

Evaluating the Efficiency of the Internal Control System in Pharmaceutical Enterprises: A Case Study of SAIDAL Group – El-Harrach Branch -

Meriem Boukadoum¹, Marwa Boukadoum², Mustapha Otmani³

¹ PhD Student, Laboratory of Islamic Finance and Sustainable Development Studies, Faculty of Economic, Morsli Abdallah University- Tipaza (Algeria), boukadoum.meriem@univ-tipaza.dz

² Senior Lecturer- Class A, Laboratory of Local Government Management and Its Role in Achieving Development, Mohamed Seddik Yahia University - Jijel (Algeria), marwa.boukadoum@univ-jijel.dz

³ Professor, Laboratory of Islamic Finance and Sustainable Development Studies, Morsli Abdallah University- Tipaza (Algeria), mustapha87la@gmail.com

Article Information

Article history

Received: 5 February 2026

Accepted: 27 March 2026

Published: 31 March 2026

Corresponding Author

Meriem Boukadoum

Email:

boukadoum.meriem@univ-tipaza.dz

Copyright © 2026, University of Abdelhafid Boussof, Mila. This is an open access article under the CC BY-NC-ND license.

Suggested Citation

Boukadoum, M. Boukadoum, M. Otmani, M (2026). Evaluating the Efficiency of the Internal Control System in Pharmaceutical Enterprises: A Case Study of SAIDAL Group – El-Harrach Branch , Finance and Business Economics Review, Vol. 10, No. 1, pp. A25-33. DOI : 10.58205/fber.v10i1.2075

Abstract: This study aims to highlight the evaluation of the internal control system in the industrial sector, through a case study conducted at the Saidal Group (El-Harrach Unit) during the period 2024–2025. The study relied on field interviews as a tool for data collection, subsequently converting the results into percentages to ensure measurement accuracy.

The results revealed clear strengths in the "Information and Communication" and "Monitoring" components however, they also uncovered a significant weakness in the "Risk Assessment" component.

Accordingly, the study recommends the necessity of strengthening senior management's support for the control system and developing clear mechanisms for risk assessment, in order to enhance system efficiency and achieve better performance levels.

Keywords: Internal Control System; Internal Control; Effectiveness.

1. Introduction

FBER

25

The internal control system is considered one of the fundamental pillars that ensure the proper conduct of work within the organization. It aims to protect assets, enhance performance efficiency, and ensure the accuracy of accounting operations through a set of policies and control procedures established by senior management.

According to the COSO framework, this system is based on five integrated components: Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities. The interconnection of these components contributes to ensuring the effective implementation of internal control.

The importance of evaluating this system lies in verifying the effectiveness of its components and compliance with its procedures. This allows for identifying strengths and weaknesses to take the necessary corrective decisions and achieve the institution's objectives.

1.2 Problem Statement:

Based on the above, the central research question can be formulated as follows:

To what extent is the internal control system implemented at the SAIDAL Group – El-Harrach unit efficient?

1.3 Sub-questions:

To answer the main research question, we propose the following sub-questions:

- Does SAIDAL Group – El-Harrach unit commit to implementing internal control procedures in its daily operations?
- Does the internal control system provide effective protection for the company's assets?

1.4 Hypotheses:

To answer the sub-questions, the following hypotheses were formulated:

- **First Hypothesis:** It is assumed that the El-Harrach unit commits to implementing internal control procedures consistently and regularly across its various activities.
- **Second Hypothesis:** The current system may provide an acceptable level of asset protection however, there is a possibility of procedural gaps that may require adjustment.

1. Introduction to the Internal Control System

The internal control system is a fundamental pillar upon which organizations rely to achieve their objectives efficiently and effectively. This section explores the essence of internal control by presenting its definition, objectives, core components, and the constraints that may hinder its effectiveness.

2.1 Definition of Internal Control System

According to the French Institute of Auditing and Internal Control, an internal control system is:

“An integrated framework comprising a set of responsibilities, behaviors, procedures, and standards designed according to each organization, aimed at ensuring that its activities are properly controlled, its resources—both financial and non-financial- are optimally used, and potential risks are effectively mitigated.” (ifaci, 2025)

It is understood that an internal control system consists of: “a set of measures, policies, and procedures implemented across various administrative levels within the organization. Its objectives include achieving goals, safeguarding assets, reducing potential risks, and ensuring the accuracy and timely availability of both financial and non-financial information for decision-making.” (Hamad Idris Othman Al-Mazouri, 2024, p. 318)

From this, we deduce that an internal control system is: a collection of rules and procedures that assist the organization in regulating its work, protecting its assets, minimizing risks, and ensuring the reliability of the information upon which sound decisions are based.

2.2 Objectives of the Internal Control System

The purposes of internal control systems are clearly defined in professional literature and within the COSO 2013 framework, which classifies these objectives into three main categories: (COSO Internal Control, 2025)

- **Enhance operational efficiency and effectiveness:** By ensuring that operational processes are organized and perform as required, including asset protection;

- **Ensure the reliability of reports and information:** By confirming that financial and non-financial reports are accurate, transparent, and reflect reality in a trustworthy manner;
- **Compliance with laws and regulations:** By activating controls that help the organization adhere to relevant regulatory and legal frameworks.

2.3 Components of the Internal Control System

To ensure an effective and comprehensive internal control system, the COSO framework identifies five essential components: (Internal Control over Financial (Internal Control over Financial Reporting Handbook, 2025, pp. 20-21)

2.3.1 Control Environment: Includes the standards, processes, and organizational structures forming the foundation for applying internal control over financial reporting. It reflects the attitudes, awareness, and actions of those responsible for governance and management regarding the significance of internal control.

- Influences employee awareness of control importance.
- Provides the basis for operating the other control components.

2.3.2 Risk Assessment: A dynamic and ongoing process aimed at:

- Identifying and analyzing risks that could impede the achievement of organizational objectives;
- Prioritizing risks that require management;
- Establishing appropriate methods to manage these risks.

2.3.3 Information and Communication: Focuses on managing information and ensuring continuous communication among internal control actors, both within and outside the organization. Reliable information—whether internal or external—is essential to support the other four control components.

2.3.4 Control Activities: These are procedures carried out according to approved policies to address risks that threaten the reliability of financial reporting. They apply at various organizational levels and process stages to ensure consistent and effective execution of control procedures.

2.3.5 Monitoring and Follow-up: Monitoring activities ensure:

- Controls are designed and implemented to support the internal control components and associated principles;
- Controls effectively mitigate the risks associated with financial reporting;
- Any control deficiencies are identified and reported to responsible governance bodies;
- Monitoring can be continuous, periodic, or a combination of both.

2.4 Constraints on Internal Control

Even a meticulously designed internal control system may have limitations that diminish its effectiveness. These constraints whether human-related or operational pose significant challenges to achieving robust internal control: (Nissa, 2021, p. 95)

- **Management override:** Some managers may intentionally bypass controls to pursue personal or unlawful objectives, undermining the control system;
- **Collusion (internal or external):** When employees collaborate with others inside or outside the organization to bypass controls, no system, however strict, can fully compensate;

- **Poor decision-making:** Hasty decisions or those based on inadequate information can lead to inaccurate outcomes, which negatively impact the implementation and effectiveness of controls;
- **Misinterpretation of instructions:** Weak understanding, neglect, or employee fatigue can cause improper execution of procedures, reducing system effectiveness, especially in critical operations.

2.5 Stages of Evaluating the Internal Control System

The evaluation of the internal control system consists of four sequential steps, detailed as follows: (Mohammed, 2005, pp. 47-48)

2.5.1 Gathering Procedures:

The auditor gains an understanding of the system by collecting written procedures (such as manuals) or documenting summaries of actual practices. This is based on the "Systems Theory," which breaks down the organization's activities into sub-systems (e.g: the sales process). In this stage the auditor uses tools such as flowcharts, diagrams, and open-ended questionnaires (Questionnaires ouverts) to track the sequence of operations from the order to the accounting entry.

2.5.2 Tests of Understanding and Conformity (Tests de conformité):

The objective is to verify that the auditor's understanding of the system aligns with how it is actually applied. The auditor tracks a limited sample of operations (e.g: examining an order and comparing it with the delivery note and invoice) to ensure the procedure exists and is correctly understood, rather than assessing its application efficiency at this stage.

2.5.3 Preliminary Evaluation (Evaluation préliminaire):

The auditor identifies strengths (safeguards) and weaknesses (risks of error and fraud). Closed-ended questionnaires (Questionnaires fermés), which require "Yes" or "No" answers, are frequently used here. The goal is to evaluate the system from a theoretical or design perspective (conceptual framework).

2.5.4 Tests of Permanence (Tests de permanence):

These tests are of utmost importance, the auditor ensures that the strengths identified in the preliminary evaluation are actually implemented and applied consistently throughout the cycle without disruption. The scope of these tests is determined based on the level of expected risks.

2.5.5 Final Evaluation and Synthesis Document:

Based on the results of the permanence tests, the auditor identifies weaknesses resulting from poor application or design flaws. This stage culminates in the preparation of a synthesis document (Document de synthèse), which includes a report to management on the impact on financial information, along with suggestions for improvement.

3. Applied Study

3.1 Presentation of the Company Under Study:

This section provides an overview of the SAIDAL Group as the leading pharmaceutical producer in Algeria, while highlighting the (El-Harrach Branch), which was selected to conduct this practical study.

3.1.1 Presentation of SAIDAL Group:

The SAIDAL Group represents the strategic pillar of the pharmaceutical industry in Algeria. It is a Public Economic Enterprise (EPE) that emerged from the restructuring of the Algerian Central Pharmacy (PCA). Since its establishment in 1982, the Group has played a pioneering role as the first national laboratory specialized in manufacturing generic

medicines, dedicating its efforts to achieving health sovereignty and ensuring citizens' access to essential drugs. In 1998, the Group underwent a structural transformation into a Joint-Stock Company (SPA), followed by its listing on the stock exchange in 1999 as a public joint-stock company. This step embodied the shift toward openness to modern economic mechanisms and investment promotion, while maintaining its pivotal role as a guarantor of national health security. (COSOB, 2026)

3.1.2 Presentation of SAIDAL - El-Harrach Unit:

March 2017 witnessed the launch of the first operational phase of the El-Harrach production site, where initial efforts focused on completing regulatory requirements to obtain an operating license from the competent authorities. In March 2018, the site entered the actual production phase by manufacturing the first batches intended for technical certification.

August 17, 2021, is considered a milestone in the Group's journey, as the efforts of the El-Harrach unit culminated in obtaining the official license for the primary packaging of anti-cancer drugs, enhancing the site's technological capabilities. Following this developmental path, on August 10, 2022, the unit obtained an extension of the license to include the secondary packaging of Biosimilars, reflecting the site's commitment to keeping pace with the latest technologies in the pharmaceutical industry and expanding its specialized production portfolio. (information provided by Saidal Group, El-Harrach Unit, 2025)

3.2 Assessment of the Effectiveness of the Internal Control System at SAIDAL – El Harrach Unit

3.2.1 Evaluation Methodology

The study was based on conducting direct interviews with the Head of the Accounting Department and the Management Controller of the Purchasing Department, in addition to on-site observations through field visits to the relevant departments, namely: The Purchasing and Supply Department, the Production Department, and the Accounting Department, along with information provided by the Quality Control Directorate.

The interview checklist included 25 questions distributed across five main pillars according to the updated 2013 COSO framework, namely: Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities.

The assessment mechanism consisted of awarding a value of one (1) for a “Yes” answer and zero (0) for a “No” answer, to determine the extent to which internal control system components are present in the studied institution.

3.2.2 Interview Checklist

Table 01: presents the results of the interview conducted with the accounting officer at SAIDAL – El Harrach Unit.

Answer		Question	Pillar
No	Yes		
	1	Is there a clear written internal control policy?	Control Environment
0		Does top management show genuine support for the control system?	
	1	Does management act with integrity and show compliance with laws?	
	1	Are roles and responsibilities clearly defined for each employee?	

FBER
30

0		Are employees involved in suggesting improvements to the control system?	
03		Subtotal	
	1	Are risks assessed periodically?	
0		Are there mechanisms to detect new risks during changes?	
	0	Do various stakeholders participate in risk analysis?	
0		Is the company prepared to handle potential risks?	
	1	Are precautions taken to avoid errors or fraud?	
02		Subtotal	
	1	Are there audit or review committees that regularly monitor operations?	
0		Are there detailed controls over sensitive operations (e.g., spending or contracting)?	
	1	Is there a segregation of duties that could lead to conflict of interest?	
	1	Is there a clear accountability policy for rule violations?	
0		Is compliance with control procedures constantly verified?	
03		Subtotal	
	1	Are policies and control instructions clearly communicated to all employees?	
	1	Are various communication tools used to ensure message delivery?	
	1	Are there effective channels for information exchange between departments?	
0		Are control failures easily reported to those responsible?	
	1	Are employees informed of changes in procedures or laws?	
04		Subtotal	
0		Are control procedures updated regularly?	
	1	Are internal audit results considered to improve the system?	
	1	If an error is found, is it quickly corrected?	
	1	Are business operations regularly inspected?	
	1	Is a periodic review of the internal control system conducted?	
04		Subtotal	
25/16		Total Score	

Source: (Prepared by the researchers based on the updated COSO Internal Control Framework - 2013)

3.2.3 Interview Results – Percentage Analysis

Percentages were calculated to assess effectiveness levels in each pillar using the formula:

$$\text{Percentage} = (\text{Scored Points} \div \text{Total Points}) \times 100$$

This conversion aims to facilitate evaluation based on the proposed assessment scale.

Table 02: Calculating the Percentages of the Internal Control System Evaluation Results.

Pillar	Total Points	Scored Points	Percentage
Control Environment	5	3	$60\% = 100 \left(\frac{3}{5} \right)$
Risk Assessment	5	2	$40\% = 100 \left(\frac{2}{5} \right)$
Control Activities	5	3	$60\% = 100 \left(\frac{3}{5} \right)$
Information and Communication	5	4	$80\% = 100 \left(\frac{4}{5} \right)$
Monitoring and Evaluation	5	4	$80\% = 100 \left(\frac{4}{5} \right)$
Total	25	16	$64\% = 100 \left(\frac{16}{25} \right)$

Source: (researchers)

FBER

• Interpretation of Results

31

The results show that the highest effectiveness was recorded in the pillars of Information and Communication and Monitoring and Evaluation, both at 80%, while the lowest effectiveness was in Risk Assessment at 40%. The overall effectiveness of the internal control system was 64%, indicating a moderate level of effectiveness that requires improvements, particularly in risk identification and analysis.

3.3 Proposed Evaluation Scale

Table 03: Proposed Evaluation Scale

Percentage	Effectiveness Level	SAIDAL Classification	Remarks
Less than 50%	Ineffective		
50% to 69%	Moderate effectiveness	64%	Needs improvements
70% to 89%	Effective		
Over 90%	Highly effective		

Source: (Corporate governance centre, 2026)

According to this scale, the internal control system at SAIDAL – El Harrach Unit – is rated as moderately effective, scoring 64%, reflecting good efforts but requiring enhancement in specific areas.

3.4 Analysis of Internal Control Evaluation Results

Based on the interview checklist used to evaluate the effectiveness of the internal control

system, SAIDAL Group – El Harrach Unit – scored 16 out of 25, equivalent to **64%**. According to the evaluation scale proposed in this study, this percentage classifies the organization's control system as “**Moderately Effective**”.

The interview results revealed several positive indicators, particularly within the “Information and Communication” pillar it was evident that control policies are clearly communicated to employees through multiple channels to ensure effective dissemination. Furthermore, the “Monitoring and Evaluation” pillar reflected a clear commitment to continuous improvement principles by promptly correcting errors and taking internal audit findings into account.

Conversely, the results disclosed certain deficiencies that require greater attention, specifically in the “Risk Assessment” pillar where a lack of clear mechanisms or written procedures for identifying, assessing, addressing, and monitoring risks. Furthermore, the absence of an internal audit department at the unit which is responsible for detecting errors and irregularities, proposing solutions, and monitoring risks represents a weakness, as this department exists only at the Group’s main headquarters in Algiers, leaving the El Harrach Unit without specialized risk oversight. In addition, there is a lack of training and awareness among employees regarding risk management. Moreover, top management support for the internal control system appears to be limited, which may restrict the effective implementation of control policies and procedures on the ground.

4. Conclusion

This study concluded that the internal control system efficiency at SAIDAL Group – El Harrach Unit – is characterized by a moderate (acceptable) level, with an overall effectiveness rate of 64%. The results indicated that the system possesses solid foundations in terms of information, communication, and monitoring; however, it still faces challenges related to deficiencies in risk assessment mechanisms and limited top management support, which necessitates the development of these aspects to ensure reaching high efficiency levels.

Based on the above, the following conclusions can be drawn regarding the research hypotheses:

- **First hypotheses:** which stated that “the El Harrach unit commits to implementing internal control procedures consistently and regularly,” has been partially confirmed. The study results proved the existence of an actual commitment to implementing internal control procedures within the unit, evidenced by a score of 80% in the “Information and Communication” and “Monitoring” pillars. However, this commitment did not encompass all control components due to the weakness recorded in “Risk Assessment” at 40%.
- **Second hypothesis:** which stated that “the current system may provide an acceptable level of asset protection, however, there is a possibility of procedural gaps that may require adjustment,” has been confirmed. The study results aligned with this assumption, as the field evaluation showed that the internal control system of the company under study is characterized by a “moderate” efficiency level. This confirms that the level of asset protection is at an acceptable rather than ideal degree, due to the presence of clear procedural gaps that require adjustment.

5. Recommendations

Based on the results of the study, the following recommendations can be suggested:

- Organizing training courses for employees to introduce them to the importance of internal control and how to perform their tasks accurately to avoid errors.
- Not being satisfied with the current system, but it must be reviewed and developed periodically to suit the changes that occur in the company.
- The necessity for managers to support the control system more significantly, through:
 - Issuing clear instructions from top management regarding the importance of complying with internal control procedures and reinforcing them in regular meetings;
 - Establishing a subsidiary internal audit committee specifically for the El Harrach Unit to monitor the actual implementation of control procedures;
 - Providing training courses for employees to familiarize them with the internal control system, while ensuring top management support for these programs and regularly following up on their progress.

6. Citations

Corporate governance centre. (2026, 2 5). Retrieved from [alfaisal.edu: https://cgc.alfaisal.edu/thecenter](https://cgc.alfaisal.edu/thecenter)

COSO Internal Control. (2025, 06 14). Retrieved from COSO: <https://hemani.finance/coso-internal-control/>

FBER

33

Hamad Idris Othman Al-Mazouri, Z. H.-S. (2024). The Impact of the Internal Control System in Reducing Blockchain Technology Risks: An Exploratory Study on a Sample of Academics and Professionals. *Rafidain Development Journal*, 318. Retrieved from The Impact of the Internal Control System in Reducing Blockchain Technology Risks: An Exploratory Study on a Sample of Academics and Professionals.

ifaci. (2025, 6 10). Retrieved from <https://www.ifaci.com>

information provided by Saidal Group, El-Harrach Unit. (2025, 11 17).

KPMG. (2025, 06 13). Retrieved from KPMG: <https://kpmg.com/kpmg-us/content/dam/kpmg/frv/pdf/2023/handbook-internal-controls-over-financial-reporting.pdf>

Mohammed, p. (2005). *Auditing and Account Monitoring: From Theory to Practice*. Algeria: University Publications Office.

Nissa, O. (2021). The role of internal audit in detecting internal control system deficiencies in light of international internal auditing standars - case study-. Boumerdes: University of M'Hamed Bougara Boumerdes.

(n.d.). *Prepared by the researchers based on the updated COSO Internal Control Framework - 2013.*

the official website of the Commission for the Organization and Monitoring of Stock Exchange Operations (COSOB),. (2026, 01 27). Retrieved from Notice Information: <https://cosob.dz/wp-content/uploads/2024/05/les-emetteurs-notice-SAIDAL.pdf>