

The Influence of Internal and External Factors on Mechanisms and Techniques for Maintaining Financial Balances in the National Social Security Fund for Employees (CNAS): A Field Study

Bilal Zidan,* Mohamed Boudiaf University of M'sila, Research Laboratory for Economic Strategies and Policies in Algeria, Algeria, Email: bilal.zidan@univ-msila.dz

Lakhdar Louglaithi, Mohamed Boudiaf University of M'sila, Research Laboratory for Economic Strategies and Policies in Algeria, Algeria, Email: lakhdar.louglaithi@univ-msila.dz

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Abstract: This study investigates the interplay between internal and external factors affecting the financial stability mechanisms of insurance companies. By analyzing regulatory and market variables, we elucidate their impact on strategies for maintaining financial equilibrium within the sector. Employing a descriptive research methodology, we gathered qualitative and quantitative data through surveys and interviews with key stakeholders in the insurance industry. Statistical analyses were conducted to identify the influence of these factors on the financial stability of the national social security fund. Preliminary findings reveal that internal factors, such as risk management practices and financial reporting standards, significantly influence the financial mechanisms adopted by insurance firms. Furthermore, external factors, including market volatility and regulatory changes, impose substantial pressure, prompting organizations to adopt adaptive strategies to enhance financial stability.

Keywords: The National Social Insurance Fund, Equilibrium contributions, financial Equilibrium, internal factors, external factors.

JEL codes: G22 ; G28 ; G32 ; H55

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I- Introduction :

The role of social security funds is considered one of the fundamental strategies that the Algerian state established and has continued to support since its inception, as a basis for social and health protection for the Algerian community through the planning and implementation of long-term strategic goals. The five funds have operated by adhering to principles of solidarity and insurance against social risks faced by the Algerian individual, their family, and their dependents.

The National Social Insurance Fund for Salaried Workers (CNAS) stands as one of the cornerstones of social security, given its significant membership numbers, collection efficiency, and the benefits provided to its contributors. This makes it a strategic institution not only in terms of gathering data and information about individuals and affiliated entities, but also in terms of revenue collection, investment of contributions, and the distribution of benefits.

The importance of this fund has grown amid the complexities and expansion of economic activities in Algeria. In this context, it is crucial to explore the rules, foundations, and criteria for its financial and technical balance, as well as the direct and indirect factors influencing it, to address the future

*. Corresponding Author

challenges that it faces for sustainability and continued operation. This research aims to assist managers and decision-makers within this fund in finding appropriate solutions and making informed decisions that could bolster the financial balance of CNAS and other social security funds, from the above, the problem can be formulated as follows: - What is the ability of the National Fund for Employees (CNAS) to maintain its financial balance? What are the controlling factors in this regard?

The National Social Security Fund for Employees (CNAS) is a cornerstone in the realization of social security and social protection in Algeria, through the material and monetary services it provides to its contributors, in addition to its contributions to financing and developing the Algerian economy in both direct and indirect ways. This research aims to highlight this by identifying the various factors affecting the balance of this fund and attempting to find solutions to the problems it faces in this area.

The National Social Insurance Fund: The National Social Insurance Fund for Wage Earners (CNAS) is a public institution with special management, in accordance with Article 49 of Law No. 88/01 dated January 12, 1988, which includes the guiding law for public economic enterprises. It possesses legal personality and financial autonomy, and its primary mission is to provide social insurance for the wage-earning sector, which encompasses all employees engaged in remunerated professional activities under the regulations governing the Fund's operations. The social insurance funds for wage earners have been distributed across all provinces of the country. Previously, these funds were regional. (The Social Fund for the Algiers area - CASOREL, the Social Fund for the Oran area - CASORAN, and the National Fund for the Constantine area - CASORAC).

(Article 8 of Executive Decree No. 92-07, dated January 4, 1992, concerning the legal status of social security funds and the administrative and financial organization of social security, Official Gazette, p75).

Background of the study:

Contributions and Their Scope: The financing of social security systems. The collection of these contributions does not require parliamentary authorization. (Philip Loïc, 1991, p510).

Economic Definition of Contributions: A contribution is a mandatory deduction that grants the insured the right to receive benefits. (Luc Saidj, 2003, p479).

The concept of financial equilibrium: is defined as the balance between assets and liabilities, which refers to an organization's ability to meet its necessary debts and its capacity to fulfill obligations by their due date. In this context, it is essential that the organization's assets allow for the settlement of its required debts. Long-term funding needs are supported by the funds that remain within the organization for more than one year, while current assets are meant to finance short-term debts and obligations. Therefore, the correspondence between the financial resources outlined in the budget and their uses is expressed through financial equilibrium. (Nasser Dadi Adoun, Mohamed Fathi Nawaser, 2001, p22)

Short-term Financial Balance: This refers to a portion of the organization's assets held in liquid form, serving as the optimal primary measure for treasury management and an indicator for monitoring the organization's cash position at a specific date. It is essential for the funds utilized by the organization to finance the value of the assets available to it over a designated time period. (Daniel Arnold, translated by Prince Shams al-Din, 1992, p141).

Long-term Financial Balance: The long-term financial balance of an organization is considered sound in terms of its potential for future expansion, which necessitates long-term investments, as well as the organization's ability to consistently meet its debt obligations on their due dates. (Pierre Conso, 1983, p150).

II-Methodology:

Exploratory Study: There is no doubt that ensuring the smooth progress of any field research requires the researcher to conduct an exploratory study to assess the suitability of the field for the research procedures. This is aimed at finding the best way to conduct tests and avoiding obstacles and issues that may arise during fieldwork.

Naji Qais and Basatoisi (1987) state that the exploratory study is a miniature version of the main experiment, and it must meet the same conditions and circumstances as those in which the main experiment will be conducted, as much as possible, so that the results can be valid. (Naji Qais, Basatoisi, 1987).

Based on this, we conducted the exploratory study on a random sample consisting of ten of employees from the Social Security Fund (CNAS) in the state of Setif. They were selected from the same defined population in order to:

- Ensure proper preparation for the main study.
- Assess the suitability of the study tool for the research sample, including the ease and clarity of the survey items and phrases.
- Calculate the psychometric properties for the study (validity and reliability).
- Identify aspects of the study to formulate a questionnaire that aligns with the research hypotheses.

Methodology in Study:

Studying any issue and confirming or negating a hypothesis can only be achieved through a clear methodology or action plan. Methodology is defined as: a set of principles and rules, or the approach that the researcher follows in studying the problem in order to reach the truth. (Ammar Bouhouch, 2001, p137).

In our study, we relied on the descriptive method due to its suitability for the topic. It is defined as: the process of describing what exists, interpreting it, identifying the conditions and relationships between the facts, and understanding the beliefs and attitudes of individuals as well as their methods of growth and development. (Jaber Abdul Hamid Jaber, Ahmed Khairy Kazem, 1978, p136).

Study Population: To study any problem, it is essential to gather all relevant information regarding the subject of the study, which is referred to as the "statistical population." Salman Akab Al-Janabi (2015) defined the study population as: "All units of the phenomenon that the researcher intends to study. It also refers to all individuals, persons, or entities that are the subject of the research problem." (Al-Janabi, 2015, p29).

- In our study, the population comprises all employees of the Social Security Fund (CNAS) located in the municipality of Setif, Setif Province.

Sample of the Study: The process of utilizing samples is commonplace in scientific research and is among the most critical steps. In this stage, the researcher typically identifies the original population based on the problem they wish to examine, then selects a sample (a subset) from the units of the original population. (Qandiliji, 1999, p137).

- In our study, the sample consists of a group of employees from the Social Security Fund (CNAS) who were randomly selected, totaling 30 individuals.

Study Tools: The study tool can be defined as a set of procedures or processes aimed at achieving a specific purpose. It is a means of revealing quantitative or qualitative data intended to test the validity or invalidity of hypotheses and answer the research questions posed. (Bro Muhammad, 2014, p99).

- In our study, we relied on the questionnaire tool, which is defined as a list consisting of a series of questions closely related to the research topic. Its design is derived from the essential methodological stages that the researcher must pay attention to. (Muhammad Safouh Al-Akhras, 200, p324).

Psychometric Properties of the Study Tool:

Validity:

Validity refers to the extent to which a measurement scale accurately reflects the construct it aims to assess. In this investigation, the content validity of the scale was established through the evaluation of experts in the fields of physical education and sports, as well as in medicine and health psychology. The scale was submitted to these specialists for an assessment of its face validity, and their collective agreement confirmed that the items included are relevant to the scale's intended objectives.

The validity of the scale was evaluated through internal consistency, which several researchers (Cortina, 1993; Cronbach, 1951) define as the extent of bivariate correlations among different items within the same test or subscale of a composite measurement (Tang, Cui, & Babenko, 2014, p. 207). To assess the internal consistency of the scale, we computed the Spearman-Brown coefficient, examining the bivariate correlations between each individual item and the overall score of the scale. The findings from this analysis are detailed in Table 1.

Table 01. Internal consistency (Pearson Correlations).

Pearson correlation between each item & the total score of the scale (R)					
The first axis	Items	Pearson Correlations	(Sig)	The second axis	
	01	0,762	0,01		09
	02	0,929	0,05		10
	03	0,804	0,01		11
	04	0,769	0,01		12
	05	0,911	0,01		13
	06	0,948	0,01		14
	07	0,760	0,01		15
	08	0,681	0,01		16
		Pearson Correlations	(Sig)		
		0,605	0,01		
		0,610	0,05		
		0,709	0,05		
		0,875	0,05		
		0,609	0,01		
		0,905	0,05		
		0,916	0,01		
		0,886	0,01		

Table 1 indicates that all items within the questionnaire (comprising 16 items) demonstrated statistically significant results. Furthermore, the correlation coefficients between each individual item and the overall scale score were also statistically significant, ranging from 0.01 to 0.05. This range suggests strong internal consistency among the items, thereby affirming the scale's high validity. Additionally, the validity assessment included an evaluation of the scale's stability, which was conducted using appropriate statistical methods. The findings revealed a high correlation coefficient

between the different dimensions of the questionnaire (first and second axes) and the total score, with values ranging from 0.605 to 0.948, indicating robust stability and validity for the instrument.

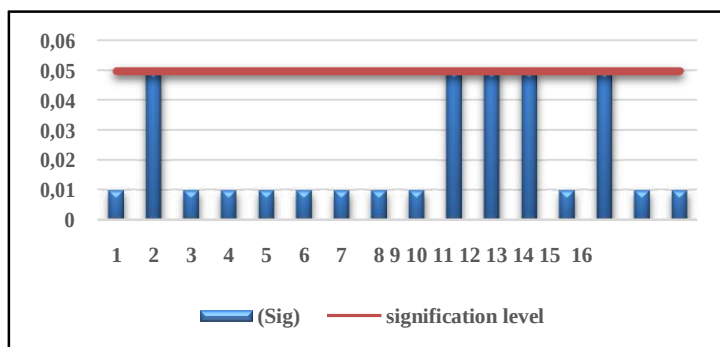


Figure 01. Present the statistical significance of the questionnaire items.

Reability:

Reliability, which refers to the extent to which a measurement scale produces consistent results (Said Kara, 2017), was evaluated in the current study using Cronbach's alpha coefficients. This statistical measure assesses the internal consistency of the questionnaire utilized. The analysis revealed a Cronbach's alpha coefficient of 0.938 for the first dimension and 0.898 for the second dimension of the questionnaire. Additionally, the overall Cronbach's alpha for the complete questionnaire was calculated at 0.954 (see Table 2). These findings indicate a high level of reliability for the scale, supporting its validity in assessing the quality of life among retired physical education teachers.

Table 2. Reliability Analysis of the Questionnaire Measuring Quality of Life Among Retired Physical Education Teachers.

Questionnaire Component	Cronbach's Alpha Coefficient
First Axis	0.938
Second Axis	0.898

III- Results and discussion:

The first hypothesis: internal factors have an impact on achieving financial balance for the National Social Security Fund for Employees (CNAS) to face future challenges.

- In the analysis of the first hypothesis regarding the impact of internal factors on achieving financial balance for the National Social Security Fund for Employees (CNAS), a chi-square test was employed to evaluate the responses across three categories: "a little," "a lot," and "often." The responses are summarized in the table provided, which includes the computed chi-square values, the critical value at a significance level of 0.05, and the corresponding significance levels for each question.

Table 01. Chi-Square Test Results for the Impact of Internal Factors on Financial Balance of the (CNAS).

Question	A Little (%)	Often (%)	A Lot (%)	Chi-Square Calculated	Chi-Square Critical
1	4,16%	42,50%	53,33%	50.45	5.99
2	4%	25%	71%	52.82	5.99
3	8%	9%	83%	44.40	5.99
4	12%	21%	67%	51.50	5.99
5	13,33%	26,67%	60%	50.25	5.99

6	16,67%	26,67%	56,67%	49.65	5.99
7	13,33%	20%	66,67%	44.63	5.99
8	10%	16,67%	73,33%	50.25	5.99

The analysis of data derived from the eight assessed questions reveals that the calculated chi-square values substantially surpassed the critical threshold of 5.99, indicating a strong association between internal factors and the financial stability of the CNAS. Notably, questions 2 and 3 exhibited particularly elevated chi-square values of 52.82 and 44.40, respectively, which strongly suggest a significant correlation between the internal factors analyzed and the respondents' perceptions regarding their importance. The majority of respondents expressed that internal factors significantly contribute to the achievement of financial balance, with "often" or "a lot" being the predominant response categories across all inquiries. The low percentage of participants indicating "a little" further supports a consensus among respondents regarding the critical role internal factors play in addressing future challenges. These findings are consistent with prior research conducted by OussatTaklit (2015-2016), which examined coercive collection methods and disputes in social security contexts for unpaid workers, as well as studies by Ahmed Adjad (2015-2016) focusing on the challenges within social security financing systems. Both studies emphasize the importance of internal factors, including the rationalization of expenditures and the establishment of supervisory bodies tasked with overseeing the financial management of resources. Furthermore, they highlight prevalent challenges, such as the insufficiency of field monitors, the rapid escalation of pharmaceutical costs, and the increasing incidence of work-related accidents and occupational diseases. The consensus among respondents underscores the critical need to address these internal factors through the implementation of appropriate control measures. Such interventions are essential for harnessing the substantial impact of these factors on achieving financial equilibrium within the CNAS, thereby strengthening its capacity to effectively confront upcoming challenges.

Overall, the statistical significance of these findings (all at a significance level of 0.05) reinforces the hypothesis that internal factors are critical to the success and sustainability of CNAS in the face of forthcoming challenges. This insight can be pivotal for policymakers and stakeholders as they navigate the complexities of financial management within the social security framework.

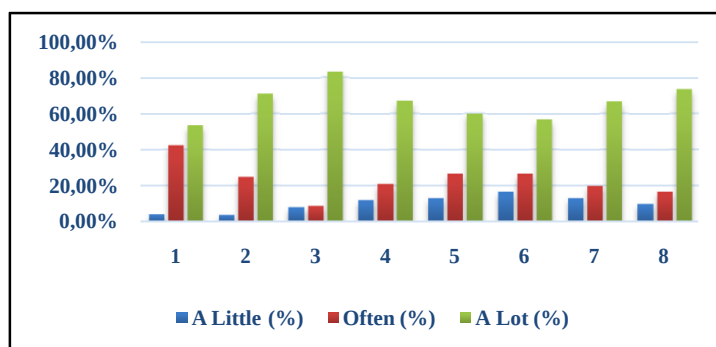


Figure 02. Present the responses of the study sample about the first axis of the questionnaire.

The second Hypothesis:

External factors have an impact on achieving financial balance for the National Social Security Fund for Employees (CNAS) to face future challenges.

- The results of the second hypothesis are illustrated in Table 3, specifically focusing on questions 9 to 16 related to the second axis. The findings indicate that there are statistically significant differences at

a significance level of 0.05. This is evident as the calculated Chi-square values for the questions in the second axis exceed the critical Chi-square value of 5.99.

Table 03. Chi-Square Analysis of External Factors Impacting Financial Balance for the National Social Security Fund for Employees (CNAS)

Question	A Little (%)	Often (%)	A Lot (%)	Chi-Square Calculated	Chi-Square Critical
1	11%	17%	72%	50.45	5.99
2	04%	13%	83%	52.82	5.99
3	9%	16%	75%	44.40	5.99
4	6%	16%	78%	51.50	5.99
5	16.67%	33.33%	50%	50.25	5.99
6	13.33%	26.67%	60%	49.65	5.99
7	26.67%	30%	36%	44.63	5.99
8	20%	26.67%	53.33%	50.25	5.99

The findings detailed in Table 3 provide substantial support for the second hypothesis, which posits that external factors significantly affect the capacity of the National Social Security Fund for Employees (CNAS) to uphold financial stability amidst future challenges. The analysis of responses from questions 9 through 16 reveals statistically significant differences at a 0.05 significance level, as evidenced by the computed Chi-square values exceeding the critical threshold of 5.99. The distribution of responses across these questions underscores several noteworthy trends. For instance, in Question 1, a considerable 72% of respondents assert that external factors exert a "lot" of influence on achieving financial equilibrium, while merely 11% perceive only "a little" impact. The calculated Chi-square value of 50.45 further highlights the statistical significance of these observations. Similarly, in Questions 2 and 4, striking figures emerge, with 83% and 78% of respondents indicating a substantial impact ("a lot") from external influences, respectively. This trend is consistent across the remaining questions (3, 5, 6, 7, and 8), wherein a majority of respondents acknowledge the notable role of external factors, as reflected in their high percentages within the "often" and "a lot" categories. Moreover, the majority of respondents in the study sample expressed strong agreement regarding the influence of external factors on the CNAS's efforts to achieve financial balance amid prospective challenges. These findings align with the research conducted by Ahmed Adjed (2015-2016), which examined the challenges of financing social security systems, and resonates with Badis Kachida's study (2009-2010) focusing on guaranteed risks and dispute resolution mechanisms in social security. Both studies underscore the significance of external factors, encompassing indirect influences such as global events, shifts in the balance of economic and trade powers, as well as the laws and economic conditions prevailing in the global economy. The consensus among respondents indicates a heightened awareness of the necessity to address these external factors through appropriate interventions. Such measures are critical for leveraging the substantial impact of these factors towards achieving financial stability within the National Social Security Fund, thereby enhancing its capability to effectively confront future financial challenges.

Overall, the strong Chi-square values and the predominance of responses aligning with significant external impacts affirm the hypothesis, suggesting that the CNAS must effectively address these external factors to safeguard its financial equilibrium against forthcoming challenges. This analysis calls for further exploration into specific external elements influencing financial balance and provides a foundation for policy recommendations aimed at enhancing the resilience of CNAS in an evolving socio-economic landscape.

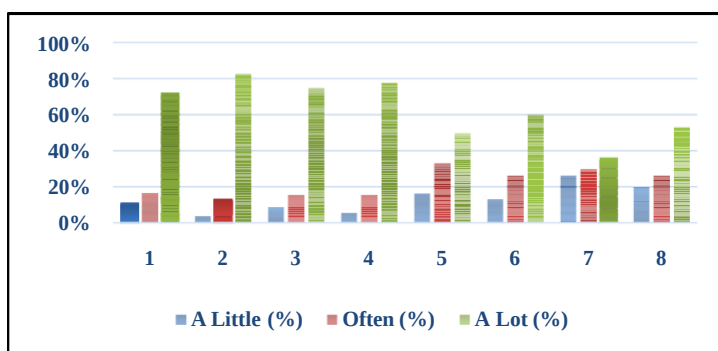


Figure 03. Present the responses of the study sample about the second axis of the questionnaire.

Conclusion:

In conclusion, the social security sector in Algeria is grappling with significant financial and organizational challenges that are adversely impacting the country's overall situation and driving up system costs. To address these issues, the government is considering comprehensive modernization initiatives within its funds, including the implementation of a treating physician system, third-party reimbursements, and the rationalization of expenses, all aimed at maintaining financial stability while promoting the use of generic medications. The financial equilibrium of the National Social Insurance Fund (CNAS) is threatened by various internal factors, such as a lack of field inspectors, escalating pharmaceutical costs, and increases in occupational accidents and diseases, as well as external influences like legislation and broader economic conditions. To secure its financial stability, CNAS must adopt contemporary management practices, including the deployment of the electronic "Chiffa" card, expense rationalization strategies, the creation of a forecasting body to oversee financial developments, and the establishment of an advanced institute for social security focused on training and professional development.

Recommendations:

- Addressing Funding Limitations: Social security institutions face significant challenges due to limited funding sources, primarily relying on contributions and subscriptions from beneficiaries. Therefore, it is essential to develop mechanisms to provide financial resources, either through increased government budgetary support for the sector or by opening new avenues for these institutions to invest in new projects.
- Establishing Collection Centers: Efforts should be made to create collection centers that are closer to users, as opposed to the current centralized approach. This would enable closer monitoring by auditors and facilitate the collection of all contributions more effectively.
- Reassessing Pharmaceutical Expenditures: Expenditures on social security, particularly in the pharmaceutical sector, are rising at a rapid pace; however, the quality of health coverage has not kept up with this increase. Given that prescriptions are issued by attending physicians, the social security system should reconsider the agreements established with doctors, in order to enforce conditions aimed at rationalizing expenditures and improving treatment quality.
- Focusing on Preventive Research: There is a need to invest in preventive research by promoting studies on the causes of certain diseases and enhancing public awareness initiatives to educate patients on health matters.

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