

## **The economic feasibility of the fire insurance portfolio in the performance of insurance companies: an analytical study**

By

**Yousif Imad Khudhur**

Higher Institute of Accounting and Financial Studies / University of Baghdad/Iraq

Email: [Youssef.Emad1202i@pgiafs.uobaghdad.edu.iq](mailto:Youssef.Emad1202i@pgiafs.uobaghdad.edu.iq)

**Ayad Taher Mohammed**

Higher Institute of Accounting and Financial Studies / University of Baghdad/Iraq

Email: [ayad\\_tahir@coadec.uobaghdad.edu.iq](mailto:ayad_tahir@coadec.uobaghdad.edu.iq)

### **Abstract**

This research aims to use performance indicators and financial criteria in evaluating the economic feasibility of portfolios of corporate insurance policies, identifying the strengths and weaknesses in the portfolio's performance to enhance the strengths and address the weaknesses. In line with the research problem, which provides for identifying the performance indicators and the economic feasibility of corporate portfolios and the extent to which performance indicators contribute to improving the feasibility of insurance portfolios and reducing the financial and insurance risks associated with the business of companies. Through the company's financial statements, profit centers, production plans, annual reports, and annual statistics issued by the company for the period (2016-2020), Insurance Business Law No. (10) for the year 2005 and performance evaluation indicators for insurance companies issued by the Federal Financial Supervision Bureau, represented by the cost rate, were also relied upon. Administrative, production cost rate, compensation rate, growth rates, implementation rates, and relative importance. The research also relied on a set of descriptive statistics methods represented in the general average, standard deviation, and percentages. The research reached a set of important results that contributed to identifying the weaknesses and strengths of the performance of insurance portfolios and assisting the administration in making future decisions, the most prominent of which was the high rate of compensation paid compared to the realized premiums, as well as the high production costs of the fire insurance portfolio.

**Keywords:** feasibility economic study- Fire insurance portfolio - corporate performance.

### **Introduction**

Performance indicators are one of the important and necessary scientific tools and methods that are relied upon in companies and financial institutions because of their prominent and significant role. Through them, they discover the positives and negatives of the company's performance during the specified period, diagnose the deviations that occur and the reasons for their occurrence, and work to address them to avoid their occurrence in the future. Insurance companies rely on financial statements and selling documents as financial indicators in expressing the company's financial position, but the outputs of these data do not give a clear picture of the economic feasibility of the company's insurance portfolios. The importance of research comes through identifying deviations, analyzing the cause of their occurrence, and providing appropriate solutions and treatments for the problems facing the company's work as well as achieving the best possible allocation of available resources by setting priorities, avoiding losses, excluding useless projects, and diversifying sources of income. Accordingly, the structure of the research consisted of four sections representing the first topic with the methodology of the research, while the second

topic included the theoretical side, the third topic included the applied side, and the fourth topic included conclusions and recommendations.

## **Chapter One**

### **Research Methodology**

#### ***First: the research problem***

It was noticed through field experience during the training period for the site of conducting the research in the Iraqi insurance company that it did not pay the required attention to the issue of the economic feasibility of the insurance policy portfolios and performance evaluation indicators and that the company still relies on the financial statements and reports issued by the Planning Department in expressing the company's financial position, which It does not give a clear and fair picture of the financial situation of the company, as well as the existence of cases of waste, loss, and misuse of the resources available to the company. Therefore, the research problem can be formulated according to the following questions:

- 1) To what extent do performance indicators contribute to improving the feasibility of insurance portfolios and supporting the company's financial position?
- 2) To what extent do performance indicators contribute to reducing and limiting the financial and insurance risks associated with the company's business?
- 3) To what extent do performance indicators contribute to identifying and diagnosing weaknesses and strengths in the performance of insurance portfolios?

#### ***Second: the importance of research***

- 1) Providing senior management and decision-makers with important information and indicators that enable them to make and take future decisions.
- 2) Providing the senior management, relevant departments, and branch units with the level of performance of the company and the insurance portfolios to enable them to know the results of the work to advance what is better and avoid bad performance.
- 3) Identifying deviations, analyzing the cause of their occurrence, and providing appropriate solutions and treatments for the problems facing the company's work.

#### ***Third: Research objectives***

- 1) Shedding light on the most important indicators and criteria used in the process of evaluating the performance of companies and the economic feasibility of the company's insurance portfolios.
- 2) Determining the weakness and strengths in the performance of the company's portfolios through the economic feasibility of the insurance portfolios for fire, engineering, marine, miscellaneous accidents, and complementary cars, and finding ways to address them.
- 3) Using scientific indicators and criteria based on methodological foundations that enable management to take appropriate investment decisions.
- 4) Reducing the financial risks associated with insurance activities by preparing analytical studies on the types of risks facing insurance portfolios.

#### ***Fourth: the research community and its sample***

The research community is represented by the Iraqi Insurance Company, one of the oldest

companies operating in the insurance sector, which was established by Law (31) of 1957 and became a public company. As for the research sample, it was represented by the fire insurance portfolio. The justifications for choosing the research sample were:

- 1) The weak performance of fire insurance portfolios compared to the performance of personal insurance portfolios represented by group and individual insurance, as it is a company specialized in personal insurance.
- 2) The portfolio achieved financial losses during the research period, which enhanced the process of analyzing and explaining the causes of losses.
- 3) The final accounts of the company were approved during the research period by the Federal Office of Financial Supervision.

***Fifth: Performance evaluation indicators and statistical methods***

It includes each of the performance indicators issued by the Federal Office of Financial Supervision, which was used in evaluating the results of the company's insurance portfolios, and they are as follows:

- 1) Administrative cost average: it calculates the general and administrative expenses incurred by the portfolio during the research period, and this indicator is extracted through the following equation (Abu Bakr, 2010: 31)

$$\text{Administrative cost rate} = \frac{\text{general administrative expenses}}{\text{net earned premiums}} * 100$$

- 1) Production cost rate: in which the production costs incurred by the portfolio are calculated from producers' commissions, inspection fees, settlement experts, advertising and marketing expenses, insurance license renewal fees, financial stamp fees, and others spent by the company for the issuance of fire documents, and this indicator is extracted through the following equation ( Abu Bakr, 2010: 31)

$$\text{Production cost rate} = \frac{\text{Insurance expenses and commissions}}{\text{Number of documents}} * 100$$

- 1) Compensation rate paid: This indicator refers to the amount of compensation incurred by the company as a result of the realization of the insured risks during the period specified in the policy, and this indicator is measured through the following equation (Hamouda, 1998: 34)

$$\text{rate of compensation paid} = \frac{\text{compensation paid}}{\text{earned premiums}} * 100$$

- 1) Marginal contribution: It represents the difference between the revenues of insurance portfolios from the variable costs of those portfolios, and it is one of the important tools in calculating the profitability position. This indicator is extracted through the following equation (McLaney & Atrill, 2013:101)

$$\text{Policy marginal contribution} = \text{Policy premium} - \text{Policy variable cost}$$

***Sixth: Means of collecting data and information***

The research relied on collecting information and data that support the research and support it from several sources and agencies:

- 1) The theoretical side: the researcher relied on the theoretical side of the research, including available sources, books, references, letters, university theses, research, and local, Arab, and foreign articles, as well as making use of the Internet services.
- 2) The scientific aspect: the data and information were obtained through the following:
  - 1) The financial statements of the researched company for the period 2016-2020.
  - 2) Insurance portfolio profit centers for the period 2016-2020.
  - 3) Annual reports issued by the Planning Department for the period 2016-2020.
  - 4) Production plans issued by the Planning Department for the period 2016-2020.
  - 5) Performance evaluation indicators issued by the Federal Office of Financial Supervision.

### ***The theoretical side***

#### ***The first axis is economic feasibility***

##### ***First: the concept of economic feasibility***

The subject of economic feasibility is one of the modern economic and administrative branches, and it is one of the main pillars on which the management relies in evaluating the results of the company's business and developing ideas and proposals. Al-Hamid, 2012: 24). The economic feasibility is the benefit, benefit, or return expected to occur. The return may be commercial-material due to the profit for the company, or the return may be social, meaning that the benefit and benefit will return to society as a result of providing services and thus satisfying the needs and desires of consumers (Al-Kinani, 2021; Suanpang, Pothipasa, & Netwong, 2021). Economic feasibility was also defined as a practical translation of the company's investment policies and aims to identify the financial risks associated with projects and reject bad investments (475 (Katharina, 2014): economic feasibility was defined as a set of procedures and methods used in collecting data and information and then classifying, classifying and analyzing them to reach results Determines the validity and feasibility of the product to be presented (Al Ghurairi, 2015; Sudarmanto & Meliala, 2020; Suhendi & Asmadi, 2022). Based on the foregoing, the economic feasibility represents the best way through which the results of the company's business are evaluated, and it is the tool that enables management to take the most appropriate decision in which the economic benefits are greater than the costs Economic, as it is a scientific and practical tool to avoid management from falling into potential losses or reduce their severity and reduce opportunities for waste and loss.

##### ***1- Second: the importance of economic feasibility***

- 1) The economic feasibility contributes by providing the necessary data and information to analyze and study all aspects and variables involved in the production process, as it provides a detailed report that includes a careful examination of market studies, technical, financial, legal, economic and social studies (Khalaf, 2012: 40).
- 2) The optimal use of the resources available to the company, which are characterized by relative scarcity, thus avoiding the loss of those resources (Ghoneim, 2010: 42).
- 3) The economic feasibility contributes to correcting and adjusting production processes in a way that suits the circumstances and urgent changes in work and protects the company from the risk of production interruption (Al-Rawi and Hussein, 2017: 129).
- 4) Economic feasibility helps in drawing up the company's plans and programs and following up on the stages of planning and implementation, in addition to being an important tool in strategic planning and an effective methodology for strategic management (Maarouf, 2010: 22).

***Third: the characteristics of economic feasibility***

- 1) Economic feasibility reports are characterized as reports with multiple dimensions and aspects in terms of their variables, which requires the involvement of specialized agencies and a variety of expertise, including economic, financial, administrative, legal, marketing, and others (Obeid, 2018: 43).
- 2) The economic feasibility study includes multiple and interrelated stages, as each stage of the project's feasibility study and analysis is based on, related to, and complementing the other stages in the study, as the results of each stage represent inputs to the next stage (Al-Dulaimi and Al-Tufaili, 2018: 219).
- 3) Economic feasibility contributes to defining special priorities in the company's projects by setting a set of criteria that help arrange projects according to the efficiency and importance of the project to the company (Razdaq and Bassiouni, 2011: 36).

***Fourth: areas of economic feasibility***

- 1) The economic feasibility of new investment projects: These studies are considered one of the most widely used and important applied fields because the company needs expectations and estimates based on accurate scientific and methodological foundations under the conditions of uncertainty accompanying any new project for the company, meaning that this study is prepared before starting the implementation of the company's projects (Abdul Hamid, 2012: 32).
- 2) The economic feasibility of expansions in existing projects: These studies are prepared for the company's already existing projects, and the company seeks to increase its production capacity, for many reasons, including increasing the potential demand for the company's products, or adding new branches and offices for the company in new geographic areas, or to increase competition between companies. Abdelaziz, 2014:96)
- 3) The economic feasibility of replacement and renewal: These studies are prepared when the investment decision requires replacing or replacing new assets with old ones in order to reduce production costs, increase expected returns and introduce modern technology into the production process, marketing, and promotion (Bjornsdotir, 2010:55).

***Fifth: Components of economic feasibility.***

The economic feasibility study and project evaluation include multiple and varied stages, and all these stages are linked with each other, as the outputs of each stage represent inputs to the next stage (Thompson, 2005: 185). There are two types of feasibility studies and project evaluation, as the first includes a preliminary and comprehensive study on all aspects of the project, which are what are known as pre-feasibility studies for the project. The second type of study is a link to a series of accurate and detailed studies that require competence and professionalism when preparing this study and are known as detailed feasibility studies (Mustafa, 2009: 24) :

- 1) Pre-feasibility studies: This study is a preliminary survey with the purpose of exploring the financial difficulties and risks facing the company's projects. This study provides approximate estimates and logical conclusions about the risks and potential returns of these projects (Maarouf, 2010: 40). In general, the preliminary feasibility study is a simplified and focused study at the same time, through which the volume of cash outflows by the company, the size of the company's cash inflows, an estimate of the



expected returns, and the number of proposed documents are determined (Al-Issawi, 2013: 45).

- 2) Detailed Economic Feasibility studies: This study is defined as subsequent studies to the preliminary feasibility study, but it is more detailed, accurate, and objective. : 113). On the basis of these studies, the administration can take a decision either to abandon the project, postpone it, or move and start implementing it (Abd and Abdel Hamid, 2018: 20). The components of these studies include the following:

a- Legal feasibility study: This study aims to assess the state's position and identify the legal facilities that the state can provide and the restrictions it imposes or may place on the company's activity and determine the efficiency and performance of the project (Diab, 2009: 26).

b - Social feasibility study: This study is concerned with evaluating the social aspects of the project from the community's point of view, as this indicator takes into account the provision of social protection to individuals and institutions from potential losses, as well as creating new job opportunities and reducing the level of unemployment (Al Ghurairi, 2015: 80).

c- Administrative feasibility study: This study is concerned with how to divide and distribute the total of the company's tasks at the various administrative levels, including departments, units, and branches in order to accomplish the specific tasks (Robbins and Judge, 2012:42). It is also concerned with educating human resources and providing them with skills that enable them to face challenges and obstacles at work (Gomez-Mejia, et.al, 2014:17).

d- Market feasibility study: This study is concerned with identifying and estimating the current and expected demand for the company's products (insurance policies), analyzing the market size and nature, and estimating the absorptive capacity in light of the marketing methods and measures taken. Or a miscalculation of the inputs of this study will negatively affect the economic feasibility outputs (David & Nigel, 2009: 22).

e - Technical feasibility study: This study is concerned with examining and analyzing the expected effects of the various technical alternatives that the company needs, whether related to alternatives to production, technology, alternatives in infrastructure, choosing the locations of the company's branches, and others. The form and specifications of the products from the technical point of view and the selection of the optimal production method and the expected production volume (Al-Issawi, 2013: 51)

f- Financial feasibility study (financial analysis): This study is concerned with evaluating and analyzing the company's cash flows, as it analyzes and compares each of the cash outflows represented by paid compensations, production expenses, public expenses, and cash inflows represented by insurance premiums and reinsurance commissions in order to extract the net cash flows Represented by the net profit of the document (Gitman & Zutter, 2015: 16).

### ***The second pillar is fire insurance***

#### ***First: the concept of insurance***

Insurance is one of the main activities supporting the state, as the insurance activity aims to provide support and protection for individuals and institutions from financial losses resulting from the realization of potential risks that may occur in the future, causing measurable material losses (4899 Lakshmana, et.al, 2019:), and insurance is also concerned with Also, by mobilizing savings and reinvesting them, which achieves economic and social goals that help in developing the economies of countries (Teresa, 2013:30). Insurance is related to the sciences of statistics and mathematics and the use of the law of large numbers, and it is also linked to the sciences of law,

since insurance documents represent legal contracts governed by laws and legislations, and for this, there were various definitions of what insurance is (Alwan et al., 2017: 61), as insurance was defined as a way through which fears can be removed and something obtained. For safety, by transferring the damages from the insured “individuals, institutions” to the insured “insurance company” and compensating the insured for the financial damages incurred by him in return for paying a small amount represented by the insurance premium (Abboud et al., 2015: 52). Insurance was also defined as a social tool that aims to create reserves to face potential losses, by transferring the burden of risk from persons exposed to the same risk to one person or group of persons (Emmett & Therese's, 2008:41).

***Second: the basic characteristics of insurance***

- 1) The law of large numbers, which is the basic requirement in the insurance industry, and by it we mean the availability of the numerical abundance of the vocabulary of the insurance shops, and it is required that these shops be homogeneous and similar, and in the absence of the numerical abundance, the insurance portfolios become less balanced and more vulnerable to deviations in their results (Kessler, 2013: 480).
- 2) The accidental nature, which is that the risk to be insured is of a probabilistic and contingent nature, so it is not possible to insure against the risks that are expected to occur, nor can it be insured against intentional losses on the part of the insured, just as it is not possible to insure against the impossible risks (Pankoke & Eling, 2014: 253).
- 3) The subjection of risk to measurement and the possibility of estimating losses, which is that the insurable risk can be measured and estimated. The risk that is impossible to estimate and measure is not subject to insurance, as the insurance policy cannot be priced and the insurance premium cannot be calculated (Emmett & Thereses, 2008: 43).
- 4) The legality of the risk, which is that the risk to be insured is legitimate and not contrary to regulations, laws, and public morals, so it is not possible to insure against financial fines, confiscated funds, drugs, and smuggling acts (Satbir & et al, 2015: 27).
- 5) Transfer of pure risks from a party with a financial position that cannot bear the loss represented by the insured to a party with a stronger financial position than the insured who can bear the loss represented by insurance companies (Saraswani, et al., 2014: 6).

***Third: the fire insurance portfolio***

Many researchers agreed that the fire insurance policy comes at the forefront of the types of money and property insurance policies, because the risk of fire is one of the dangers that can easily occur, and the causes of its occurrence and the factors contributing to its occurrence are diverse (LarsFredrik 2013:74-75). Fire is an agreement between the insured and the insured, as the insurer, who received the insurance premium, undertakes to compensate the financial loss incurred by the insured as a result of damage or damage to the insured property from the risk of fire or other within the period specified in the document (Sharma, et al, 2014: 2) Conditions that are required to include fire losses (Al-Tai et al., 2011: 166):

- 1) That the fire was spontaneous and unintentional by the insured or his affiliates, but if the fire occurred by the action of others and without the knowledge of the insured or one of his affiliates, it is considered a fire according to the insurance concept.
- 2) That the fire came from an external source and is not confined to its usual limits. The fires that are deliberately ignited in ovens and stoves for use in cooking and heaters, if

they cause losses that are not compensated by insurance and the burning of materials due to self-fermentation is not considered a fire according to the insurance concept.

- 3) That the fire results in material losses, whether total or partial. If the fire did not result in a loss or decrease in the value of the asset, it is not considered a fire according to the insurance concept.

***As for the hazards excluded from the standard fire document (Normal, 2010: 78), they include***

- 1) Loss of money due to theft operations during and after the fire.
- 2) Funds are damaged or destroyed as a result of self-fermentation or slow oxidation.
- 3) Damage and damage caused by fire from the ground.
- 4) Damage and damage caused by fire by order of any public authority.
- 5) Damage and damage arising from civil wars, military operations, riots, disturbances, and civil disobedience.
- 6) Damage and damage resulting from the use of radioactive materials, nuclear materials, and any self-chemical fission.

***The third axis: the performance of companies***

***First: the concept of performance appraisal***

The concept of performance appraisal is seen as the ability to complete tasks and works efficiently and effectively and the extent of the company's ability to continue and grow and interact with opportunities and threats and exploit the available resources in order to achieve the set goals (9Bird & Westly, 2011: 11). Performance evaluation is defined as the company's ability to complete work, compare actual performance with planned performance, achieve company goals, and assist management in taking corrective actions (Wheelen & Hunger, 2010: 376). It is also known as a set of activities and processes through which managers obtain information related to the performance of the company and judge this performance against pre-determined criteria and indicators (Horngren et.al, 2016: 829). He also defined the relationship between the desired goals and the extent to which they are achieved and how to exploit financial, human, and information resources in order to produce the best quantity of products at the lowest cost and the best quality and to avoid cases of waste and loss (Anaid, 2018: 243).

***Second: the importance of performance appraisal***

- 1) The importance of performance evaluation lies in being a control tool that helps the company in the optimal use of available resources by comparing the planned performance with the achieved performance, rationalizing expenditures, maximizing resources, and correcting strategies (Al-Saadoun, 2017: 59).
- 2) It determines the effectiveness and efficiency of the activities and the implementation of the plans and strategies drawn up by the company (Moatasem, 2010: 72).
- 3) The performance evaluation process reflects the extent of the company's ability to survive and continuity and its ability to adapt to the surrounding environment (Delfi, 2012: 28).
- 4) The performance appraisal process contributes to raising the level of individuals' productivity and identifying strengths, weaknesses, opportunities, and threats and how to improve performance (Khaled and Ibrahim, 2021: 189).

***Third: The foundations of the performance appraisal process***

- 1) Determining the objectives of the company, by which we mean that the company seeks



to achieve the main objective in addition to achieving other subsidiary objectives. These objectives are supposed to be clear, specific, and measurable (Al-Isawy, 2005: 251).

- 2) Defining responsibility centers, and by them we mean the departments, branches, and organizational units specialized in performing business, as each of these departments has the authority to make decisions that would manage part of the company's activity (Al-Karkhi, 2000: 49).
- 3) The existence of a clear organizational structure in which the powers and responsibilities of each director or department official are defined, without overlapping the powers and tasks between the rest of the departments (Rashid and Yaqoub, 2014: 62).
- 4) Determining performance evaluation criteria This step is one of the basic requirements in the performance evaluation process, as the multiplicity of standards has become a problem at the present time and it has become impossible to implement all standards, so it is necessary to select standards in a manner that is commensurate with the objectives of the company and its administrative departments (Ali and Abdel-Kazim, 2018: 353).
- 5) The company should have cadres and employees who are experienced in the performance evaluation process and are familiar with all the details and scientific aspects, such as their knowledge of standards, ratios, and evaluation indicators, and their knowledge of the nature of the company's work activity and its objectives (Hafez and Abbas, 2015: 39)

## **Application side**

The topic reviews the analysis and discussion of the economic feasibility of the fire insurance portfolio in the Iraqi insurance company in terms of the feasibility of its work, the efficiency and effectiveness of its performance, and its continuity, by studying the indicators of the administrative cost rate, the production cost rate, the rate of total compensation and comparing the performance achieved with the scheme in order to identify and diagnose deviations in the results of the portfolio's business.

### ***First: Analysis and discussion of the planned and realized premiums for the fire insurance portfolio***

Table (1) shows the planned and realized premiums, growth rates, implementation rates, and the relative importance of the fire insurance portfolio for the period 2016-2020. We find that the general average of the planned premiums for the fire insurance portfolio amounted to 2,950,000 dinars, with a standard deviation of 370809 thousand dinars, and we find the highest planned premiums in 2017. It amounted to 3,500,000 thousand dinars, with a growth rate of 40% compared to the year 2016, while we find that the lowest planned premiums in 2016 amounted to 2,500,000 thousand dinars and a growth rate of 17% over the year 2015, while we find the planned premiums for the years 2018, 2019, 2020 amounted to 2,750,000 and 3,000,000 and 3000000 thousand dinars, with growth rates of -21%, 9%, 0%, respectively. The table also shows that the general average of the realized premiums for the fire insurance portfolio amounted to 2,985,974 thousand dinars, with a standard deviation of 607854 thousand dinars for the period 2016-2020. Fire insurance in 2017, amounting to 2348,356 thousand dinars, with a growth rate of -37% over 2016, while the realized premiums for the fire insurance portfolio amounted to 80372738, 70228691, and 61796927

thousand dinars for the years 2018, 2019 2020 with growth rates of 6%, 15%, and 21%, respectively. As for the implementation rates, we find them high, as the highest implementation rate reached 150% in 2016 due to the high realized premiums, which amounted to 3746,600 thousand dinars, compared to the planned installments, 2,500,000 thousand dinars, while we find that the lowest implementation rate in 2017 was at 67%, and the reason is attributed to the decrease in the realized premiums, which amounted to 2,348356 thousand dinars compared to the planned installments 3500000 thousand dinars, and this indicates the weakness of planning in predicting the planned installments, while the implementation rates reached 91%, 96%, 116% in 2018, 2019, 2020, respectively. Finally, we find that the relative importance of the fire insurance portfolio, which is calculated By dividing the fire insurance premiums by the company's total premiums, we find that the relative importance of the fire insurance portfolio's premiums is low compared to the company's total premiums. The company justified that the high degree of risk of some fire insurance policies and the high rate of risk realization led the company to adopt selective policies in underwriting operations, which led Due to the low productivity of the portfolio, in addition to the fact that the company specializes in the field of people's insurance, which reduces the relative importance of the fire portfolio, as we find that the highest relative importance of fire insurance premiums amounted to 7% In 2016, the lowest relative importance of fire insurance premiums was 3% in 2018, while the relative importance reached 5%, 4%, 6% in 2017, 2019, 2020 respectively.

**Table (1)** *Planned and realized premiums, growth rates, implementation rates, and the relative importance of fire insurance for the period 2016-2020 (1,000 dinars).*

Details	2016	2017	2018	2019	2020
Planned installments	2500000	3500000	2750000	3000000	3000000
growth rates	%17-	%40	%21-	%9	%0
General Average			2950000		
standard deviation			370809		
Realized Installments	3746600	2348356	2495798	2865291	3473828
growth rates	%2	%37-	%6	%15	%21
General Average			2985974		
standard deviation			607854		
total installments	52471523	48692466	80372738	70228691	61796927
Execution rates	%150	%67	%91	%96	%116
Relative importanc	%7	%5	%3	%4	%6

**Second: The average index of the administrative cost of the fire insurance portfolio for the period 2016-2020**

The administrative cost average aims to measure the company's general and administrative expenses regardless of the volume of activity and distribute them to the insurance portfolios based on the data provided by the company. The administrative cost rate is extracted by dividing the portfolio's share of administrative expenses by the portfolio's net premiums. Administrative expenses, net portfolio premiums, and average administrative cost for the fire insurance portfolio for the period 2016-2020.

**Table (2)** *The average administrative cost of the fire insurance portfolio for the period 2016-2020 (thousand dinars)*

Details	2016	2017	2018	2019	2020
Administrative expenses	524883	545011	542496	227864	277260
net premiums	1818548	588245	199976	1867335	2270278
Administrative cost rate	%29	%93	%271	%12	%12
General Average			%83		
standard deviation			%110		

It is clear from the table that the average administrative cost of the Iraqi insurance company compared to the fire insurance portfolio, as the general average amounted to 83% and with a standard deviation of 110% for the period 2016-2020, as the highest average administrative cost amounted to 271% in 2018, and this is a negative indicator as the administrative expenses exceeded the net premiums. The company (the total premiums of the fire portfolio - the share of the reinsurer from the premiums of the fire portfolio), we find that the administrative expenses for the year 2018 amounted to 542496 thousand dinars, while the total premiums for the fire portfolio amounted to 2495798 thousand dinars, and the share of reinsurance premiums issued was 2295821 thousand dinars, so the remainder of the total premiums for the portfolio The fire (net fire premiums) amounted to 199976 thousand dinars, and by dividing the administrative expenses by the net premiums of the company, we will find that the percentage is high. Which caused damage to the Iraqi insurance company in general and the results of the fire portfolio in particular. While the lowest average administrative cost amounted to 12% in 2019, and 2020 respectively, and this is a good indicator of the low average administrative cost. We find that the administrative expenses for the years 2019, and 2020 amounted to 227,864 and 277,260 thousand dinars, respectively, while the company achieved total premiums for the fire portfolio amounted to 2865291 and 3473828 thousand dinars, respectively, and the share of return companies, including 997956 and 1203550 thousand dinars, meaning that the remaining total premiums for the fire portfolio (net of fire premiums) amounted to 1867335 and 2270278 thousand dinars, respectively. Returned premiums amounted to 35% of the total fire premiums for both years, as well as for the decrease in administrative expenses in 2019 and 2020 compared to previous years, as mentioned previously. The administrative expenses for the year 2016, and 2017 amounted to 524,883 and 545,011 thousand dinars, respectively, while the total premiums for the fire portfolio were 3746,600 and 2,348356 thousand dinars, and the share of the repeater, including 1928051 and 1760111 A thousand dinars, so the company's net premiums from the fire portfolio amounted to 1818548 and 588,245 thousand dinars.

### ***Third: The average production cost index for the fire insurance portfolio for the period 2016-2020***

The average production cost of the policy is an indicator that aims to measure the cost of producing a single policy for the fire portfolio, as production costs are characterized as variable costs that change according to the activity and volume of insurance operations. The average production cost for one document is extracted by dividing the expenses and production costs for the fire portfolio by the number of portfolio documents. The average policy premium is extracted by dividing the company's net premiums for the fire portfolio by the number of portfolio documents, while the marginal contribution represents the difference between the average document premium and the average cost of producing the document. Table (3) shows the average production cost of the fire insurance policy, as the general average of the average production cost of the fire insurance policy was 204 thousand dinars, with a standard deviation of 34.5 thousand dinars for the period 2016-2020, while we find that the highest average production cost amounted to 245 thousand dinars in 2018 from By dividing insurance expenses and commissions 417856 thousand dinars on the number of documents 1707 documents, while the lowest average production cost was 150 thousand in 2017, as insurance expenses and costs amounted to 250,904 thousand dinars, while the number of documents reached 1675 documents, while the average cost of producing the document was 206, 203 and 217 thousand Dinars for the year 2016, 2019, 2020 respectively. While the general average premium for the fire insurance policy amounted to 795 thousand dinars, with a standard deviation of 522 thousand dinars for the period 2016-2020, the highest average premium for the policy amounted to 1228 thousand dinars in 2020, while the lowest average premium for a policy was 117 thousand dinars in 2018, while the average premium for the document is 1201, 351 and 1078 thousand dinars in 2016, 2017, 2019 respectively. The

table also shows the average marginal contribution of the fire insurance policy, and it represents the difference between the selling price (the average premium of the document) and the variable costs of production (the average production cost of the policy). We find that the general average of the average marginal contribution amounted to 590 thousand dinars with a standard deviation of 465 thousand dinars for the period 2016- 2020, as the year 2020 achieved the highest average marginal contribution amounting to 1011 thousand dinars, and this is a good indicator that indicates the efficiency of the portfolio's performance and its ability to maximize profits, while the lowest average marginal contribution amounted to -128 thousand dinars in 2018, and this is a negative indicator as the average cost of production The document exceeded the average premium of the document, meaning that the company incurred expenses and production costs amounted to 245 thousand dinars per document, while the selling price of the document reached 117 thousand dinars, which caused the loss of the portfolio. Of the portfolio's total premiums, as well as incurring insurance expenses that are not in line with the revenues generated, which was reflected in the portfolio's performance, the average marginal contribution amounted to 995, 201, and 875 thousand dinars in 2016, 2017, 2019 respectively.

**Table (3)** *The average production cost of the policy, the average policy premium, and the average marginal contribution of the Iraqi insurance company for the fire portfolio for the period 2016-2020 (thousand dinars)*

Details	2016	2017	2018	2019	2020
Insurance expenses	312509	250904	417856	351355	401217
Number of documents	1514	1675	1707	1732	1849
average cost	206	150	245	203	217
Productivity			204		
General Average			34,5		
standard deviation	1818548	588245	199976	1867335	2270278
net premiums	1514	1675	1707	1732	1849
Number of documents	1201	351	117	1078	1228
Average document premium			795		
General Average			522		
standard deviation	995	201	128-	875	1011
average marginal contribution			590		
General Average			465		

***Fourth: Analysis and discussion of the rate of compensation paid for the fire insurance portfolio for the period 2016-2020***

The total compensation rate aims to measure the compensation paid for the fire insurance portfolio and compare it with the fire premiums in order to determine the percentage of loss realization. Table (4) shows the total compensation rate for the fire insurance portfolio for the period 2016-2020. The rate of total compensation for the fire insurance portfolio was 58% with a standard deviation of 30% for the period 2016-2020. The table also shows that the highest rate of total compensation amounted to 92% in 2018, and this percentage is very high indicating that the company's policy in selecting risks and underwriting operations had an impact negative impact on the performance of the portfolio, as the total compensation for the fire portfolio amounted to 2297099 thousand dinars, while the total premiums for the fire portfolio amounted to 2495798 thousand dinars, and the total compensation rate in 2020 amounted to 81.5%, as the total compensation for the fire portfolio amounted to 2832877 thousand dinars, while the premiums amounted to The total compensation for the fire portfolio was 3473828 thousand dinars, while the

lowest rate of total compensation for the fire portfolio was 16% in 2019, as the total compensation amounted to 448856 thousand dinars, while the total premiums for the fire portfolio amounted to 2865291 thousand dinars. cases of occurrence, while the total compensation rate amounted to 54% and 48% in 2016 and 2017, respectively, as the total compensation for the fire portfolio amounted to 2037184 and 1051090 thousand dinars, while The total premiums for the fire portfolio are 3746600 and 2348356 thousand dinars, respectively.

**Table (4)** The rate of total compensation for the fire portfolio for the period 2016-2020 (thousand dinars)

Details	2016	2017	2018	2019	2020
Total portfolio compensation	2037184	1051090	2297099	448856	2832877
Total Wallet Premiums	3746600	2348356	2495798	2865291	3473828
Portfolio Compensation Rate	%54	%48	%92	%16	%81,5
General Average			%58		
standard deviation			%30		

## Conclusions and Recommendations

### *First: the conclusions*

- 1) The fire insurance portfolio achieved the highest rate of losses and paid compensations compared to the rest of the other portfolios, as the paid compensations exceeded 58% of the realized premiums during the research period, which indicates the weak performance of the portfolio in selecting risks, underwriting processes and accepting high risks, which was reflected in the portfolio incurred financial losses during the research period.
- 2) The company in question relied on two methods in distributing general and administrative expenses on the insurance portfolio. Insurance is based on the relative importance of the premiums generated from the portfolio, and thus the general expenses were distributed fairly and closer to health for the years 2019 and 2020.
- 3) The marginal contribution index in 2018 showed that the portfolio suffered a financial loss, as the portfolio incurred production costs and commissions that exceeded the net earned premiums, which was reflected in the performance and profitability of the portfolio.
- 4) The company's weak performance in planning, forecasting, and estimating premiums, the presence of deviations between the achieved performance from the planned performance, and the company's reliance on previous years in forecasting and estimating instead of relying on scientific and methodological bases, which was reflected in the company's performance level in general and the governor's performance in particular.
- 5) Low portfolio productivity and low growth rates compared to the rest of the company's portfolios. The company justified that the reason for the decline is due to the lack of insurance awareness among most segments of society and the deterioration of the political and economic conditions of the country, as well as the company's reliance on the group insurance portfolio in its business results.

### *Second: Recommendations*

- 1) The research recommends that the company should follow new policies and methods



in the subscription operations, the selection of risks, the pricing of documents, the adoption of the reward and punishment system, and not rely on the cash payment method as the only method when compensating the insured for the losses they suffered. Rather, it is preferable to follow other methods and methods when compensation, for example, repairing or replacing the damaged insurance shops.

- 2) The company's management should distribute the general and administrative expenses to the insurance portfolios in a fair manner that suits the potential of the insurance portfolios. It is unreasonable for the fire insurance portfolio with low premiums and high compensation to bear similar general and administrative expenses from portfolios with high productivity and high premiums.
- 3) The need for the company's management to reduce production expenses and commissions in order to reduce cases of waste, loss, misuse of available resources, rationalization of expenses, and maximizing revenues in a way that enhances the profitability of the portfolio.
- 4) The need for the company to rely on financial and statistical methods and standards when preparing plans for estimating production operations, as well as evaluating the results of the insurance portfolios' work through performance indicators, diagnosing strengths and weaknesses, identifying existing deviations and analyzing the causes of their occurrence in order to avoid their occurrence in the future.

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