precisely to the conditions of each market national target.²

1.2.4. Transnational strategy:

Like all companies in the market economy, these are looking for maximizing their profiles, by building their global strategy or they meet each other. These companies have subsidiaries abroad, the parent company or its registered office, is located in the country of origin and remains the place of decision for the entire group.

Through this first section, we focused on the basic notions of Internationalization, where we had discussed its definition, its reasons, and its different types of strategies we move to the integration strategy

1.3. Advantages and disadvantages of internationalization of companies:³

The internationalization of the company is an essential element for the development and growth of these activities, but this exposes the company to advantages and disadvantages resulting from its internationalization approach.

1.3.1. Benefits of internationalization:

The benefits of internationalization are many, among some advantages we can mention:

- Openness to new markets and customers, following the saturation of demand interior;

¹ Ibid

²MILLIOT. E : « Stratégie d'internationalisation » : une articulation des travaux de porter et Perlmutter, Management & Avenir 2005/1 (n°3), P.43, translated by us.

³AMELON J-L, CARDEBAT J-M : « *Les nouveaux défis de l'internationalisation : quel développement international pour l'entreprise après la crise* », Ed. De BoeckUniversité, Bruxelles ; 2010. P.145.translated by us.

- Profit from economy of scale allows him to increase these profits;
- Avoid protectionist barriers (tax, regulatory, etc.), settle down directly in the country;
- The requirements of foreign markets obliges the company to boost and introduce new development strategy;
- When attending foreign markets, the company can acquire knowledge and important skills that allows him to gain experience at the scale international;
- Reduced costs. Indeed, two types of costs can fall thanks to internationalization:
 - ✓ Supply costs (no shipping costs, price control in coming flow, no stock-outs, etc.),
 - ✓ Production costs (cheaper labor, local taxation more advantageous, etc.).

Sub-section 2: Generality on integration

2.1. Integration strategy:

The integration strategy consists in internalizing within the company complementary activities located upstream and / or downstream from the current activities.

2.2. Integration strategy types:

Integration can take four directions: upstream vertical integration, downstream vertical integration, horizontal integration, and full integration.

- Integration is vertical upstream when the company integrates sourcing activities previously performed by suppliers. Example: Michelin buys rubber plantations, rubber raw material for its tires;
- Integration is vertical downstream when the company integrates activities related to the distribution of its products. Example: Rolex opens stores to sell its own luxury watches;
- Integration is horizontal when the company takes control of competing activities by buying competitors or alliances. Examples: Renault took control of Nissan, Peugeot made an alliance with Mitsubishi;
- Integration is global when the company carries out all the activities of the sector. This strategy can be effective in a fast-growing industrial branch.

2.3. The benefits of the integration strategy in terms of cost minimization:¹

The integration strategy promotes good control of the production process in three areas: product quality, production time and cost reduction.

The attributions of this strategy on the reduction of the costs can be generated in the points as follows:

- Have an autonomous control on the operating system;
- The power of supply directly from the source without having to use an intermediary which eliminates the costs of the latter;
- The attributions of this strategy on the reduction of the costs, can be generated in the points as follows:
 - ✓ Enrich your knowledge by integrating previously uncontrolled skills and technologies that later save you time and money;
 - ✓ Opening to new markets and customers, following the saturation of domestic demand;
 - ✓ Profit from economy of scale allows him to increase these benefits.
- In foreign markets, the company can acquire important knowledge and skills that can help them gain experience, and take less risk and decide better internationally;
- Lower costs. Indeed, two types of costs can fall thanks to internationalization: Supply costs and Production costs (cheaper labor, more advantageous local taxation, etc.).

In this chapter, a traditional approach to strategies has been presented. Its fundamental principles, and the different types of strategy,

The company analyzes its environment and its skills in order to then determine the best strategy and reinforce its competitive position, whether at the level of the business unit (business strategy) or the group as a whole (corporate strategy). It depends on the advantages and disadvantages of each strategy, but also on the purpose of the company, among its objectives:

The minimization of costs, the main cause and reason for the integration and internationalization of companies.

These last two are essential and specifically for our Algerian companies if they want to penetrate new foreign markets to minimize their costs and that is why the next chapter is dedicated

¹ KACHANER. (N), DUCREUX. (J), ABATE. (R), Le grand livre de strategie, Boston consulting Group, January 2009 P 112, translated by us

Chapter two : Insurance and reinsurance

The development of economic activities has led to a growth in insurance activities. Insurance today has become more than a necessity, through its essential role in protecting people and their assets. In addition, reinsurance helps protect insurers against unforeseen or extraordinary losses by allowing them to spread their risks.

The purpose of this chapter is to introduce insurance and reinsurance. To do this, we thought it would be useful to share the chapter as follows:

In the first section, we begin by giving historical landmarks that have marked the notion of insurance and reinsurance and mechanisms; then, in the second section, the work will focus on the insurance in Algeria; Moreover, we end with section three, which marks the reinsurance captives, the types and its strategies.

Section 1: Insurance and reinsurance

Insurance is a relatively recent institution; in fact, it only appeared at the end of the middle Ages in the form of maritime insurance, because of the development of sea trade in all the countries of the Mediterranean basin.

The reinsurance started, as a risk management tool. Disasters emphasize the value of reinsurance. Some events, such as disappearance of Malaysia Flight 370 and natural catastrophes (Hurricane Katrina), resulted in large exposures, with direct writers resorting to reinsurance to spread the risk. Over the years, it has evolved, offering numerous benefits for insurance companies, including access to information, relationships, and expertise that can yield greater benefits in the claim adjudication process.

Sub-section 1: Insurance

1.1. Insurance history:

Insurance has existed for centuries when Chinese merchants paid extra for the ships to get a refund if their cargo was lost at sea. Roots are also found in Babylon where traders were encouraged to insure the risk of caravan trade through loans repaid with interest only after the goods have arrived safely.

In the middle age, with the growth of cities and commerce in Europe, workers formed guilds to protect themselves from work accidents, pirate captivity, poverty or death. In Italy, several forms

of insurance have been developed to facilitate economic activities; the first virtually universal sea insurance record among the maritime nations of Europe.

1.2. Definition of insurance:

«Insurance is a financial service corresponding to a collective savings operation in which the physical or legal prospects agree to pay a premium to an insurance company so that each one benefits from a hedge on the basis of the risks previously defined in the terms of the insurance contract. The amount of this cover depends, on the nature of the risks incurred in cash using statistical calculation methods»¹

We can also define insurance as a contract between an individual and an insurance company, that insures risks in an exchange for premium payments, the insurance company accomplishes this by charging enough premiums from insurance participants to exceed the amount the company has to pay out for insured losses. Insurance companies base charges on their Actuarial calculation of the risk they insure.

1.3. Types of insurance:²

Insurance, which is based on general insurance product, may be broadly classified into the following types:

1.3.1. Personal General Insurance:

Persons use it to protect themselves against risks that they face in non-commercial situations. For example: social insurance, liability insurance...

1.3.2. Commercial General Insurance:

Businesses purchase it to protect themselves against risks that arise in the course of their business activities, such as business interruption, aviation insurance...

¹ General Agreement on Trade in Services, edition OMC, p 376;

²*Basic insurance concepts and principals*, Singapore College of Insurance, 5th edition, October 2016, pp 218;

1.4. Functions of insurance:¹

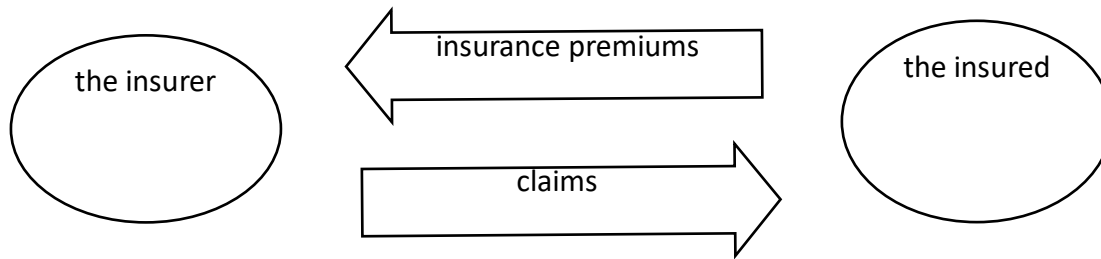
- Risk management; the benefits of diversification for imperfectly correlated risks;
- Pooling of resources; collecting premiums from many policyholders reduces the number of insurance contracts, per policyholder costs of investment in information, etc.
- Transfer of resources; collected premiums are invested in matching duration assets; medium to long-term investment horizon;
- Information production; probability distribution of losses, adverse selection and moral hazard problems of policyholders,
- Derivatives; to reduce the exposure of insurers to market risks that they do not control;
- Securitization of underwriting risks; to transfer tail risk to the broader financial market and to increase the capacity of the insurance industry;
- Asset management in life insurance; to provide delegated asset management services, life-cycle consumption smoothing;
- Financial Market activities; credit intermediation outside the traditional banking system: securities lending and collateral supply, credit enhancement contracts and financial guarantees.

1.5. Insurance contract:

It is contract of mutual trust and confidence. Both parties: the insurer and the insured must disclose all relevant information to each other. This information is a declaration of risk for the insured via paying premiums and a commitment of the insurer to insure him against the predictable disaster in the limitation of insurance policies, via repaying claims.

¹ KARTASHEVA Anastasia, « *Insurance functions in the financial system* », disclaimer of International Association of Insurance Supervisors IAIS and Bank for International Settlements BIS, pp5-6;

Figure II-1: Basic insurance procedure



Source: elaborated by ourselves

1.6. benefits of insurance and its necessity:

1.6.1. Economic benefits:

Insurance brings many benefits; it enables the risks of financial losses to be transferred from the insureds to the insurers as mentioned earlier. The benefits are outlined in the sections below:

a. Provides Financial Stability and risk transfer:

Insurance is important because both human life and business environment are characterized by risk and uncertainty. Insurance plays a key role in mitigation of risks, which is spread over a number of people rather being concentrated on a single individual.

b. Stimulates Business Enterprise:¹

Insurance serves to provide businesses with some level of financial security and certainty, as they can free up their available funds, which can then, be deployed to more productive business investments. In this respect, insurance serves an important economic function in helping to stimulate business enterprise.

¹Basic insurance concepts and principals, Singapore College of Insurance, 5th edition, October 2016, pp 218, p 49.

c. Encourages Loss Control, investments and provision of credit facilities:

Insurers always aim to enhance their own profitability and to contribute to a general reduction in the economic waste following a loss, through reducing the frequency and severity of loss that are resulting from the hazards.

Insurers have large amounts of money that can be invested, in a wide range of financial instrument, in the time gap between the receipt of a premium and the payment of a claim.

«Bankers and other financial institutions require the security of insurance in financing properties and overseas trade. Therefore, insurance enhances a borrower's credit, because it guarantees the value of the borrower's collateral, or gives greater assurance that the loan will be repaid in the event of an insured peril occurring during the period of insurance. »¹

d. Contributes to capital market:

Capital market invests enormous amounts of assets as a result to the financial stability that the capital market offers to particulars and societies. Insurance companies are repaid premiums so that they estimate the frequency of the losses and how much the loss might be; through investing huge sums on the capital market.

At the macroeconomic level, insurance market contributes to national mobilization of savings and even to diminish the gap between the developed companies and the emergent ones.

1.6.2. Necessity of insurance:

To appreciate the necessity of insurance we have to discuss the benefits that we derive from it. As explained in the previous sections. Insurance allows also to:

- Provide liquidity;
- To avoid drawing on savings in case of serious illness as an example;

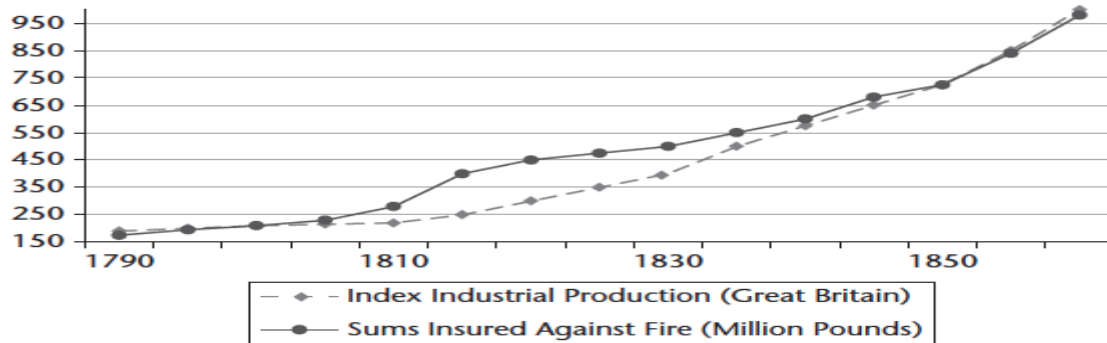
¹Ibid; p 50.

- «Minimize the financial repercussions that could be caused by a minister, for example. »¹

1.7. Financial aspect of insurance²:

The insurance sector is often measured by insurance premiums relative to GDP and the number of employees in the sector. Over time and across countries, GDP and the size of the sector are positively correlated.

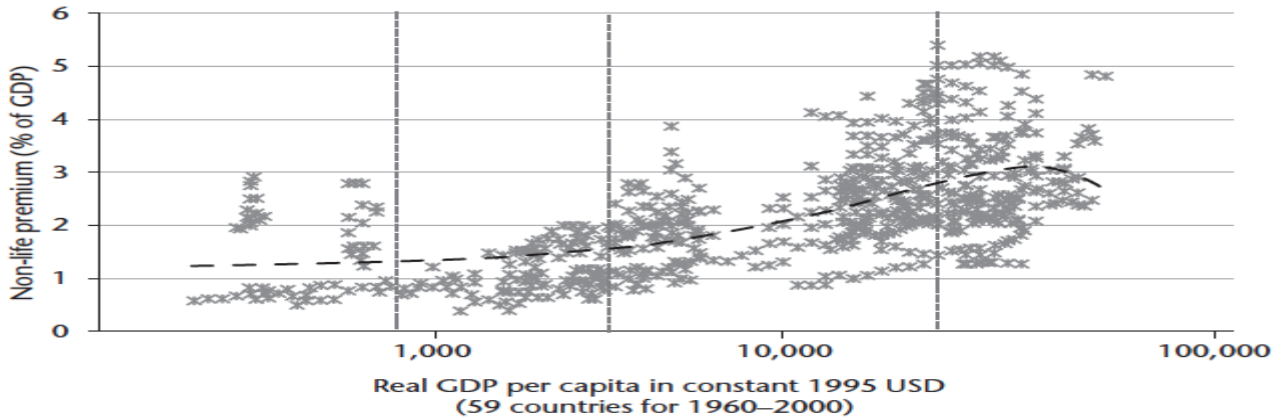
Figure II-2: GDP and insurance



Source: article «The invisible service: The economics, regulation, and systemic risk of insurance markets».

¹REMINI, (Amine) : *Le processus et l'impact de création d'une Captive de Réassurance*, magistralthesis en commercial science, Ecole des Hautes Etudes Commerciales d'Alger, 2011,p 16;

²Felix Hufeld, Ralph Koijen, Christian Thimann, «*The invisible service: The economics, regulation, and systemic risk of insurance markets*», VOX, January 2017

Figure II-3: Real GDP per capita in constant 1995 (59 countries for 1960-2000)

Source: article «The invisible service: The economics, regulation, and systemic risk of insurance markets».

Note: The top panel plots the correlation between fire insurance and growth in the UK. The bottom panel plots the increasing insurance penetration versus economic growth.

However, insurance is a rather ‘invisible’ service affecting virtually all individuals and many investments and innovative activities. Although there are some estimates of the welfare benefits of various insurance markets, more research is needed to quantify the macroeconomic role of the insurance. Kessler et al. (2016) discuss measuring the impact of the insurance sector on economic growth (by optimizing savings and investments, lowering interest rates, and easing access to credit) and on improved risk sharing (across firms and households, and between generations). Given the important role insurance companies play in promoting innovative activities, insurance regulation needs to keep pace with the risks covered by insurance companies. Examples are the accumulation of cyber risk and the need for a new liability regime in a world growingly exposing humans to robots (starting with driverless cars).

Sub-section 2: reinsurance

2.1. Reinsurance history:

As the stage was being set for world war I , the reinsurance was divided into two camps: the demand countries and supply countries including Germany, which accounted 67percent of the total premiums income of all the independent reinsurance companies in the world. After world war I , U.S.A prohibited reinsurance relations with hostile countries in order to meet the demand for reinsurance, when by 10 new insurance companies were founded (1910-1920). Despite that, U.S.A did not have a strong domestic system of reinsurance companies, and Germany (Munich Re...) and Russia used to have reinsurance companies set up in U.S.A.

«The postwar times through the remainder of the century were marked by favorable economic times and a significant growth in reinsurance, particularly in the founding of new life insurance companies and companies engaged exclusively in reinsurance. Commenting on the revitalization of the reinsurance business. »¹

However, insurance and reinsurance help make modern society possible. Airlines and satellites have replaced the risks associated with early sailing vessels. Hurricanes, earthquakes and terrorism present risks beyond the great fires of the past. Life reinsurers help provide financial capacity as well as the atomization of risk. Reinsurance will be of long and continuing importance not only to the insurance business itself but to risk management worldwide.

2.2. Definition of reinsurance:

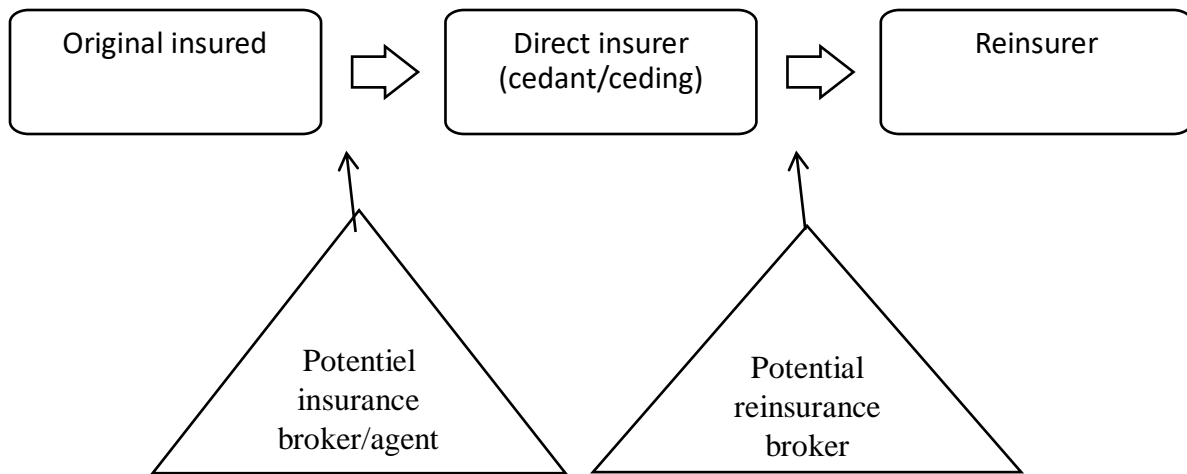
«Reinsurance is an extension of the fundamental concept of insurance, namely the sharing of risks. It is a risk transfer mechanism, whereby the original insurer (called the reinsured, cedant or ceding company) cedes or transfers part of a single risk or several risks to another insurer or insurers. The company that accepts the transfer of risks is known as the reinsurer. »²

¹HOLLAND, David M, «A Brief History Of Reinsurance», an article from «Reinsurance News», February, 2009,pp.4-29, p 24

²*Basic insurance concepts and principals*, Singapore College of Insurance, 5th edition, October 2016, p 184;

In other terms, reinsurance is a practice, which insures the transportation of portfolio to other parties in order to reduce exposure reclaims. The reinsurance transaction process is resumed in the following figure:

Figure II-4: The reinsurance transaction process



Source: developed by ourselves.

2.3. Types of reinsurance:

There are essentially two types of reinsurance arrangements:

Facultative Reinsurance: the ceding company offers an individual risk to the reinsurer, which chooses to accept it or reject it.

Treaty Reinsurance: the reinsurer must accept all business included in the terms of the reinsurance contract, knowing that the transaction includes a book of business of the ceding company.

2.3.1. Characteristics:¹

Table II-1: Characteristics of reinsurance types

FACULTATIVE (INDIVIDUAL RISK)	TREATY (BOOK OF BUSINESS)
<ul style="list-style-type: none"> – individual risk review – right to accept or reject each risk on its own merit – a profit is expected by the reinsurer in the short and long term, and depends primarily on the reinsurer’s risk selection process – adapts to short-term ceding philosophy of the insurer – a facultative certificate is written to confirm each transaction – can reinsure a risk that is otherwise excluded from a treaty – can protect a treaty from adverse underwriting results 	<ul style="list-style-type: none"> – no individual risk acceptance by the reinsurer – obligatory acceptance by the reinsurer of covered business – a long-term relationship in which the reinsurer’s profitability is expected, but measured and adjusted over an extended period of time – Less costly than “per risk” reinsurance – one treaty contract encompasses all subject risk

Source: Munich reinsurance, a Basic Guide To Facultative and Treaty reinsurance

2.4. Objectives of reinsurance:

Like insurance, reinsurance aims to reduce or eliminate the uncertainty of losses and provides peace of mind, confidence to the direct insurer and sharing risks. Therefore, the objectives are the following:

¹Munich reinsurance, a Basic Guide To Facultative and Treaty reinsurance, p.05;

2.4.1. Stabilizing Underwriting Results:

Reinsurance helps to stabilize the direct insurer's losses by smoothing the fluctuations of the losses from year to year. The profitability of the direct insurer will then fluctuate less drastically, and this will help to stabilize the direct insurer's financial performance.

2.4.2. Increasing Underwriting Capacity:

Owing to its financial limitation, the direct insurer may not be able to accept risks that are beyond its underwriting capacity. By transferring part of the risks to the reinsurer, the direct insurer will be able to increase its capacity to accept more or larger businesses for its own portfolio.

2.4.3. Supporting Entry into and Exit from Insurance Markets:

Reinsurance may assist insurers seeking to expand into new markets or to withdraw from particular segments.

2.4.4. Achieving Risk Concentration or Diversification:

Insurers generally seek a balance between risk concentration and diversification when underwriting one or more books of business. Insurers may use reinsurance to assist in achieving a targeted risk profile.

2.5. Retrocession:

Retrocession is a type of measurement wherein a reinsurance company takes on part of the risk assumed by another reinsurance company. Similar to reinsurance on a second degree, retrocession also aims to reduce risk and the liability burden of the initial reinsurer by spreading out the risk to other reinsurance companies. This process also protects the initial reinsurer and ensures that there are available funds when a huge amount of claims needs to be paid out.

Retrocession is common in places that are prone to natural disasters like earthquakes and hurricanes. Due to the prevalence of natural calamities, insurance companies might not thrive if they do not have access to reinsurance and retrocession.

«Retrocession fees are commissions paid to a wealth manager or other new money acquired by a third party. For example, banks often pay retrocession fees to wealth managers who collaborate with them. The bank will encourage and compensate the managers for bringing business to the

bank. Banks may also receive retrocession fees from third parties, such as investment funds, for distributing or promoting specific financial products. »¹

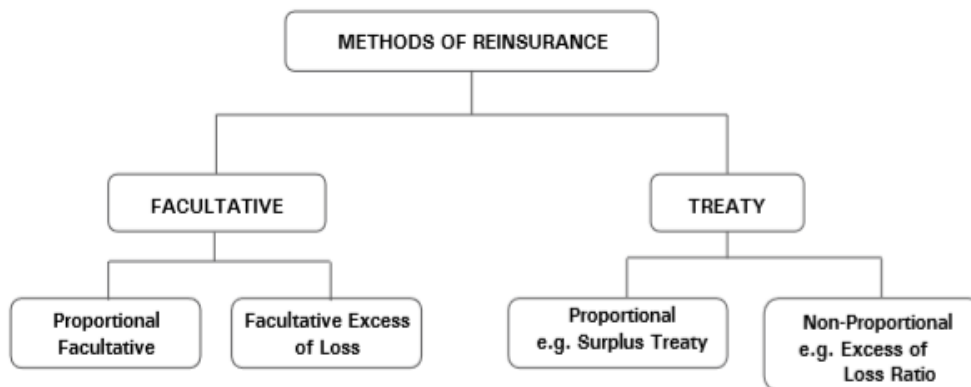
2.6. Functions of reinsurance:

The most common functions of purchasing reinsurance include:

- Reinsurance assists the ceding companies to build their reinsurance plan;
- Reinsurer plays the role of adviser by playing a financial role more or less direct;
- Reinsurer provides the ceding companies with varied skills and range of portfolios.

2.7. Reinsurance system:

Figure II-6: Methods of reinsurer



Source: Basic insurance concepts and principals, Singapore College of Insurance, 5th edition, October 2016, p.176;

2.7.1. Proportional Reinsurance:

The direct insurer and the reinsurer share amount of risk (capital) and premiums, in the same proportion; means the Insurer pays same portion of the claim paid back by the reinsurer.

Reinsurance claims includes commercial and administrative expenses committed by the reinsurer.

We distinguish many types of Proportional Reinsurance:

¹<https://www.investopedia.com/terms/r/retrocession.asp>, consulted 03/11/2019, at 01h47

a. Quota Share:

The ceding company is indemnified for a fixed percent of loss on each risk covered by the treaty contract, all liability and premiums are shared (the reinsurer accepts each policy underwritten by the reinsured).

Used for small portfolios, captives, creating new branches and insuring a certain premium volume.

b. Surplus share:

The ceding company has the right to decide how much it wants to retain on any one risk. This is called retention. Any risk that falls within this retention, is handled totally by the primary company. Whenever the company insures a risk that is larger than the retention, the amount over the retention is ceded to the surplus share treaty as a multiple of the retention. All losses between the insurer's retention on the risk and reinsurer's participation are pro-rated.

2.7.2. Non-Proportional Reinsurance:

The ceding company and reinsurers do not share either premiums or losses in same proportion; it is when insurer accepts to reinsure the risk only from threshold previously defined by a mutual agreement as an exchange of a calculated premium versed by the insurer.

There are many types of Non-Proportional Reinsurance:

a. Excess loss:

The ceding company and reinsurer share premium and losses according to a predetermined percentage. The reinsurer does not get involved with a loss until a predetermined retained limit of loss or retention, which the ceding company will pay, is exceeded.

b. Stop loss:

It is an excess of loss agreement on the whole portfolio; The reinsurer will protect the ceding only in case the priority is exceeded by adding up all claims paid during the period of coverage, usually one year.

2.8. Economic benefits of reinsurance:

Reinsurance is an important mechanism by which an insurer manages risk and the amount of capital it must hold to support such risk... In as much as reinsurance is a business-to-business transaction, the purpose and terms of reinsurance contracts can vary greatly based upon the parties' needs and commercial objectives.

Reinsurance enhances the availability and affordability of insurance in nations, which helps spreading risks, reduces financial uncertainty for businesses and individuals, provides private capital in a post-event recovery, and promotes economic growth.

On a macroeconomic level, «insurance industry following catastrophes, when insurance capital plays an essential role in post-event recovery. Reinsurers support the insurers that contribute billions for reconstruction efforts and which aid property owners and local, state and regional economies».¹

Reinsurance promotes Capital Allocation among Affiliates: Insurers are often owned by, or under common ownership and control with, other insurance companies. Separate insurance companies within a group may exist for legacy reasons, or might have been formed to operate in different jurisdictions for regulatory reasons, to sell different products, or to use different distribution systems.

2.9. Reinsurance limits:

The current environment for Regulators of Insurers and Reinsurers is increasingly complicated place, challenging and uncertain. Natural catastrophes may require billions of dollars as indemnity and that may affect the whole system of insurance.

There are contract clauses that protect the insurers against a portion of these risks; certain clauses took legislative measures to not cover risks from type: nuclear danger.

¹*Reinsurance and Financial Stability*, International Association of Insurance Supervisors, 8th edition, July 19, 2012.

Section 2: Insurance in Algeria

Sub-section 1: evolution of insurance and reinsurance in the Algerian market

1.1. Evolution of insurance in Algeria:

In the Maghrebin region, where Amazigh's in Algeria (now), created “TUISA”; an old form of mutual contribution. It was an old form of a basic insurance.

Just after the independence, 160 company entered the Algerian insurance market. Following the law 62-157(1962), these companies had to leave the country leaving behind them some engagements in a way to finish what they start with clients in the Algerian market.

Since then, insurance market knew many stages:

- Nationalization of the activity and specialization of companies;
- Non-specialization and progressive opening of the market;

1.1.1. Nationalization of the activity and specialization of companies:

This period is dated from 1962 to 1989, when foreign companies refused to obey the obligation that says foreign companies have to yield 10 percent of their portfolios to CAAR (Compagnie Algérienne d'Assurance et Reassurance, created in 1963) and there are no brokers. As a result, CAAR was seen to support all engagements and indemnify the insured clients.

In 1964, all companies in Algeria (CAAR, SAA, STAR¹ and other 2 other mutual companies) had been nationalized and specialized in a way to obey the Algerian law 66-127 1966:

- CAAR specialized in transport and industrial risk;
- SAA (Société Algéro-égyptienne d'Assurance) the Egyptian part was bought and it specialized in vehicle risk and person insurance.

In 1975, CCR (la Compagnie Centrale de Reassurance) was created to proceed the companies cedes in its profit.

¹STAR (Société Tunisienne d'Assurance et de Réassurance)

In 1982, the creation of CAAT (Compagnie Algerienne d'Assurance Transport), which monopolized transport risks was as a result to the specialization emphasis on the Algerian insurance market that CAAR took place in, and it monopolized industrial risks only.

1.1.2. Non-specialization and progressive opening of the market:

Dated from 1989 to 2013, this period is characterized by setting up and the liberalization of the Algerian insurance market.

In 1989, autonomy of public companies lead to huge competition among three public companies after they had been non-specialized.

In 1995, following the law 95-07 1995, government monopoly was stopped, besides to the appearance of brokers and privatization. This have opened the doors to foreign companies tp invest back again in Algeria under the local law as: branch, representative desk...

In 2008, French and Algerian companies ratified a convention that allows the transfer of portfolios as a retroactive effect (of 1966). Automatically, France has become legible to enter Algerian insurance market.

«In 2012, Algerian market is composed of 22 insurance and reinsurance company whose half of them of public sector.

In 2013, CSA (Commission de Supervision des Assurances) agreed the existence of 10 foreign reinsurance brokers.»¹

1.1.3. Actual insurance Algerian market:

a. legislative and regulatory framework:

The insurance sector is overseen by the Ministry of Finance's Insurance Supervision Commission (Commission de Supervision des Assurances, CSA), which is responsible for authorising insurers, intermediaries and reinsurers, as well as new insurance products. It also handles insurance regulation.

Among insurers' priority recommendations in the past few years has been a revision to rules on intermediation to simplify the accreditation process for brokers and independent agents. In a June

¹«Guide des assurances en Algérie», KPMG, translated by me, edition 2015, p.14.

2016 CNA (Conseil National des Assurances) newsletter Ahmed Chouchane, vice-president of the National Association of General Insurance Agents, said that the more than 1000 registered intermediaries brought in 32% of the sector's total revenues in 2015, and insurers believe that licensing more of them could expand penetration. "If we really want to help develop the insurance sector and reach this mass of the population that is not insured, we need to improve proximity through greater intermediation. That means making it easier to enter this profession," Benmicia claimed.

«Insurers and regulators are also collaborating to finalize regulations on takaful (Islamic insurance). Currently only one private insurer, Al Salama, offers takaful policies, though Benmicia told OBG (Oxford Business Group) that, in the absence of a regulatory framework that would allow for traditional takaful pooling, existing policies are merely takaful-like workarounds. Insurers believe adding such products to their portfolios may help them reach a sizeable segment of the population who currently avoids purchasing insurance. Benmicia added, "There is some demand, but we will not be able to gauge exactly how much until these products are on the market.»

In the agricultural sector, insurers are interested in developing regulation to better manage the impact of climate change. Algeria currently does not oblige or subsidize agricultural insurance for farmers, but as Benhabiles told OBG, "It is just a question of time until we put subsidies in place, because right now the state is fully shouldering the costs of climate change. They are the insurer of last resort who covers the cost of every catastrophe." Drought pushed agricultural claims up 42% in 2015, according to the CNA. Some combination of coverage requirements or subsidies for crop insurance, Benhabiles said, would allow for climate-related production challenges to be managed within the framework of the insurance industry.»¹

b. Economic and financial framework:

While it has grown more than five-fold since the 1990s, Algeria's insurance industry remains small relative to the size of the economy, with low penetration and density ratios, a common feature seen in emerging and frontier market insurance markets. Today, under pressure to stay profitable amid turbulent economic conditions, underwriters are expanding their product lines,

¹<https://oxfordbusinessgroup.com> (consulted 17/03/2019 at 02h49);

points of sale and auxiliary services, especially assistance products. Amid slowing growth across the economy, insurers are also working to adapt quickly in order to remain profitable and maintain a strong safety net, which the current climate makes essential now more than ever.

Since 1993, a device for promoting and supporting investment brought many fiscal and custom advantages for every investor whether national or foreigner (tax mitigation,

Inclusive payment on wages paid, decreased customs costs...). On the other hand, the state has subscribed to all international conventions ensuring the guarantee of investments, the freedom of repatriation of profits and dividends, etc. Thus, the regulation of the bank of Algeria guarantees the repatriation of the funds of foreign currency and of any regular imported capital as well as the transfer of dividends calculated in the portal of the contribution in foreign currency. Since February 2000, foreigners had been no longer held regardless of the reason for their stay.

The privatization of the public sector that must be relevant to the profitable companies, with a large market and sufficient competitiveness has since been aimed at time. It is carried out in various ways, including the introduction on the stock market. This method used to open the capital of the EriadSetif society, SAIDAL and EL AURASSI. All these introductions have great success: the application has exceeded the number of available actions.

The insurance sector is not excluded from a privatization movement whose most appropriate way is the current stock introduction, because of the profitability if companies, as the national Council for State Participations has just entrained the CAAR for the first opening operation of the capital.

In the sector, insurance companies are changing today in a context of economic growth and inflation. The tendency to control inflation is constantly manifested clearly through the non-hydrocarbon GDP deflator.

1.2. Evolution of reinsurance in Algeria:

1.2.1. Central Reinsurance Company:

CCR (La Compagnie Centrale de Reassurance) s a joint-stock company with a registered capital of 22 billion DA owned by the Algerian State. The Company is headquartered in Algiers (Ouled Fayet).

«Nevertheless, the CCR continues to occupy a major place in the reinsurance landscape in Algeria. Indeed, the CCR offers its capabilities in various reinsurance lines to its national and international clients. In addition, the CCR centralizes insurance against the effects of natural disasters, under the guarantee of the State, by reinsuring all the insurance companies of the Algerian market.

The activities of the CCR extend to all forms of reinsurance and all branches of insurance. For this reason, it is in business relationship with all Algerian insurance companies as well as with a multitude of partners (insurers, reinsurers and brokers) around the world, and with which, it develops a volume of business important and benefits both nationally and internationally from a good brand image (Rating B + issued by the AM Best Rating Agency).

Based on the data provided by the AM Best Rating Agency at the end of 2016, it is noted that over the last 5 years, the CCR has the best technical performances represented by the "loss ratio" and the "combined ratio" of all reinsurers in the MENA region rated by the rating agency AM Best.

In addition, the CCR actively participates in the regional organizations OAA, GAIF, FAIR, FANAF. She is a member of the AWRIS and FAIR Pools and Pools, African Pool Aviation and Non Pool, Asian Pools Non Marine and Aviation.

One of the main strengths of the CCR is the quality of its qualified and multidisciplinary human resource. Our managers are rigorously selected, and they undergo extensive training courses in reinsurance business, both at home and abroad, with advanced training courses at the largest reinsurance companies in the world, in order to be able to serve our customers, both national and international. Our human capital benefits from a competitive work environment, and integrity is one of our main currencies.

In terms of social responsibility, the CCR integrates social, environmental and economic concerns into its activities on a voluntary basis. Thus, the company sponsors a number of sports events, including those aimed at young categories, certain university activities (with our partners

IEDF, ESC, USTHB, etc.), in addition to certain charitable activities for the benefit of disabled associations. »¹

Sub-section 2: updating the market

2.1. Updating the Algerian market:

2.1.1. Insurance companies in Algeria:

Currently, there are 16 public or private insurance companies in the Algerian insurance sector.

- The only reinsurance company in Algeria: CCR.
- The public company CASH (Compagnie d'assurance des Hydrocarbures) that has been created by SONATRACH, NAFTAL, CAAR and CCR has been added to the 3 old public insurance companies, directly agreed to practice all branches even reinsurance: SAA, CAAT, CAAR;
- 4 new private insurance companies not specialized (TRUSA(1998), 2A and CIAR (1999), EL BARAKA OUA EL AMANE (2000));
- 2 mutual specialized companies: CNMA (for agricultural insurance) and MAATEC (for the need of education workers);
- 3 public specialized companies: GAGEX (for exporter's warranty), SGCI (for investments) and AGCI (for mortgage);
- Two private companies STAR HANA and AL RAYAN that belong to bank groups (BCIA, AL RAYAN Bank) however, they stopped the activity of insurance.

«These companies generated an annual turnover of 460 million Euros, in 2006 and close to 538 million Euros (+16 percent) in 2007. Pursuant to laws governing the revaluation of fixed assets, certain companies benefited, in 2007 from an increase in equity following the incorporation of a

¹<https://www.ccr.dz/index.php/fr/presentation> (consulted 14/03/2019 at 00h18), translated by me.

revelation adjustment, which resulted in a significant improvement in the solvency margins of these companies and the market as a whole. »¹

Unlikely, Algeria has a weak insurance product in comparison with neighbor countries. «The average expenditure on insurance product increases to 467 Euros, in Morocco, while Algeria reaches approximately 20 Euros. »²

So as we can see the life insurance has blink space in the Algerian market, while vehicle and person insurance implies an important role; «it progresses fast (13.6 percent) with a turnover that exceeds 4 billion of dinar. »³

2.2. Stakeholders in the Algerian insurance market:

«The institutional framework of the Algerian insurance market is composed of three autonomous institutions:

- The National Insurance Council (CNA):

Is the framework for consultation between the various parties involved in the insurance activity, it is a force for reflection and proposal capable of preserving the interests of the parties involved in the consultation.

- the Commission de Supervision des Assurances (CSA) :

Acts as the supervisory administration through the insurance structure of the Ministry of Finance through the insurance inspectors.

- the Central Risk Office (CR):

Is part of the insurance structure of the Ministry of Finance. Its mission is to collect and centralize information relating to property and casualty insurance contracts taken out with insurance companies and authorized foreign insurance branches. »⁴

¹«Guide to investing in Algeria», KPMG,edition 2011, p.275.

²REMINI Amine ;

³ Op.cit ; 37-38 ;

⁴TAFIANI (B), « Les assurances en Algérie », Ed : OPU et ENAP, Alger, 1987, P 24, translated by us

Beside other actors are involved in the Algerian insurance market, such as general agents, brokers and banks and insurers. All these stakeholders are under the supervision of the Ministry of Finance.

- The Ministry of Finance:

Insurance and/or reinsurance companies may only operate after obtaining approval from the Ministry of Finance. The latter shall ensure the protection of the rights of policyholders and beneficiaries of insurance contracts, the soundness of the capital base of insurance and reinsurance undertakings and their ability to honor their commitments.

Note: The creation of a subsidiary requires a capital of one billion dinars and some companies argue that this amount is very high and beyond their reach so some of them prefer to seek a partnership with existing subsidiaries.

Two (2) mutual: CNMA and MAATEC. Reinsurance practiced by the CCR.

Specialized insurance provided by: CAGEX, for export credit insurance, and SGCI, for real estate credit insurance.

Sub-section 3: Foreign presence in the insurance market

Foreign presence in the Algerian insurance sector is low. We can mention the French players and the participation of operators in the near and Middle East, with whom so-called "takaful" (i.e. sharia-compliant) insurance policies have emerged.

For the actors of the French market, the lifting of the Algerian-French dispute was undoubtedly an opportunity for the creation and/or partnership between the different actors of the two countries. This was followed by the partnership agreement between the Mutual Macif and the national company SAA, Cardif Al Djazaïr, which was created as a result of the partnership between CNEP-Banque and BNP, and recently (in 2011) the creation of the mixed companies AXA damages and AXA assurance-vie

As for the large international brokers (direct and reinsurance), their current absence is linked to the impossibility for them to establish themselves freely.

Section 3: Reinsurance Captives

Sub-section 1: captives

1.1.Captives history:

For years, large companies have had to realize that self-insurance can be economically attractive, especially since insurance companies have not been able to satisfy the needs of their clients. The principle being simple, large companies actually create called CAPTIVE, which receives bonuses from an insurance company called FRONTIER INSURER. In turn, the said subsidiary to reinsure some of the risks with the market reinsurers.

As a result, the affiliate played premiums earned by the parent company, which can make the investment while compensating the taxpayers likely to be registered.

the will of the big groups by creating subsidiaries or captives is to ensure a better management of risk to which they are exposed and to save an economy often considerable thanks to a better pricing.¹

1.2.Captive:

A captive is a subsidiary company (insurance or reinsurance) owned by an enterprise or an industrial or commercial group. Its mission is to insure the risks of the owner group by meeting several objectives, mainly financial and tax, but also to guarantee risks that are difficult to insure via the traditional insurance circuit. Let us shed light on insurance and reinsurance captives, their operating models and insurance fronting.

With an insurance and/or reinsurance captive, the company acquires a financial tool that allows it to better manage its retention, optimize the performance of exchanges with the insurance market and better control claims compensation.

¹*Guide des captives à Luxembourg*, published June 2003, translated by us

1.3. Shape and function of captive:¹

1.3.1. Direct insurance captives:

Perform the same function as a direct insurer. They are very rare due to the strong regulation of the insurance sector.

1.3.2. Reinsurance captives:

Are more frequent. They act as reinsurers for the direct insurer and may in turn retrocede part of the risks assumed.

1.3.3. Rent a captive account:

Are captive accounts leased from reinsurers? This form does not require capitalization in the beginning.

1.4. Captive insures risks:²

- Risks traditionally ceded to the insurance market
- Uninsurable risks such as: Risks related to new technologies, Risks related to pollution or asbestos, Risks with excessive accumulation risks (such as the consequences of a prolonged transport or postal strike);
- Commercial risks (such as currency risks, political risks, fluctuations in commodity prices, etc.).
- Risks that do not weigh on the group but on its customers. The captive then behaves like a traditional insurer.

¹«Best's Captive Directory», review, 2001 Edition Update,

²«L'actualité de l'assurance dans le monde», Atlas magazine, Mars 2004

1.5. Advantages and disadvantages:

Table II-2: Advantages and disadvantages of reinsurance captives

Benefits of insurance captives	Disadvantages of insurance captives
<ul style="list-style-type: none"> • Reduction and stabilization of risk costs over the long term • Effective prevention incentive: the loss experience is not fully transferred to the insurance and reinsurance market • Custody of a portion of the financial income generated by premiums and reserves and a portion of the underwriting results usually transferred to insurers • Access to the reinsurance market 	<ul style="list-style-type: none"> • Captive operating costs (payment of a fronting commission) • Cost of claims to which the captive will be exposed: in the event of a high loss experience, the captive's retention capacity could be fully absorbed before the end of the financial year • High cost of protection to guarantee the group's risks beyond its own retention

Source: «Best's Captive Directory», review, 2001 Edition Update,

1.6. the reasons for creating a captive:

1.6.1. Motivations related to localization:

Some locations are extremely attractive for a captive reinsurer because of the stable and advantageous environment enjoyed by these locations or by the quality of recognized financial center; they have adopted legislation favorable to the development of activities related to insurance and reinsurance. Economic, financial and social stability play a very important role, thus constituting a major asset for the national groups, not to mention the fiscal aspects.

1.6.2. Structural motivations:

Insurers are subject to binding regulations, namely in drafting insurance contracts in order to protect victims, policyholders and third parties by taking advantage of more flexible legislation. It will allow reinsurers to expand their capacity to cover greater risks. The captive can absorb this amount, which can jeopardize his financial position. Economics of commission fees for

intermediaries, even more with access to adequate cover at its own risk against the consequences of a disaster

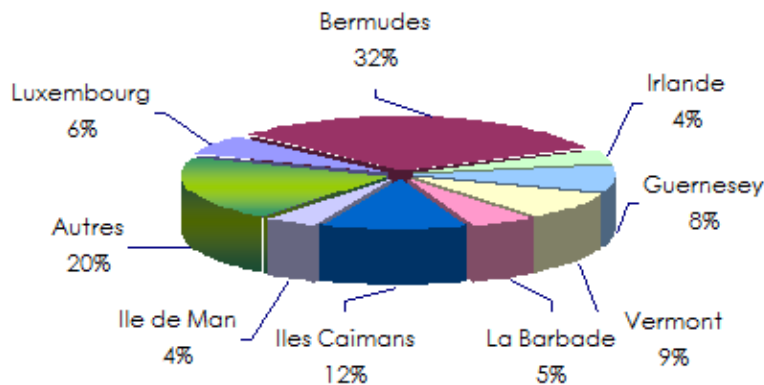
1.6.3. Financial motives:

by choosing the best risks known as own risks that do not have a significant loss ratio instead of paying premiums to reinsurers, allowing it to record a reinsurance allows in addition to saving costs will set up.

Sub-section 2: Insurance captives around the world

According to "Best Captive Directory 2001", there are 4,458 captive companies operating worldwide, more than 30% of which are based in Bermuda. The other main locations are the Cayman Islands followed by the State of Vermont (United States).

Figure II-6. Distribution of insurance captives worldwide



Source: *Best's Captive Directory 2001*

2.1. Captive insurance in emerging countries:

The evolution of insurance captives around the world has been accompanied by a no less important development in Africa, particularly in southern African countries where cellular captives (similar to "rent a captives") have begun to develop. as early as 1993. However, this development took place in the absence of specific legislation.

Some emerging countries wanting to provide a more attractive framework for private insurers have regulated the sector. Two countries have embarked on this path. These are Bahrain and Mauritius.

2.2. Example of big petroleum groups that create captives:¹

Among the major oil and industrial groups that have created a reinsurance captive we distinguish the following:

- Sasol, the South African giant has two reinsurance captives, one based in Manila Island and the other in Ireland;
- Pemex, Mexico, has a captive for more than 14 years based in Bermuda;
- Petronia, Malaysia;
- Petroleos, Venezuela, has a powerhouse in Bermuda;
- Petrobras de Brasil was a captive during the year 2011;
- Saudi Aramco;
- Petroleum Qatar.

Sub-section 3: management of reinsurance captives²

As soon as insurance activities have developed, it has become necessary to lay down the rules concerning the legal, contractual, technical and financial framework governing the relations between the parties to the contract, the obligations of the parties, the control of the insurance companies and reinsurance, the elements that must appear in the contract, etc. In most countries, reinsurance companies are subject to the supervision of

The condition that applies to the gross portfolio, that is, their gross premiums and their commitment. Consequently, the control is considered as an optimal guarantee, which renders any supervision of the reinsurers superfluous. Indeed, the notion of control has evolved over time. In addition, has its meaning gone? Gradually from the strict framework of sanction or veto, to that of guidance and assistance.

¹REMINI Amine ; Op.cit ; p 58.

²*Guide des captives à Luxembourg*, published June 2003, translated by us

As a result, control concerns have also undergone a profound, wide and varied change in direct insurance, their field of application being rather limited at the level of reinsurance.

The supervisory authorities differ from one country to another, but the common point is that all of these depend on the financial sector. Among the services that can be provided by these supervisory authorities, we will distinguish:

- to receive and instruct any application for approval;
- to supervise the insurance, reinsurance and insurance intermediary sector;
- to coordinate the execution of government initiatives and measures aimed at the orderly expansion of insurance and reinsurance activities in Luxembourg;
- to follow the files at the community and international level;
- to present to the government suggestions for improving the legislative and regulatory environment.

In this chapter, insurance has been presented as the best tool to protect oneself from the events and hazards of life. Insurance covers all areas of economic and social life: maritime, Air, heritage or individuals of individuals, companies or industrial groups, and most risks. It is therefore linked to the development of trade and businesses, as well as to economic and social developments then it was said that reinsurance ultimately helps the insurer to monitor its risks by allowing it for example to compensate for the most catastrophic. In addition, as the number of risks facing companies today has never been so high. To counter them, there is notably the "captive". It is a reinsurance company, a subsidiary of an industrial or commercial group, whose mission is to insure the risks of its parent company. This requires the integration of the insurance business into the groups.

Some sites are extremely attractive for the creation of a reinsurance captive because of the stable and advantageous environment they enjoy or the quality of the recognized financial center, they have adopted legislation favorable to the development of activities related to the insurance and reinsurance

In this case, internationalization is necessary for the success of the captive in terms of cost minimization. It is in the next chapter that we will prove that.

Chapter Three: study case SONATRACH Ré

After, a theoretical part talking about cost reduction strategies, fundamentals of insurance and captive, now we start our practical part trying to discuss ultimately, result of our qualitative and comparative studies, in the end of the chapter, with what we mentioned in a theory.

The chapter will be structured in the following:

Section one will present the mother society SONATRACH a its risks.

Secondly, we will present SONATRACH Ré and procedure of its creation and its importance;

Finally, we get into the study case studying our two opted studies: qualitative and comparative.

In conclusion, we are going to refuse or confirm the hypothesis suggested previously, finding solutions and recommendations.

Section 1: presentation of SONATRACH

Sub-section 1: field of activity of SONATRACH

1.1. Presentation of SONATRACH:

SONATRACH is an Algerian government-owned company formed to explore the hydrocarbon resources of the country. It is the largest and most important hydrocarbon company in Africa. SONATRACH adopts a diversification strategy; their activities cover all aspects of production: exploration, extraction, transport, and refining. It has diversified into petro-chemistry and the desalination of seawater. It operates the largest oil field in Algeria and in another regions; it has some concessions in Libya, Mauritania, Peru, Yemen and Venezuela.

SONATRACH is the 11th largest oil consortium in the world and the fourth exporter (3rd exporter of GPL, 4th of GNL and 5th exporter of natural gas), with a turnover of 77 billion of Dollars (realized in 2009). «The company, which employs approximately 120,000 workers, produces 30% of the GNP of Algeria. Annually it produces 206 million Tone of Oil Equivalent (TOE), including 24 million TOES, or 11.7% of total, for the Algerian domestic market. »¹.

¹<https://en.wikipedia.org/wiki/Sonatrach> (consulted 15/03/2019, at 11h25);

In addition, SONATRACH is:

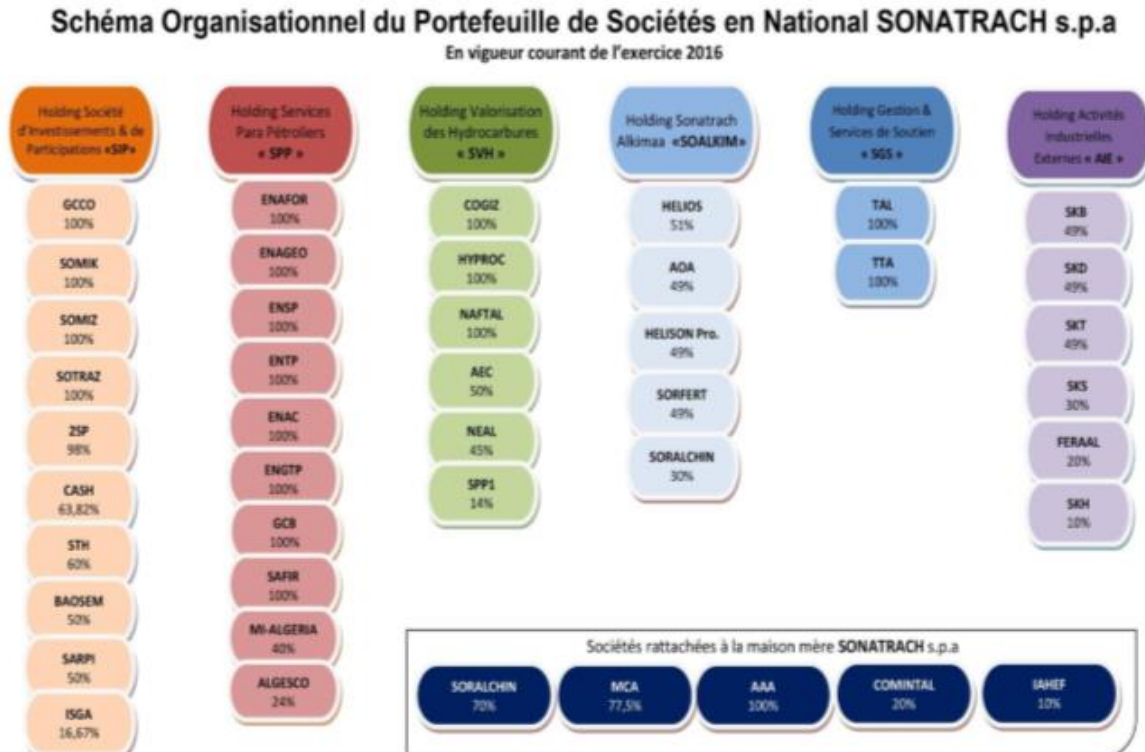
- The first African company;
- 12th petroleum company in the world;
- 13th worldwide company of hydrocarbon liquids (in reserve and production);
- 6th worldwide company of natural gas (in reserve and production);
- 25th petroleum company basing on effectives.

1.1.1. SONATRACH portfolio:

a. National portfolio:

SONATRACH's national portfolio is organized as a holding company and each holding company is in turn composed of several companies, as illustrated in the following figure:

Figure III-1: Figure National Portfolio of SONATRACH companies



Source : rapport annuel de SONATRACH 2016

This figure shows the diversity of SONATRACH's fields of intervention in multiple fields ranging from work on wells, drilling, and distribution of petroleum products to seawater desalination, which confirms the size and power of this group and its contribution to the national economy.

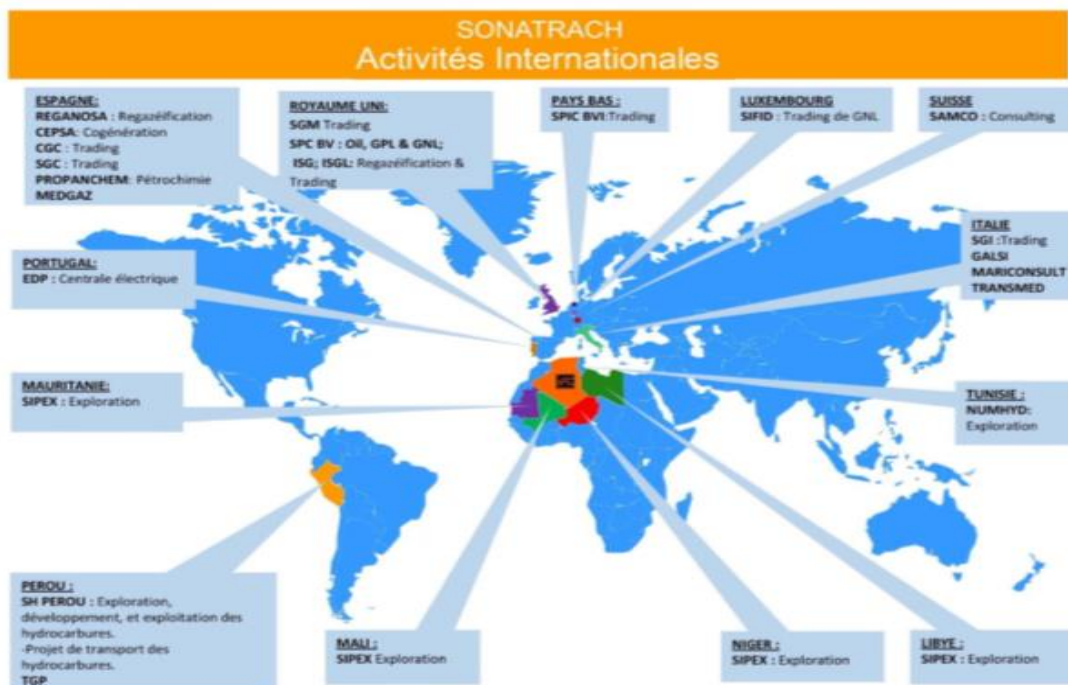
In addition to the companies where SONATRACH is a 100% shareholder, several participations are shown in the figure.

The purpose of the holding company organization, which is also called a holding company, is to combine interests in various companies and to ensure their management unity.

b. International portfolio:

SONATRACH is also present on the international scene, which gives it the vocation of a multinational company. Like the national portfolio, SONATRACH has subsidiaries and shareholdings as shown in the figure below:

Figure III-2: International Portfolio of SONATRACH companies



Source : rapport annuel de SONATRACH 2016.

The majority of subsidiaries and/or international investments are engaged in trading. The others are divided between exploration and financial risk management and reinsurance.

1.2. Macro-structure organism of SONATRACH:

The organization scheme of the SONATRACH macrostructure is organized around the following structures (Appendix 01):

- General direction;
- Operational structures;
- Functional structures.

Sub-section 2: finance group of SONATRACH

2.1. The organization of the finance group coordination of SONATRACH:

2.1.1. Corporate Finance Department:

Corporate Finance Department is headed by an Executive Director (CEO). It is composed of five departments (Appendix 02) and cell (Appendix 03):

- Insurance sub-Department;
- Taxation sub-Department;
- Wealth Management sub-Department.
- Cell: A Captive (purpose of our study).

The cell; Captive is responsible for the following operations:

- The authorization of the related costs for the day-to-day management of the captive;
- The organization and follow-up of the boards of directors;
- Please ensure that the decisions of the Board of Directors are implemented;
- Launching calls for tenders within the scope of its activities;
- Ensure permanent reporting to the group's management;

- Carrying out studies to promote its development.

2.2. risk presentation of SONATRACH:

2.2.1. SONATRACH risk decomposition:

The focus of the insurance department is the insurance and protection of the assets, whatever their nature within the SONATRACH group. The most important risks of SONATRACH are articulated around its activities, namely the activity:

- Upstream (production-association);
- Transport of hydrocarbons by pipeline;
- Downstream (liquefaction, refining, petrochemicals).

All these activities are a source of risk:

- Operational risk: among the risks that may occur:
 - Damage to industrial installations caused as a result:
Damage, fire, explosion, machinery breakdown, natural events (earthquake, flood...), acts of terrorism and sabotage.
 - Operating losses and additional costs (loss of gross margin)
- Risks related to the renovation and development of industrial facilities:
 - Damage to projects under construction/assembly and anticipated operating losses;
 - Damage to existing installations during assembly or construction and subsequent operating losses.

2.2.2. Insured Capital (values at risk):

In, 2010, the value of the SONATRACH group has insured capital was estimated at approximately:

Total insured value/ USD	40,000,000,000,000
Overall premium/USD	44,000,000,000

These assets break down as follows:

Figure III-1: Decomposition of SONATRACH's insured capital

Insured Assets	Insured Value/USD	Insurance Premium/USD
Downstream activity (GLIZ, GL2Z, GL4Z, GP1Z, GP2Z, CP1Z, RA1Z, GL1K, GPLK, RA1K, CP1K and unity PEHD, refining, petrochemical).	14 000 000 000	20 000 000
Upstream activity (gas treatment unit/oil treatment unit DP and AST)	14 000 000 000	10 000 000
T.R.C activity (installation and piping)	12 000 000 000	3 000 000
Drilling machines (ENTP/ENAFOR)	10 000 000 000	3 000 000
Upstream activity of well control	Total well depths	3 000 000
SONATRACH, general civil liability	Total payroll	1 000 000
third party liability for victualing	galvanizing volume	400 000

Source: «montants approximatifs», internal company source, translated by us

2.3. Importance of the risk in SONATRACH:

We have observed that SONATRACH risks are giant because of the nature of activities (risky, uncertain, dangerous...), besides to sums insured by installations are also high. Therefore, there is an importance of these values at risk on the insurance and reinsurance level.

We can define the impact of this importance through the following:¹

- Weakness of the capitalization of Algerian insurance companies and consequently of their retention on SONATRACH risks;
- Use to a large extent of the support and financial capacities of the international reinsurance market;
- Use of the optional reinsurance model due to the complexity of the risks and especially the importance of the values involved;

¹REMINE Amine ; Op.cit ; p 84-85

- in this world of reinsurance, the conditions of coverage and pricing (premium rates) are dictated by the international market;
- These conditions vary from year to year depending on the market situation (market cycle);
- Claims are managed and controlled by the reinsurers themselves under the so-called claim's control clause.

Sub-section 3: observations with SONATRACH

3.1. Insurance progress within SONATRACH:

The reinsurance international market is the principal provider of financial capitals to heavy companies such as SONATRACH. It has considerable assets that need the protection of several insurance companies (national and international). 30 company covers 70 percent and CASH, CAAT, CAAR and CCR cover the rest (30 percent).

CEO of CASH explained that financial capacities of reinsurers are not sufficient to meet insurance risk values of industrial and hydro carbonic sector SONATRACH is present on the international reinsurance market in order to be financially covered.

«The disaster that devastated the SKIKDA oil refinery in 2004 is an example. In addition, SONATRACH alone has been able to benefit from significant international reinsurance by recovering \$500 million from abroad. "It's the equivalent of 30 years' worth of insurance premiums," CEO of CASH says, recalling the importance of buying coverage. »¹

However, SONATRACH cannot address this market directly, because:

- It has to pass first by local insurance market to issue an insurance policy, it is a legal obligation;
- Annually, it organizes call for tenders in two stages, according to the procedure in force at group level.

¹<https://www.djazairress.com/fr/infosoir/120923>, (consulted 20/03/2019 at 01h36), translated by us

Thus, we can observe a dispersed use of Algerian insurance companies in the international market to obtain the conditions.

«This use of scattered ranks combined with the annual organization of calls for tenders had a negative effect on the conditions and above all on the cost of insurance borne by SONATRACH (lack of loyalty to reinsurers, which is a fundamental element in the profession). Reinsurers are indeed forced to set their prices bearing in mind that they could lose the business at the end of a year of cover "insurance is a long-term relationship".

the financial efforts made by SONATRACH in terms of installation safety, staff training, upgrading and rehabilitation of the various units did not have a significant impact on insurance prices. The role of communication towards the market was not well understood by local companies, which were more concerned about winning tenders.

An often, ex-post control (after the entry into force of insurance policies) of reinsurance investments by SONATRACH, which was able to discover certain irregularities in reinsurance investment despite all the measures taken in its specifications.

Withdrawals by local insurers were proposed during the competition and proved insufficient to place the entire risk on the market, which could have caused significant damage to SONATRACH (discovered in terms of coverage). »¹

3.2. The crisis in the global financial system and its impact:²

- The volatility of portfolios and downgrades in the ratings of the world's leading reinsurers (we cite the near-miss facility avoided by the US government in the case of the AIG insurer);
- Cases of bankruptcy could occur in reinsurance, as in the banking sector;
- Further reduction in the number of players and concentration of capacity through merger/absorption mechanisms between reinsurers;
- Reduction in available financial capacity.

¹REMINE Amine ; Op.cit ; p 86-89.

Expected consequences on the reinsurance business:

- Very few leaders in energy insurance who would agree to rate the SONATRACH risk and take a significant part in it as is the case until then (remember that AIG took up to 28 percent of the SONATRACH risk);
- Disappearance of the notion of leader and followers (important):
 - In the past, to place a risk like that of SONATRACH, a leading reinsurer, with knowledge of the risk and experience in its management, sets the price and conditions and takes a share ranging from 5 to 20 percent on the risk. The other reinsurers simply followed the leader's price and conditions.
 - The financial difficulties experienced by the majority of reinsurers (events of September 11, the hurricanes in the USA and other major claims throughout the world), have led each reinsurer to decide freely on the risk and set its own conditions and price, which are sometimes significantly different from those of the leader.
 - The current financial crisis is likely to exacerbate this practice, making it difficult to maintain the current tendering scheme.

In the end, it is for all the above reasons, and thanks to the different experiences, SONATRACH has become aware:

- That the international market is the inevitable means of obtaining the insurance coverage that the group needs;
- That all the conditions of the insurance contract that SONATRACH subscribes each year to on the local insurance market are dictated by the international market;
- That the best way to give a true picture of SONATRACH risks remains direct contact with the international market without intermediaries.
- that the implementation of a tool to bring this closer to the market is likely to enable the SONATRACH group to hope for better coverage of its risks and substantial reductions in insurance-related costs.

In conclusion, after having presented the macro structure of SONATRACH and having made a statement on the values insured by SONATRACH on the international market. Without having the capacity to control its investments on the world reinsurance market without speaking of the substantial amounts in terms of currency transfer, we have deduced that the idea of setting up a captive reinsurance company is more than essential.

Considered as a risk management tool, this captive Reinsurance Company will allow SONATRACH to reaffirm its position on the reinsurance market and ensure better control of its protection programs and costs.

Section 2: Presentation of SONATRACH Ré

Sub-section 1: Field of activity

1.1.presentation of SONATRACH Ré:

"SONATRACH Ré" is a reinsurance captive, with a share capital of 20 million euros and Created on 19 November 2007, SONATRACH Ré is based in the Grand Duchy of Luxembourg. AIM (Aon Insurance Managers), a subsidiary of AON specialized in the management of captives in the Grand Duchy of Luxembourg, was selected, after a call for competition, as an approved manager for a period of one year. CASH, a subsidiary of the SONATRACH group, was selected as the "front-end" insurer to place the first \$10 million line on behalf of SONATRACH Ré. The company will initially only be able to assume industrial risks, well control and drilling rigs for an amount not exceeding \$10 million.

Since its creation, SONATRACH Ré, which is a subsidiary, has contributed 82 percent on a first line of damage risks up to USD 10 million per claim.

The balance of 18 percent of the first line is divided between a 3 percent net retention for the CASH ceding company and the mandatory transfer of 5 percent.

SONATRACH has adopted the assumption based on a retention of ten (10) million USD distributed among subscribers as follows:

3%: Insurer (Fronteur),

10%: Legal transfer - CCR,

5%: Conventional sale - Africa Ré,

82%: SONATRACH Ré.

The risks covered include the industrial risks that are:

- Lot1: SONATRACH complex RI: Enip, Naftec.
- Lot2: industrial complex and production facilities: Agip, Association,
- Lot3: all oil installations and construction machinery, COC roofing, COC roofs, AF drilling rigs.

1.2. Existence and feasibility:

SONATRACH Large Oil Group is known for the importance of industrial risks that are disproportionate to the Algerian insurance market, which leads to the establishment of fixed insurance conditions between Algerian insurers and international reinsurers that cover 90 percent of the real risks.

In response to this type of situation, most major companies around the world, including oil and gas companies, have created their own tools to deal directly with reinsurers,

This tool is most often a captive reinsurance company, a vehicle that allows, first, greater flexibility and then, in the long term, to gain increasing control over insurance.

1.3. Creation:

The project to create the captive was approved by the SONATRACH AGM on 01.02.2007 - resolution no. 5.

This agreement includes:

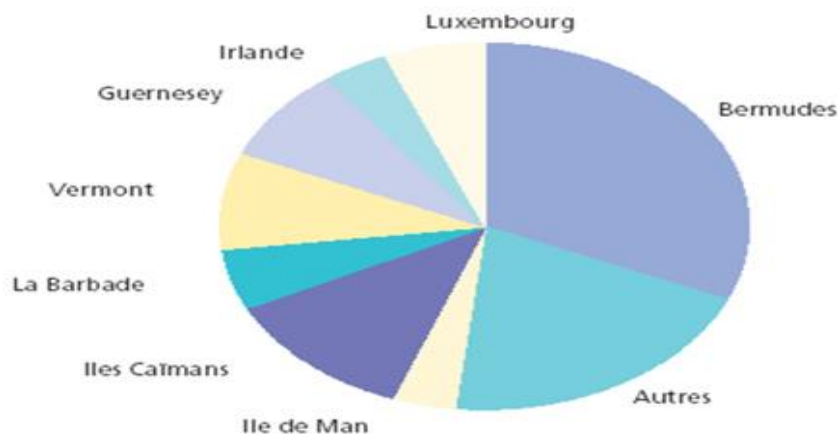
- The list of shareholders: SONATRACH Spa & SIHC Holding,
- The amount of the share capital of: 20 million euros,
- The legal form: Public limited company,
- The place of its registered office: Luxembourg (GDL),

- The name: SONATRACH Ré.
- The share capital is divided between the shareholders at 18 million euros, 90% for SONATRACH spa and 2 million euros, 10% for SIHC.
- The choice of Frontier Insurer: As a subsidiary of the S SONATRACH Group, CASH Hydrocarbon Insurance Company was chosen as the Frontier Insurer of the Company.
- The choice of the Captive Manager: a working group was set up for this purpose, in collaboration with the consultant "Gras Savoye", 5 managers were consulted, the choice was made for the AON/AIM manager;
- Obtaining the agreement in principle from the Commissariat aux Assurances Luxembourg: July 2007;
- The preparation of the file relating to the application for approval by the Commissariat aux Assurances;
- The Commissariat aux Assurances gave its approval on 19 December 2007.
- The appointment of Directors;
- The legal creation of the Company: November 19, 2007;
- Choice of auditor: following a limited consultation, DELOITTE SA was selected as the Company's auditor.

Sub-section 2: implementation

2.1. Choice of domicile:

Figure III-2: Distribution of captives worldwide in 2005



Source : (REMINI, (Amine) : *Le processus et l'impact de création d'une Captive de Réassurance*, magister's thesis in commercial sciences, Ecole des Hautes Etudes Commerciales d'Alger, 2011,)

It appears from these statistics that Bermuda is at the forefront in terms of the domiciliation of reinsurance captives.

SONATRACH's desire to establish itself successfully on the European reinsurance market has led it to focus on two possible domiciliation: Luxembourg and Ireland.

So here, a Benchmarking has been made and Luxembourg has been chosen to be a place of implementation of SONATRACH Ré:

2.2. Why Luxembourg?

Luxembourg is a fully diversified financial center with particular strength in certain areas. It is the second largest investment fund center in the world after the United States, with 1,700 billion euros under management, and the largest private banking center in the Eurozone.

«Luxembourg is also the largest captive reinsurance domicile in the European Union. Companies from around the globe have domiciled over 250 captive reinsurance companies in the financial center. They have chosen Luxembourg for a variety of reasons:

- Luxembourg is a stable democracy with a strong economy and a neutral position in the European Union;
- Luxembourg's unique multilingual and multicultural workforce is accustomed to working in different jurisdictions and time zones;
- Economic, social and political stability ensure a secure legal and tax framework. »¹

Therefore, the specificity of the Luxembourg tax system, which makes it all the more attractive, is constituted by technical provisions - i.e. provisions for claims to be paid and for risks in progress - that enjoy a special status. This is also the case for provisions for fluctuations in claims experience (P.F.S.) which lead to tax exemption.

The aim is to provide tax benefits (income tax exemption) while establishing tax-free provisions that allow Captives to strengthen their financial capabilities from year to year and gradually reduce the level of risk transfers.

Faced with the many States that have introduced the captive reinsurance company mechanism into their legislative arsenal, Luxembourg, which is not considered a tax haven, is a strategic location that offers both accounting and tax advantages.

The Luxembourg financial center also offers great flexibility in the management of captives, having developed a unique experience in the provision of "turn-key" management of captive companies.

¹members of the LFF Reinsurance Working Group, «Luxembourg Captive Reinsurance Company», brochure, January 2009 ;

2.3. The provision for loss fluctuation (PFS):¹

Luxembourg legislation requires reinsurance companies to consult a provision for loss fluctuation (P.F.S) in accordance with very strict regulations. The creation of the provision for loss flare-ups reduces the risk of insolvency, which could run the captive reinsurance company in the event of a significant loss.

The presence of this provision allows the captive reinsurer to cover and/or increase its risk retention with a low probability of occurrence and to use the traditional reinsurance market only to protect itself against exceptional risks. It should be noted that the captive reinsurance company is exposed to heavy and undiversified risks.

Reinsurance companies must establish sufficient technical provisions. For classes other than life insurance, provisions for outstanding claims, risks in progress and unearned premiums must be established. For the life branch, life insurance provisions and the deferral of premiums must be calculated in accordance with the actuarial rules accepted by the supervisory authorities, the insurance commissioner. For all classes, the law requires the creation of a provision for loss experience.

This provision is set up to cover future risks and expenses that reinsurance companies may have to bear in the event of an exceptional loss.

The Luxembourg PFS consists of the transposition of Article 30 of European Directive 91/674 of the Council of Ministers of 19.12.1991, on the annual and consolidated accounts of insurance undertakings, which provides for «The equalization provision includes all amounts provisioned in accordance with legal or administrative provisions to equalize fluctuations, in claim rates for future years or to cover special risks". These legal and administrative provisions can be summarized as follows:

- The constitution of this technical provision, which is tax deductible, is reserved for reinsurance companies authorized by the Commissariat aux Assurances.
- The annual allocation must be equal to the technical and financial results of the insurance company.

¹ Le mensuel d'AGEFI Luxembourg, Juillet 2000 ;

- The annual allocation must not result in a loss after taxes for the financial year or a loss carried forward. When the operations generate a loss for the year, the PFS must be reintegrated into the income statement up to the amount of the deficit in order to offset the loss. When the reinstatement of the provision is insufficient to offset the company's loss, the balance of the loss may be carried forward indefinitely for tax purposes.
- The PFS must be established separately for each risk category. A ceiling is set for each category of reef. The PFS appearing on the balance sheet must not exceed a limit equal to the sum of the individual limits set for each risk category.

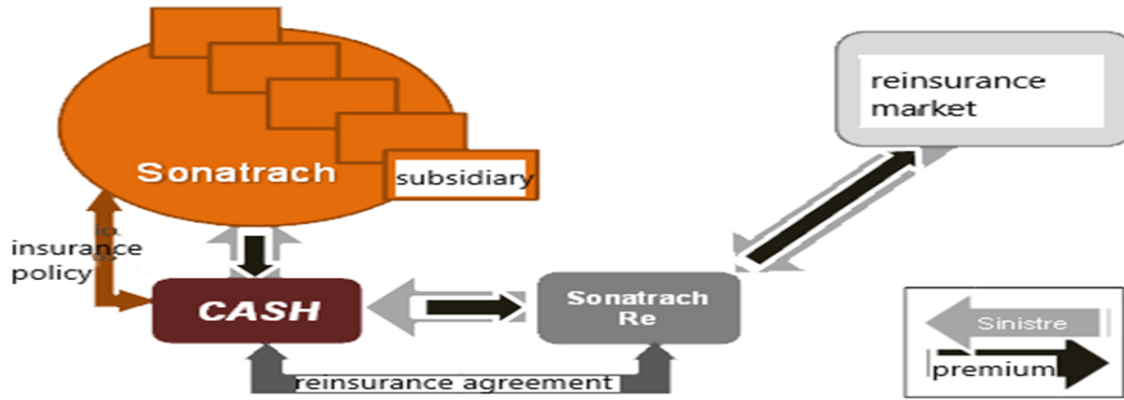
Each limit is equal to a multiple of the average amount of the average net earned premiums (earned premiums after deduction of ceded reinsurance, cancellations and commissions) over the five last years for a given risk category. Multiplier coefficients are set by the commissioner and are based on the initial business plan.

- When, following, for example, a decrease in premiums received or a change in risk category, the PFS exceeds the limits mentioned above, the excess must be reinstated in the income statement and thus becomes taxable.
- the balance of the PFS must be reinstated in income upon liquidation of the company.
- Under certain conditions, the Commissioner may authorize a moderate allocation for one or more accounting periods.

Sub-section 3: the impact of SONATRACH Ré creation

3.1. Functioning:

Figure III-4: Operation of SONATRACH Ré



Source: developed by ourselves.

- Insurance agreement:

Signed between the front-end insurer and SONATRACH Re, its purpose is to reinsure part of the risks related to the activities of the SONATRACH group as defined in the special conditions.

- Retrocession agreement:

In order to enable the reinsurance captive to protect itself, it retrocedes part of the risk for which it is responsible to the reinsurance market by means of a retrocession agreement containing general and specific conditions similar to that of the insurance agreement referred to above.

3.2. Impact in terms of results:

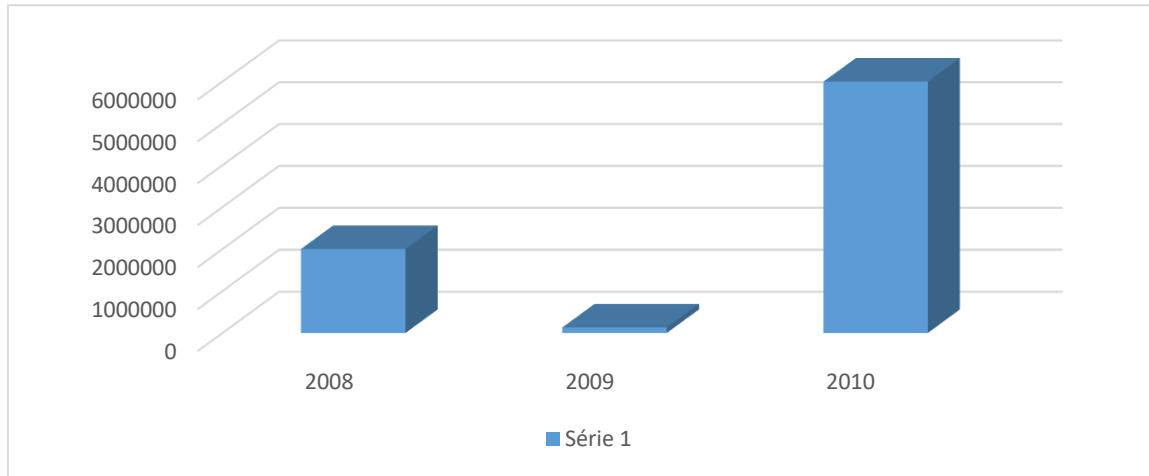
The following statistics show the evolution of the subsidiary's results over the last three financial years 2008, 2009 and 2010.

Table III-1: evolution of the company's results between 2008 and 2010.

Exercice	2008	2009	2010
Results	2000000	130000	6000000

Source: SONATRACH information

Figure III-1: Evolution of the company's results between 2008 and 2010



Source: SONATRACH information

We notice from this graph that the company's result decreased significantly during the 2009 financial year due mainly to the frequency of claims incurred, that the captive has set aside provisions for their possible reimbursement.

3.3. Impact in terms of premium economy:

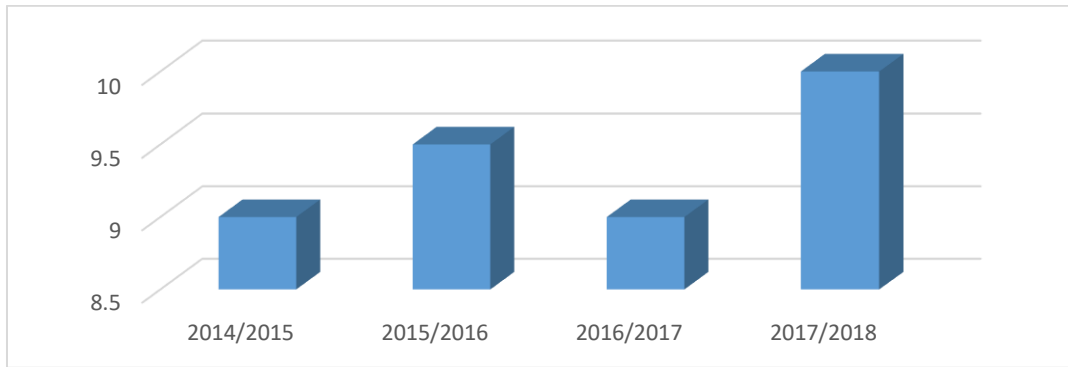
The following statistics show the evolution of the subsidiary's insurance premiums (exercice 2014-2018), in millions Euro.

Table III-2: Evolution of the company's insurance premiums between 2005 and 2010.

Exercice	2014/2015	2015/2016	2016/2017	2017/2018
Insurance premium	9	9.5	9	10

Source: SONATRACH information

Figure III-2: Evolution of the company's insurance premiums between 2014 and 2018.



Source: SONATRACH information

We will notice from this graph that the company's insurance premiums reached record amounts following the January 2004 disaster in SKIKDA GLIK.

3.4. Impact in terms of cost and activity control:

The creation and the captive made it possible:

- To reduce insurance costs and the total cost of risk in the company by USD 18 million in a single year;
- To protect himself, in a way proportional to his risks his size.....
- To pool the Group's various risks;
- To position itself on risks that are insurable and uninsurable in traditional markets;
- To regulate the volatility of the Group's risks from one year to the next;
- To be directly involved in the al reinsurance markets, which are real risk carriers;
- To train SONATRACH staff in new reinsurance practices.

Section 3: the study case SONATRACH Ré

The cost reduction strategy will only be effective if the structure in which it operates is fully known, so that its specific features can be taken into account. The establishment of a unit in the field of reinsurance and captives requires a prior analysis of the existing situation and to do so, we have chosen one of these two methods: a so-called qualitative and a second called comparative.

We will demonstrate this upon this section.

Sub-section 1: qualitative study

1.1. Qualitative study:

We chose qualitative study to describe the how, using interview guide, interviewing executives in semi directive interviews, who are familiar with SONATRACH's environment. Our research consists in understanding how the SONATRACH Group could diminish its costs through the strategy of integration and internationalization.

1.1.1. Definition of interview:

Interview is defined as a scientific investigation process that uses a communication process to collect information relevant to the purpose.

According to the Larousse dictionary: «Interview refers to a conversation between two or more people on different subjects. People can be friends, family members or others. »¹

The interview differs from the questionnaire itself. Indeed, direct contact (visual and/or verbal) as well as the researcher's low directivity are likely to encourage the interviewee to build his or her thinking. Therefore, it is not an interrogation, but an interrogation.

A process that allows for the collection of a person's verbal testimony. To do so, the reach, the researcher must adopt a neutral position, almost content to listen the other one.

1.1.2. Interview types:

There are three different types of interviews:

¹<https://arlap.hypotheses.org/8170>, (consulted le 05/21/2019 at 15h43), translated by me.

- The directive interview consists of a series of open-ended questions, or closed asking for short answers. where the interviewer realizes very clearly, and little stimulus.
- The semi-directive interview corresponds to a series of questions open, previously established by an interview guide. In this case, it is up to the respondent to build his or her thought around the object of research. The researcher guides him so that he does not leave the object of study.
- The non-directive interview is based on a general theme, and serves to understand the individual in his or her singularity and history. We let the respondent speak as he or she wishes.

1.1.3. The reasons that led us to choose Semi-directive interview:

Semi-directive interviewing was chosen as an information gathering tool for many reasons, such as:

- Allow the interviewee the opportunity to express his or her opinion on the subject;
- The questions asked are relatively open-ended, which allows the interviewee to obtain as much information as possible from the interviewee;
- The semi-directive interview allows the investigator to keep the informant within the objective framework of the research.

In addition, most often used this interview in the field. It allows obtaining information and opinions on previously established topics, to understand the opinion of the respondent, to deepen important points but also to set up a participatory approach.

a. The semi-directive interview consists of 3 phases:

the preparation of the interview, the carrying out the interview, transcribing and reporting on the interview. The interviews conducted revealed the need to adopt a dual approach:

- The first was to position oneself in a non-directive way in order to create a climate of trust, to explore the reasoning of our interlocutor.

- The second, more directive, was intended to collect information on the themes previously established. We have tried to achieve this by first using a calm and calm tone. Then, at the beginning of each interview, we took care to reassure the interlocutors about the many names that would be used to describe the physical activities of in the heart of nature. Then at the end of each theme, we re-expressed the comments collected to ensure that we understand them and to allow for a more flexible transition to next theme.

We have sometimes been surprised, when, as they reasoned, they interlocutors were already answering the questions to come. To compensate for this, we put everything as well as these questions, stressing that they had already answered some of them...

1.2. Interview guide methodology:

The interview guide is a support for the interviewer, a checklist that lists the topics that will need to be addressed during the discussion. It can take a more formal form or less detailed, in our guide interview contains 4 main axis with questions. Its role is to provide the investigator with details of the subject of the study. It was built with reference to documentary investigations and a theoretical university approach.

1.2.1. The objective:

Our objective is to try to understand whether SONATRACH Ré as an international subsidiary contributes to cost reduction. To carry out this work, the qualitative study was chosen in the form of individual interviews with the specialists who work to ensure the smooth running of the unit. This option is justified by the purpose of the study, which requires an analysis by the financial department and the responsible of the captive SONATRACH Ré, to ensure that it meets the conditions for the development of this tool, and to gather the positioning and opinions of various executives. As such, free expression is a major condition for gathering as many ideas as possible and deepening them.

1.2.2. study tool:

For the study, the method of administration chosen is a semi-structured individual interview, which allows interviewees to speak and express themselves on a subject, while verifying specific points with the help of pre-established questions. This choice is justified by the nature of the

research theme, while ensuring that the interview includes the main lines of assessment to assess the situation.

1.2.3. Sample of the study:

In order to achieve the objectives of the study, it was necessary to identify and approach the executives and managers operating within SONATRACH Ré and authorized to provide authorized answers.

The choice of these frameworks was based on multiple criteria:

- A small sample with extensive experience and knowledge of the company is a key factor in conducting qualitative research.
- The sample selected is the basis for many decisions made within the management.
- The selected sample is made up of executives who represent a reliable source of information.

Indeed, we interviewed 03 people who work in the financial department within the SONATRACH Group, whose functions are as follows:

- Head of the captive reinsurance department, SONATRACH Ré.
- Two financial and accounting managers.

1.2.4. Preparing for the interview:

To be able to achieve the objectives of our research, we established an interview guide (see appendix 04)

Our guide has been designed as follows(see appendix 04) :

- A presentation of our theme and the purpose of our research.
- The axis that we will address.
- A fact sheet for each interviewee.

The areas covered during the interview were as follows:

- ❖ Axis 01: strategy, insurance and reinsurance: in which we wanted to know the relation between strategy and insurance.
- ❖ Axis 02: SONATRACH and strategy: to get deep into SONATRACH's strategies.
- ❖ Axis 03: SONATRACH Ré, a reinsurance captive, a SONATRACH's subsidiary: to understand implementation of the captive its strategies and goals in cost reduction.
- ❖ Axis 4: Facing future: and here to have some potential plans and put future action towards cost management.

1.2.5. Progress of the interview:

The interview we conducted can be summarized in three steps:

- Step one: The preliminary contact.
- Second step: The interview process.
- Third step: Synthesis of the results.

a. The preliminary contact:

This step is very important; indeed, it was necessary to interest the interviewee in our research and find a time slot that suited him/her.

We took advantage of our practical internship period at SONATRACH; to identify executives who could be useful to us in our research. The study was communicated; similarly, we agreed on an appointment to discuss the subject further. As mentioned above, we were interested in three executives among others. As a result, we asked them if an interview with them would be possible. We received their favorable opinion and conducted these interviews over two days in the same week (Tuesday and Thursday).

- Tuesday 30/05/2019: Mr. REMINI Amine the head of the captive reinsurance department, SONATRACH Ré.

- Thursday 02/05/2019: Mr. BENKHELELI Mehdi et Mrs. NEKAB Fella are two financial and accounting managers.

b. The interview process:

The interviews lasted on average 1.5 hours, during which the interviewees expressed themselves freely on the subject. In order to get the most detailed answers, it took:

- Ensure that the interviewee does not lose sight of the original purpose of the study;
- Follow-up with the interviewee to further refine his or her analysis and thoughts.
- ❖ Tuesday 30/05/2019: We visited Mr. REMINI Amine in his office to conduct the scheduled interview at 10am. We started with a short presentation of the interview guide, the themes to be addressed and the objective of the research. After finishing the presentation, we started the interview by asking the questions that were in the paper copy that we sent to our interviewees a week before the interviews took place. The interview with Mr. REMINI Amine lasted 30 minutes and he answered questions that seemed affordable to him.
- ❖ Thursday 02/05/2019: On the second day, we had our second interview with Mr. BENKHELELI and Mrs. NEKAB. He was able to answer half of our questions in a 15-minute period, but the interview with Ms. BENAMMAR Amel lasted 30 minutes, during which she was able to answer all the questions and at the same time provide us with additional information about her role as planner.

c. Synthesis of the results:

The last step in the process of our interview is the synthesis of the results obtained, and we have done so as follows (see appendix 05):

- We listened to the voice recordings several times so that we could get the information we need for our research.
- The information obtained was transferred to a paper medium.
- The results obtained were followed by comments to be able to make a synthesis that will allow us to make our project a reality.

Sub-section 2: comparative study

2.1. Definition and purpose of the comparative analysis:

2.1.1. Definition:

The comparative study can be defined as a decision support tool based on a collection, analysis and comparison of information for a given purpose. Gold all the comparative analyzes do not pursue the same ends, and in doing so they do not all involve the same degree of difficulty in collecting information. It is why, it is appropriate as a preliminary. to grasp the different realities that can cover the notion of comparative analysis in order to identify the methodology to be followed in particular context of our study.¹

2.2. Comparative analysis as a tool of choice:

When the comparative analysis concerns products, it answers a problem of choice. The information collected to carry out this type of study can then take various forms the realization of surveys, tests or test benches, or more simply it can rely on vendor publications. The choice of a collection method will depend on the purpose and purpose of a comparison, regardless of the form of the comparative analysis (benchmark or comparative). Four basic criteria characterize, it a collection of information a shaping and restructuring of information a process of validation or quality control a high realization cost. The comparative study is therefore a product of simple appearance because the result is schematically a table with two entries (the range of objects "on the one hand, and the parameters or characteristics on which they are studied. Yet, whatever form it may take, comparisons on the other hand) "²

2.3. Determination of the purpose of the comparative:

It is up to the study manager to determine what is worth comparing: the range of products that we want to take into consideration. On this point, the decision maker usually has already his idea. However, when the comparative study is about products, it should not be restricted from the outset to a narrow segment. One pitfall to avoid is to reason in terms of solution rather than needs. We demonstrate in the second part of our presentation that the precise object of the comparative can be clearly identified only after a thorough study of the needs.

¹Amélie .FONDAMERE, *Analyse comparative de SIGB*, october 2004

²Eric Sutter, p 112

Sub-section 3: Analysis and discussion

3.1. Answers of interview guide:

The results are in details (see appendix 05)

3.2. Analysis of the answers:

3.2.1. detailed analysis:

Axis 01:

1. According to the interviewees we found that the strategy is a set of instructions that represent an action plan according to the objectives of SONATRACH
2. The three opinions of the interviewees show that SONATRACH has opted for a strategy consisting in knowing how to place the major risks that it carries out with respect to its assets, among foreign reinsurers with cash. And so it takes a strategy to choose the reinsurer reinsurance risks given the high premiums of \$ 54 million

Axis 02:

1. The interviews led us to know that: SONATRACH's insurance strategy is well structured. It is based on economies of scale by moving towards the insurance market with all the risks of all insurance companies (CASH, SAA, CAAR, CAAT). For the purpose of reducing costs (insurance premiums). In addition, we structure it in:

Figure III-2-Insurance strategies of SONATRACH

Source: elaborated by ourselves

2. In terms of source of information: the strategy of internationalization seeks to create more wealth, through the reduction of costs, settling in a country where regulations allow them to earn more.
3. According to the interviewees, we notice that SONATRACH integrates in strategic management the internationalization strategy, which is indeed a goal for SONATRACH because internationalization means to make a profit. The installation is made in the most strategically appropriate countries in terms of legislation, costsetc. like Switzerland, Spainetc.

Axis 03:

- 1 and 2. The interview shows that SONATRACH creates the captive to reduce costs in the first place (reducing insurance premiums) and the company will reinsure this through a strategy that consists of choosing the part that. - even SONATRACH Ré. This implies that SONATRACH is controlling its risks from an international point of view because SONATRACH is open to the international reinsurance market.
3. According to the interviewees, the captive had to be made elsewhere because of the Algerian legislative obstacles that will prevent us from creating a captive than by the existence of a local insurer.

4. The information indicates that SONATRACH chose to integrate the insurance service to reduce the large insurance premiums transferred into the insurers' account as opposed to the former outsourcing strategy. Therefore, this captive has two strategies: (integration strategy and internationalization strategy). SONATRACH integrates the insurance business and internationalizes the reinsurers, the market, the country...
5. According to the interviewees, SONATRACH pays less insurance premiums, thanks to this captive and we can notice that in the evolution of the premiums from 2006 to 2010.
6. So, the captive had a positive financial aspect of her creation, because there was only expenditure as the capital and the dividends that build society. Therefore, nothing has cost SONATRACH and it has made more money according to the PFS indicator.

Axis4:

1. In the long run, they think that the captive will always help reduce costs and that through SONATRACH freedom of choice of risks.
2. Thus, the result of the captive is injected into the provision (PFS) to have result 00, but the profit is realized and allows having new risks.

3. And 4. they believe that:

- SONATRACH is in the expected position and result.
- Expected financial effectiveness is a risk diversification strategy for the captive.

5. The interview also led us to know that Luxembourg's strategic choice is made based on legislation and security. Luxembourg is a country that has a serious regulation and well controlled by the authorities of the European Union, which are quite strict. Therefore, the fact that Luxembourg is a tax advantage is better.

6 and 7. According to the interviewees, they keep their opinions on SONATRACH's future strategies for dealing with the potential risks of taxation and legislation, and therefore the conservation of the opinions of those in charge are due to:

- SONATRACH does not have a future strategy for future international risks especially in terms of changing tax and other laws

- SONATRACH has a strategic watch that officials do not want to disclose to avoid the hack of information.

3.2.2. Brief analysis:

According to the 3 interviewees, we notice that there are 2 objectives of SONATRACH Ré:

- Cost reduction.
- Risk management (expand risk portfolio): SONATRACH itself insures more risk than before.

Moreover, we have noticed that:

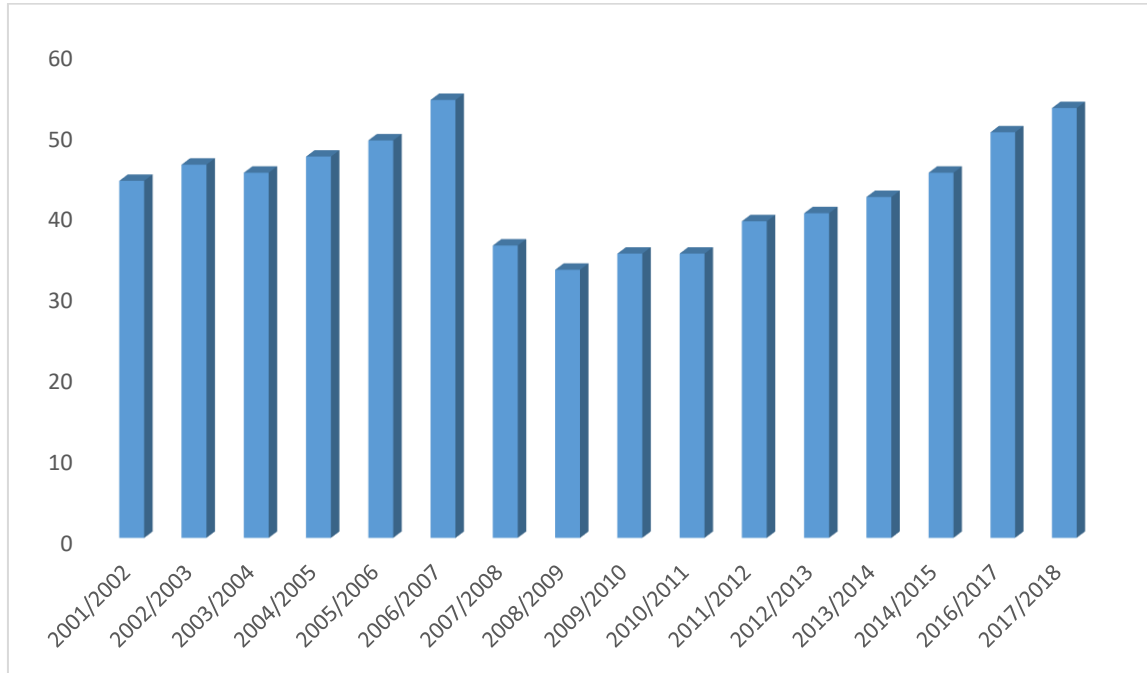
- The implementation of the captive in Luxembourg has really positive impact on the costs reduction and that's via:
 - ✓ PFS and taxation system that lead the captive to been more saving

There are other factors that influence as well positively the efficiency of SONATRACH Ré such as:

- ✓ It is multicultural country.
- ✓ Luxembourg is a stable democracy with a strong economy and a neutral position in the European Union;
- ✓ Luxembourg's unique multilingual and multicultural workforce is accustomed to working in different jurisdictions and time zones;
- The captive opted for the integration strategy and the internalization strategy, that has helped it to reduce more costs, and this through:
 - ✓ SONATRACH chose to integrate the insurance service to reduce the large insurance premiums transferred into the insurers' account as opposed to the former outsourcing strategy. So, this captive has 2 strategies: kongourou bag (integration strategy and internationalization strategy). SONATRACH integrates the insurance business and internationalizes the reinsurers, the market, the country ...

3.3. Evolution of Insurance Premiums :

Figure III –3: Evolution of premiums



Source: SONATRACH information

According to the histogram of premiums evolution, we notice that:

- 2001-2007: we can observe that insurance premiums are in the average of 46 million dollars US o we see a light increase in the premiums in this period to get to its climax on 2006-2007with a amount of 54 million dollars.
- 2007-2008: the evolution of premiums saw a real concession on the year of creating the captive; from 54 to 36 million dollars US which saved 18 million dollars.
- 2010-2018: since 2010, we notice a light augmentation in the premiums (2010-2018) to get to 53 million dollars US by 2018, and this augmentation is due to recorded incorporation and exchange loss of the currency.

The recorded incorporation is that SONATRACH Ré includes each year new risk to be reinsured and covered.

The exchange loss is that when the creation of SONATRACH Ré they used the euro as currency to social capital and this had been continued in activity until 2015 when they changed the currency to dollars and this due to managerial choices and decision besides the legislative and financial causes.

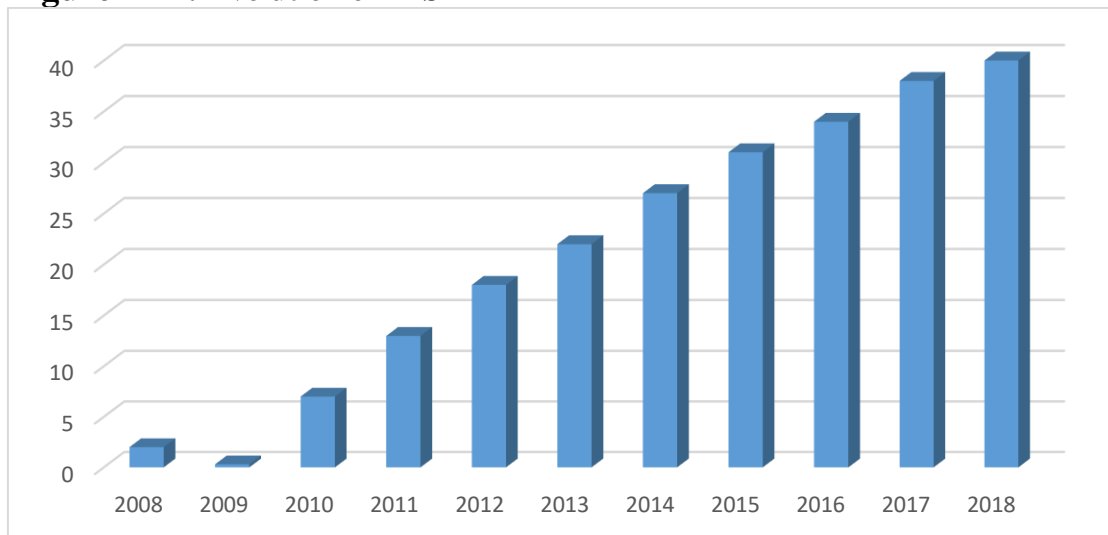
The head of the department reinsurance captive said: "2018/2019, we have had five losses, so we paid 20 million dollars of premiums and in the others hand we gained 81 million dollars of claims".

- Basing on his statement, we acknowledge that the year 2008-2009 witnesses a sudden fall in the premium to 20 million dollars US because it has been 5 losses, so SONATRACH Ré realizes a benefice of 33 million dollars in comparison to the last year. Thus, besides the 81 million dollars that is gained as a claims versed by the contribution of clients as (TASSILI airlines...)

3.4. Evolution of PFS:

SONATRACH Ré was created in 2007 but until 2008 it has been put into activity:

Figure III-4: Evolution of PFS



Source: SONATRACH information.

Table III-5 Evolution of PFS

Years	PFS achieved	PFS ceiling	% achieved
2008	2.4	23.9	10.04
2009	0.2	25.2	0.22
2010	6.6	24.7	6.62
2011	13	25	52
2012	17.7	25.6	69.14
2013	22.2	23.7	93.67
2014	27	30	90
2015	30.8	30.8	100
2016	34	35	97.14
2017	37.7	49.4	76.31

Source: SONATRACH information

- Before 2008: PFS equals 00 and that is because PFS does exist only in Luxembourg; one of the advantages of creating captives and international implementation.
- 2008-2009: We notice from this graph that the company's result decreased significantly during the 2009 financial year due mainly to the frequency of claims incurred, that the captive has set aside provisions for their possible reimbursement.

we notice that PFS covered only 0,22% of the ceiling which indicates that the result of SONATRACH Ré was not really considerable, and this because: the captive has just started its activity of reinsurance, back then. so automatically there was few clients that pay less premiums.

- 2009-2017: we notice that SONATRACH Ré has made a very significant result.it is appeared in the histogram by a heavy augmentation in the realized amounts of PFS to achieve 100% from PFS ceiling, in 2015.

This means, that SONATRACH group is incorporating more risks from its subsidiaries , so, they pay more premiums. in case of no loss (2009-2016) the PFS increases as a result because the received insurance premiums from clients are considered as claims for

SONATRACH, in deed, that will be transferred to PFS, to protect itself from heavy taxation.

3.5. Perspectives and Recommendation:

3.5.1. In term of internationalization:

SONATRACH Ré is making profits out of the adopted strategy of internationalization. The implementation in Luxembourg has made the mother company to realize considerable gain in a comparison to before creating the captive (SONATRACH used to pay 45 million dollars US annually)and this due to the priviliges offered abroad in Luxembourg(as PFS...see more in section, 2- sub-section1, why Luxembourg?).

However, it faces the danger of any sudden change in the taxation or legislative laws in Luxembourg. In this point, SONATRACH has to create or force, obligatory, its strategy intelligence in order to be protected from any potential events in the external or the internal environment; via:

- Giving a clear visibility to SONATRACH Group in term of the quality of risk control in all operational activities (for example by using mapping monitoring software realized).
- Extend a range of services as opposed to a reinsurance captive in the strict sense of the term.
- Follow the international market of insurance and reinsurance, get opportunities and adapt its protection in term of retrocession next to the same characteristics. And this in order to realize other substantial insurance premiums to make the group more dependent on the market.
- Partnership extension (joint venture...)

3.5.2. In term of costs:

SONATRACH is reducing its costs and this via creating the reinsurance captive SONATARCH Ré. The mother company auto insures itself ; it verses premiums to the captive (passing by CASH), which will be transferred as a consequence to SONATRACH in case of no loss(because the insurance premiums are not taking by the other insurers anymore), consequently

SONATRACH is not outgoing but gaining a, in the case of the claims that will be versed to SOANATRACH in case of loss. Generally, the more premiums the more liquidity. So, in order to increase more financial resources. it ought to:

- provide reinsurance capacity for the risks of the SONATRACH group
- reinsuring market risks on a selective basis
- reinsure the supplier or subcontracting risks of the SONATRACH group
- Provide in-depth training for SONATRACH Ré staff on unmeasured risks to broaden their risk portfolios and increase premiums.
- Encourage foreign investment while SONATRACH has placement abroad.
- make credits with interest for qualified investors.

3.5.3. In term of integration:

SONATRACH integrated its insurance activity and stopped externalizing it nearby other insurers.

SONATRACH has made a real successful decision by opting for the strategy of integration. That indicates that it is good and careful in what concerning strategies. Even though if we see SONATRACH since its creation in 1963, it does not witness any problems regardless strategies adopted.

As it is mentioned in “*le grand livre de stratégie*” by the Boston consulting group(see chapter three, section 3, sub-section2), the integration strategy really helped SONATRACH to have an autonomous control, reducing cost and the opening to new market which is the international (case of creating SONATRACH Ré).

It’s recommended to update this strategy with the new international conditions. In order to acquire important knowledge and skills that can help to gain experience with less risk to better decide internationally.

Conclusion

The objective of our research was to determine the impact of the creation of an insurance captive within SONATRACH with regard to the reduction of insurance costs.

Companies in all sectors are looking for different ways to adopt cost minimization policies to increase their profit margins, these policies can start from a simple reduction of daily expenses by going towards event load perspectives as it is the case for premiums, where does the concept of captive reinsurance come from.

The captive reinsurance represents a strength element on which the industrial company is based, like the reduction of the premiums, the strategy allows him a self-financing of the risks according to adequate contracts with the strategy of the company itself without having to pursue systems imposed by other insurance companies, this even affects risks not insurable by traditional insurance and which will be insured in their turn.

Our research work focuses next to the captive insurance, on the internalization of the latter by positioning it in Luxembourg which in turn allows opening international doors to the company especially and Algeria in general.

This work, which was divided into interconnected chapters to answer the main problematic, was based on a set of previously defined steps.

First, we started with a literature search that aimed to determine the key concepts and theories of the strategy namely the integration and internationalization strategy and the cost reduction strategy, which they have been linked with the captive insurance system which aims to minimize these costs; this part allowed us to connect our two search variables to obtain a theoretical model on which our practical case is based.

Secondly, we carried out a practical study within SONATRACH to obtain professional opinions and information on the reduction of costs in the company by using an insurance captive located in Luxembourg through the investment strategy. 'Integration. This practical study was made using a mixed approach of the qualitative method and the comparative method.

The main results obtained during the 3 interviews conducted within the SONATRACH with senior executives are as follows:

- SONATRACH Ré aims to: minimize costs, ensure management risks;

- The international implementation of SONATRACH Ré has a positive impact on the minimization of costs via the privilege of Luxembourg as PFS and the taxation system;
- SONATRACH integrates the insurance activity via the creation of the reinsurance captive and it has been open on the international market via the implementation in Luxembourg.

Through the practical part, we were able to verify the hypotheses posed in our introduction, which made it possible to answer the problematic formulated as follows: "How does the creation of the captive contribute to the reduction of the costs of the companies? »

• Hypothesis 1: Confirmed

All executives have confirmed the positive impact of implementing a reinsurance captive in Luxembourg, on the reduction of costs via:

- PFS and taxation system that lead the captive to be more saving Beside of other factors that influence as well positively the efficiency of SONATRACH Ré such as: Being Luxembourg a multicultural country, a stable democracy with a strong economy and a neutral position in the European Union;
- Luxembourg's unique multilingual and multicultural workforce is accustomed to working in different jurisdictions and time zones.

• Hypothesis 2: Confirmed

After our comparative analysis to the most important factors in the premium economics (PFS and insurance premiums), more precisely: SONATRACH Ré. We have found that the creation of the captive contributes positively in cost reduction and this not only concerning insurance premiums but other financial resources. so, the reinsurance captive allows the group to save significant financial resources.

• Hypothesis 3: Confirmed

At the beginning, SONATRACH has always outsourced the insurance service so it has paid significant insurance premiums. Therefore, to reduce the costs of the mother company, it decided to integrate the insurance, and that through the creation of the captive SONATRACH Ré via

opting the strategy of integration and internationalization such as the installation on Luxembourg and the opening on the international reinsurance market.

- The results obtained allow us to have an answer to our initial questioning by confirming that SONATRACH's strategy of setting up an insurance captive in Luxembourg effectively reduces the company's insurance costs.

These results have contributed to try to study the future plans of SONATRACH's strategy and to open the questioning of the company's strategic intelligence to student researchers later.

The difficulties encountered in doing our work were mainly the lack of people with whom we could do interviews to acquire more information and a lack of free documentation.

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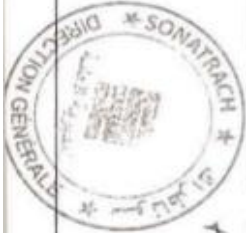
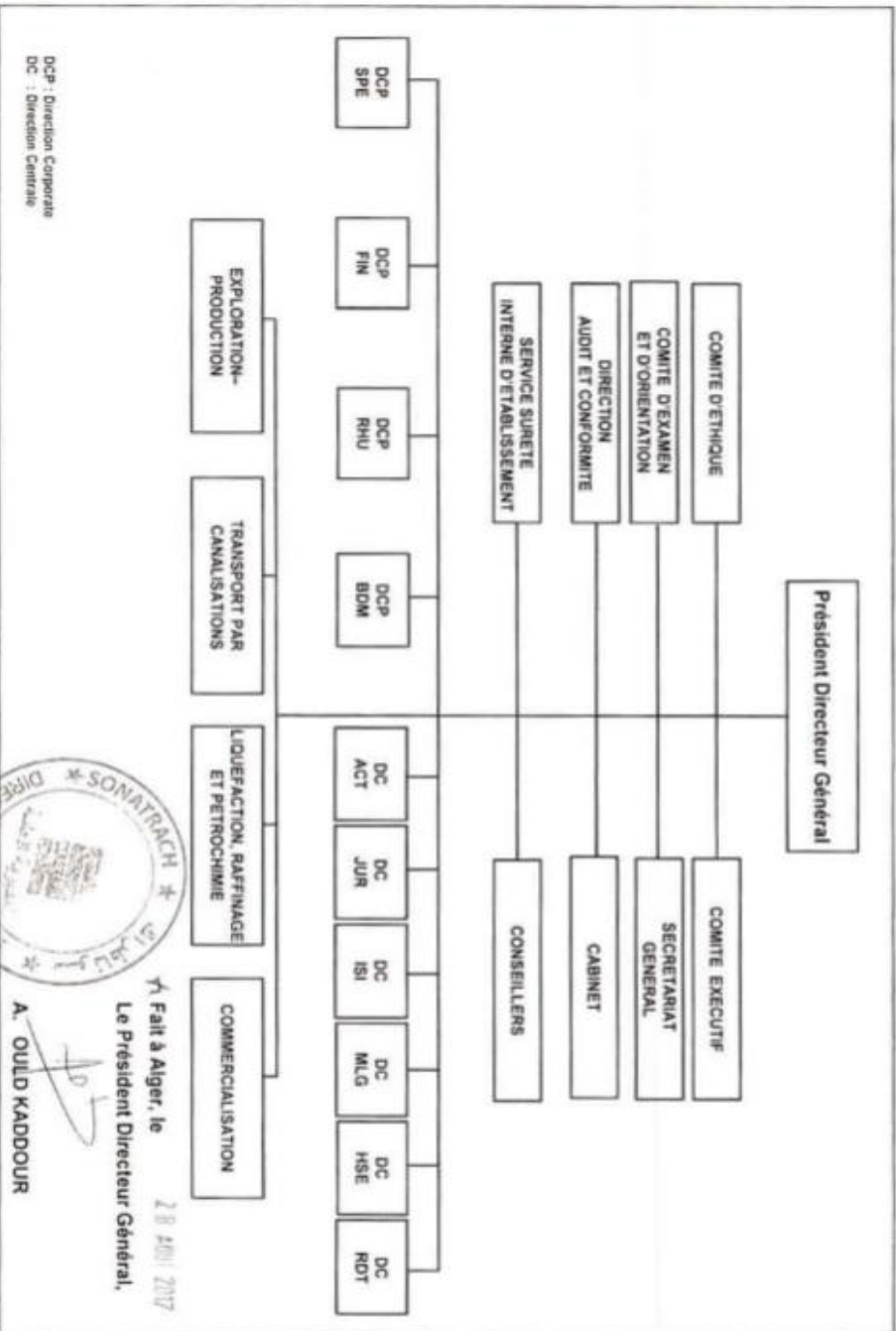
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Appendices

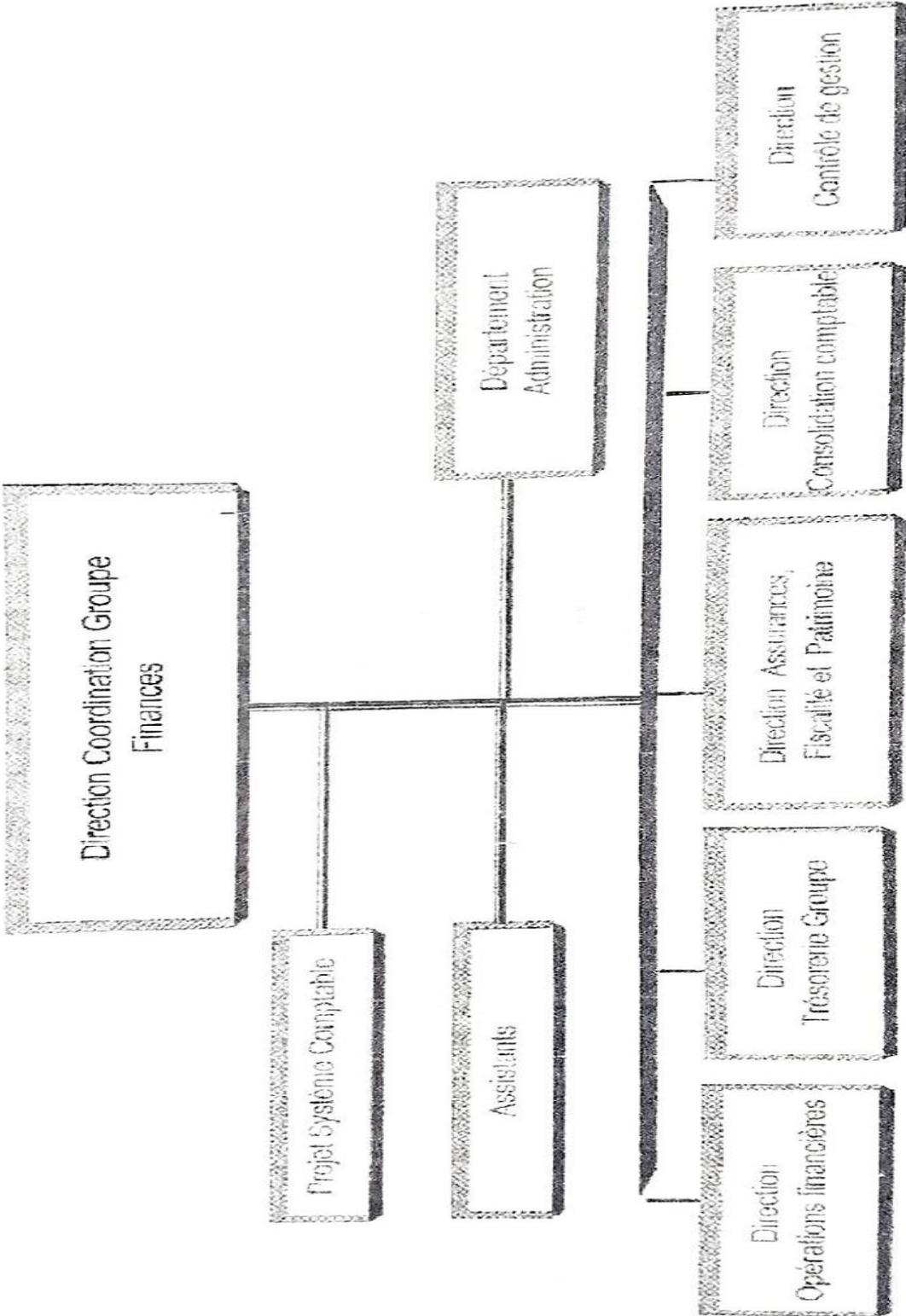
organigram of SONATRACH

ORGANIGRAMME DE LA MACROSTRUCTURE DE SONATRACH



Fait à Alger, le 28 Avril 2017
 Le Président Directeur Général,
A. OULD KADDOUR

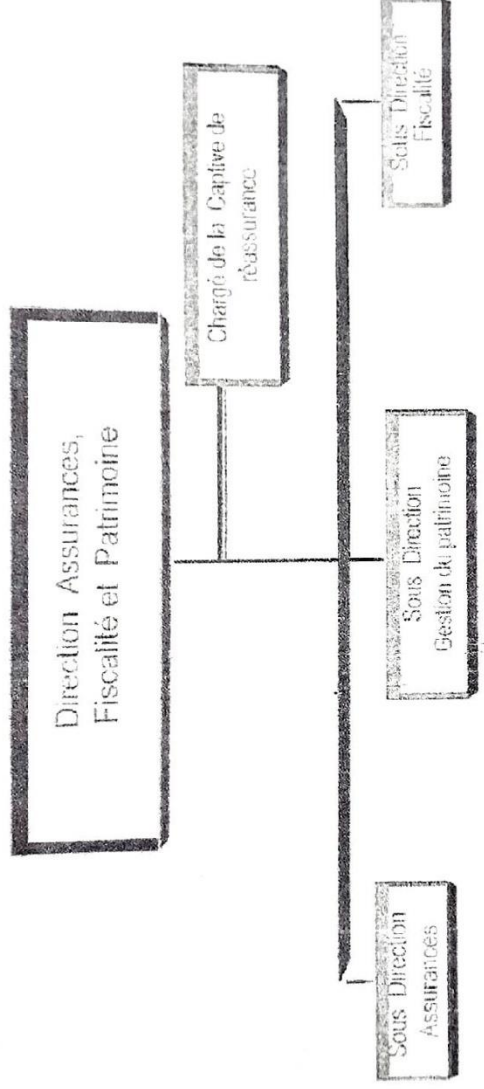
**Organization chart of the direction of the management
coordination group finances**



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**Organization chart of the insurance, tax and wealth
department**

ORGANIGRAMME DIRECTION COORDINATION GROUPE FINANCES



Fait à Alger, le 04 MARS 2006

Le Président Directeur Général,

M. MEZIANE

Interview guide

INTERVIEW GUIDE

To whom it may concern,

As part of a research project for a master in commercial sciences at the Ecole des Hautes Etudes Commerciales EHEC, we have the honor to solicit you to participate in our interview.

Indeed, our thematic research is « The strategy of reducing costs through the creation of a captive reinsurance company», Study case: SONATRACH Ré.

Thank you for giving us some of your time.

I will remain at your entire disposal for any further information. You can reach me by contacting: chaima.kl.hec@gmail.com

SONATRACH used to externalize its Insurance and reinsurance services, however after 2008 it changed its strategy, they opted for an integration strategy!! A new subsidiary has been created in order to guarantee the Insurance and reinsurance services for SONATRACH.

Axis 01: strategy, insurance and reinsurance

- How to define strategy?
- What is the link between strategy and insurance/ reinsurance?

Axis 02: SONATRACH and strategy

- What is SONATRACH's insurance strategy?
- What is the role of internationalization strategy in SONATRACH?
- Is internationalization strategy an integral part of strategic management?

Axis 03: SONATRACH Ré, a reinsurance captive, a SONATRACH's subsidiary

- Why has SONATRACH created the subsidiary SONATRACH Ré?
- Do you think SONATRACH created this subsidiary to reduce costs, in the first place?

- How to reduce insurance costs through the creation of a captive reinsurance company?
- Why did SONARACH choose to internationalize its subsidiary, reinsurance captive?
- How could SONATRACH adopt the integration strategy through the internalization strategy in the creation of SONTRACH Ré?
- what is the impact of SONTRACH Ré since its creation and how would you describe its evolution since then?
- What was the financial aspect of the creation of SONATRACH Ré and the financial evolution of SONATRACH Ré?
- What is the real objective of SONATRACH Ré?

Axis 4: Facing future

- Do you think that SONATRACH Ré will have no impact on cost reduction in the long term?
- Where does the profit made by SONATRACH go?
- Today, is SONATRACH in the position and the expected result?
- What is the financial efficiency expected by SONATRACH from today?
- Why would you choose LUXEMBURG among many competitive countries to implement the reinsurance captive SONATRACH Ré?
- If LUXEMBURG assembled new rigid laws that raise the taxation of the country, what would SONATRACH react? And what would impact the captive?
- Are there any secondary plans to be taken by SONATRACH and/or the subsidiary in case that LUXEMBURG raised taxation?

Answers of interviewees

Answers of interviewees:

Axis 01: strategy, insurance and reinsurance

1. How to define strategy?

In fact, strategy is a roadmap, it is an approach after internal strategy, it depends on what you want.

2. What is the link between strategy and insurance/reinsurance?

In fact, Sonatrach's insurance is a very important insurance because in December 31, 2018, the assets are estimated by 60 billion dollars. this is important to Sonatrach's insurance costs are very important and for that we cannot afford since the premiums you saw, the 54 million, will Exeter in a random way, so for that we really need to put in place a strategy of agreement : a strategy that will allow us, to insure yourself well because it is very important and the objective is to be reimbursed in the event of a claim. Nevertheless, you must know how to place the risk you have.

In addition, to place it with reinsurers who have the ability to insure, you really need to put a strategy in place.

Axis 02: SONATRACH and strategy

3. What is Sonatrach's insurance strategy?

In fact, Sonatrach's strategy is two lines:

This is called a first line and a second line. The first line is from \$0 to \$10 million, the second line is from \$10 million to \$2,750 million. The first strategy is to reinsure yourself with your own company, which is SONATRACH Re.

The second part is insured with the International Market, How? All this based on what is called a consortium which is an insurance company grouping so they took national insurance companies CASH CAAT CAAR SAA. They are the ones who take the risks of society and go to the market. The objective in fact is that they go to the international market in..... Why? Because at the time we insured lots. Each company took a lot and it was alone in the market, the prices were

very important. However, today they are all going to the market together. What is called economies of scale.

4. What is the role of internationalization strategy in SONATRACH?

In fact, SONATRACH is a multinational company whose objective is to be present all over the world. We are present in Peru, Switzerland, Spain, Portugal, Libya, Mali, Mauritania, Luxembourg...

In addition, that is actually, what allows us to create more wealth, if we are settled elsewhere it is that we are earning much more. It is clear SONATRACH Ré, so you are a parent company and you pay bonuses to your subsidiary.

5. Is internationalization strategy an integral part of strategic management?

In fact, the internalization strategy is an objective for SONATRACH, and if you notice; we are present in 165 subsidiaries, the majority of which are international.

Axis 03: SONATRACH Ré, a reinsurance captive, a SONATRACH's subsidiary

1. Why has SONATRACH created the subsidiary SONATRACH Ré?

In fact, SONATRACH Ré was created to reduce insurance premiums in the first place and to better insure the company. Because the objective is when you insure the property with your company, you are sure to insure it well; and to instead of giving money to companies we don't know.

That is actually the principle. the fact that the international market has seen that we have taken some of our risks at our own expense, they have told themselves that SONATRACH trusts his risks means that his risks are good and that's where a lot of disasters and accidents happen. Moreover, the fact that we covered these costs the premiums elsewhere have gone down, because at the time when it was not SONATRACH there was terrorism... etc.

we are also third world African country and all of a sudden we have had very high premiums so that now things have changed, we have given signal that we trust our risks because we have shown we can take the most exposed part.

2. Do you think SONATRACH created this subsidiary to reduce costs, in the first place?

Yes.

3. How to reduce insurance costs through the creation of a captive reinsurance company?

taking the most exposed part (from 0 to 10 million) automatically reduces parent company insurance premiums, also raising awareness in this sense...so no claims also reduces costs.

6. Why did SONARACH choose to internationalize its subsidiary, reinsurance captive?

we didn't choose to internationalize the captive, it was mandatory to do it elsewhere, because the Algerian regulations don't allow... so we made a Benchmark to choose the domiciliation based on the language, PFS.....

7. How could SONATRACH adopt the integration strategy through the internalization strategy in the creation of SONTRACH Ré?

a parent company pays insurance premiums to its subsidiary and never a claim there the subsidiary which will reimburse the parent company. and so, the money remains in loop and that means self-insure. so the washing in all this is the presence of the CASH which plays the role of the front-end insurer. because for the Algerian regulation we cannot insure directly, we must leave by a local insurer (CASH which is also a subsidiary).

8. what is the impact of SONATRACH Ré since its creation and how would you describe its evolution since then?

The company to keep it more than 80 million euros. We saw 80 you are a million dollars of premiums and we paid only a few claims and when you saw comparative table the premiums have largely decreased in example: SONATRACH pays less insurance premium thanks to this captive.

9. What was the financial aspect of the creation of SONATRACH Ré and the financial evolution of SONATRACH Ré?

An approved center has been set up with a capital of 20 million euros. It did cost SONATRACH 00 euros. We had international investments; we built the company with dividends so it did not cost anything to the mother company. There were expenses auditor manager it is completely normal but all this is nothing compared to 20 million euros of the capital and the financial situation has largely evolved. when you see an increase in the PFS it's in fact the fortune.

10. What is the real objective of SONATRACH Ré?

Its real objective is to expand its risk portfolio, now we are building a fortune with the bonuses we are acquiring, thank God. There is not a lot of sinister stuff. Because even if there are claims, our money stays in the company. That is to say, even if we pay back, we pay back the mother company. In addition, it is to take the maximum risk. Therefore, we took some if you take the recent comparison you will find that in recent years we have taken a lot more risk. Back then, we started with two risks and now we are taking it all over the place.

The more you take it yourself, the more you reduce insurance premiums and the advantage of SONATRACH Ré is that it can choose the risks it wants; usually it chooses the risks it wants to control.

Axis 04: Facing future

1. Do you think that SONATRACH Ré will have no impact on cost reduction in the long term?

On the contrary, SONATRACH Ré will never take the risks of the mother company even more and it will also postpone reducing the costs upstream of SONATRACH and also, we have the right to take the costs of other companies. Example: if we want to take the risks of SONALGAZ, Air Algérie, cevital ...we can do so and if it ever makes the result of tomorrow it is the mother company that benefits if we decide to increase the entering dividends.

2. Where does the profit made by SONATRACH go?

when we make the zero result it is that we have not made a profit but we have actually made some, profit we are injecting them into the provision and this is what allows us to take new risks and therefore we have been able to say diversify the risk portfolio.

3. Today, is SONATRACH in the position and the expected result?

Yes, Largely!

4. What is the financial efficiency expected by SONATRACH from today?

Our objective is to further diversify the risks of accepting many more premiums and to say that there is still a strategy that could be adopted by SONATRACH Ré in the field of insurance and reinsurance.

5. Why would you chose LUXEMBURG among many competitive countries to implement the reinsurance captive SONATRACH Ré?

Finally, how Luxembourg is the best place, we could do it in Malta but we chose the European Union because: they are serious. we are well controlled, unlike other tax havens that do not know also about regulation, it should be known that Luxembourg is not a tax haven but it is a more tax-friendly(advantage fiscal et non Paradis fiscal) country and we are subject to a lot of control from the authorities because the perspectives of the European authorities are very strict.

So we did a benchmarking and we chose Luxembourg.

6. If LUXEMBURG assembled new rigid laws that raise the taxation of the country, what would SONATRACH react? And what would impact the captive?

We will discuss the days to come.

7. Are there any secondary plans to be taken by SONTARCH and/or the subsidiary in case that LUXEMBURG raised taxation?

We will see about it.

