
**IMPLEMENTATION OF INTERNAL CONTROLS OVER INVENTORY BASED
ON COSO AT CV. ENIGMA PASIFIK SEAFOOD**

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Abstract

This study aims to evaluate the effectiveness of the implementation of an internal control system for inventory in a seafood processing company. The approach used in this study is a qualitative approach with an explanatory analysis design. The primary data in this study were collected through interviews and direct field observations, which were then analyzed using descriptive techniques based on the five components of the COSO Framework. Based on the study results, the implementation of internal control over inventory based on the COSO Framework approach is only 40.00% compliant overall, indicating a “not met” category. The results show that the compliant COSO components relate to Information and Communication. Risk Assessment is categorized as “sufficiently met.” However, Control Environment, Control Activities, and Monitoring Activities remain non-compliant. The failure to meet these components stems from a manual recording system, the absence of written standard operating procedures (SOPs), absences that are not formally documented, and the lack of periodic physical counts. These weaknesses result in inaccurate inventory records, causing them to lose their function as a decision-making tool for management. As a solution, the company is advised to implement daily Excel-based computerization, develop written SOPs, tighten authorization procedures, schedule inventory counts, and improve preventive oversight.

Keywords: COSO, Internal Control, Inventory

INTRODUCTION

Operational success in companies engaged in the seafood processing industry is highly dependent on the effectiveness of their inventory management. In the supply chain of export companies, inventory is not merely a pile of goods in a warehouse but a current asset with high economic value and significant risk. Demands for efficiency and transparency in asset management compel modern entities to no longer rely solely on managerial intuition but rather to establish an efficient integrated accounting information system and robust internal controls to form a stable and controlled operational foundation (Rozika et al., 2025). The nature of seafood products, which fall under the category of perishable goods, demands highly specific handling, as any delay or error in inventory management can directly result in a decline in product quality and significant financial losses for the company. Poor management not only causes material losses but can also erode buyer confidence in international markets.

However, in practice, inventory management is often a weak point in the operational systems of medium-sized companies. This phenomenon is evident at CV. Enigma Pasifik Seafood, where, based on the researcher's initial observations, the inventory management system is still operated conventionally and is not yet well-integrated. The accounting system is designed to provide adequate control to ensure that all transactions carried out are recorded, properly authorized, valid, and accurate, and can serve as a tool to monitor the company's operational progress (Buana et al., 2023).

The main issue arises from the inventory documentation process, which remains highly manual and unsystematic. The researchers found that the company's primary daily records tend to focus only on the nominal rupiah value of purchases. It is true that information regarding weight (kilograms) and the types of fish commodities is available; however, this data remains fragmented in the form of stacks of raw purchase receipts that have not been compiled into the inventory control ledger. The absence of a systematic process for inputting data from these receipts into the reporting system makes it difficult for the company to monitor physical inventory levels accurately and in a timely manner.

In the operations of CV. Enigma Pasifik Seafood, this lack of data synchronization is the most vulnerable point to the risk of discrepancies. Observations in the field indicate that internal controls over inventory are not functioning optimally, as evidenced by a lack of clarity regarding the flow of incoming and outgoing goods. Since fish weight data is still stored in the form of raw sales receipts, the company often faces challenges when monitoring the actual inventory available in the cold storage facility. This results in a very high potential for inventory shrinkage due to miscounts or damaged goods; however, it is extremely difficult to detect these issues early on due to the lack of valid and easily accessible comparative data.

This problem is exacerbated by non-standardized procedures for documenting outgoing goods, where records of export shipments are often kept only on informal media such as used envelopes or temporary scraps of paper. This information is then reported to management solely through photographic documentation, without any data entry into a formal archiving system. As a result, the audit trail for inventory movements is disrupted, and the company loses the ability to accurately trace historical inventory data.

Weaknesses in human resource competencies in the fields of accounting and computerization often result in inventory recording systems still being conducted manually, which in turn leads to dual roles in purchasing and inventory recording activities, thereby preventing

internal controls from functioning fully and effectively (Azhari et al., 2024) . The weakness of this filing system was also evident when the researcher encountered difficulties accessing data from the past three years, as documents from previous years were directly handed over to management without any digital or physical backups at the operational office. This situation highlights the weakness of the Information and Communication function within the organization, creating a significant gap that leads to inefficiency and the risk of fraud.

The irregularities in documentation and reporting are, in theory, fundamentally at odds with the principles of sound asset management. According to (Marisyah et al., 2024) , inventory is a current asset in the form of goods or supplies intended to support operations or be resold; therefore, every movement must be accurately recorded to maintain liquidity and business continuity. In the context of the seafood industry, the absence of a physical inventory reconciliation is not merely an administrative issue but a failure in asset protection protocols (Renur et al., 2025).

To minimize the risk of such discrepancies, companies require an Internal Control mechanism. (Maruta, 2016) defines internal control as a system comprising organizational structures and coordinated methods to safeguard the organization's assets and verify the accuracy of accounting data. If controls at CV. Enigma remain informal relying on stacks of raw receipts and photo reports then the objective of controls to provide “reasonable assurance” will not be achieved.

One of the most comprehensive control frameworks for analyzing this issue is the COSO (Committee of Sponsoring Organizations of the Treadway Commission) framework. According to COSO, effective internal control must include five key components: control environment, risk assessment, control activities, information and communication, and monitoring activities (Sumarna & Novitasari, 2022) . Based on the situation at CV. Enigma, there appear to be serious obstacles in the Information and Communication and Control Activities components.

COSO theory emphasizes that information must be identified and communicated in a form that enables people to carry out their responsibilities. An internal control system is essentially a set of policies that plays a vital role in protecting an organization's assets from various forms of misuse, verifying the accuracy of data, and mitigating the risk of intentional errors in business activities (Hanum et al., 2022) . However, the reality on the ground where raw data is not processed into formal reports creates a wide gap between the ideal control theory and the company's operational reality.

This study was motivated by a research gap identified in previous studies. Previous research, such as that conducted by the , has outlined administrative stock-taking procedures but has not evaluated the effectiveness of these controls through a formal framework. Therefore, this study aims to conduct an in-depth analysis using the COSO framework to ensure that internal controls over inventory are not only procedural but also substantive.

The novelty of this study lies in the application of the COSO framework (2013) to the seafood industry, which is characterized by a high risk of shrinkage. Furthermore, the focus on transforming record-keeping from conventional data such as raw receipts and photographs into an accountable information system is expected to provide a new contribution to the literature on internal controls and accounting practices for similar business entities.

Given the various challenges associated with these manual systems and informal reporting practices, the researcher identifies an urgent need for an in-depth evaluation of the company's asset monitoring system. Weaknesses in internal controls not only hinder efficiency but also create a real risk of financial loss. Therefore, the researcher is interested in examining this issue further under

the research title: “Implementation of Internal Controls over Inventory Based on COSO at CV. Enigma Pasifik Seafood.”

RESEARCH METHOD

This study employs a qualitative approach with explanatory analysis to elucidate the phenomenon of internal controls over fish inventory. The research focus is on inventory reports and procedures for handling production byproducts, while the research subjects include staff from the internal control department and the warehouse operations department. The data sources used were primary data obtained through data collection techniques such as in-depth interviews and direct field observations.

The collected data were then processed using descriptive data analysis techniques (Qomaruddin & Sa’diyah, 2024) . In this stage, the researcher will describe the procedures in place at the company and then analyze them using the COSO framework to assess the effectiveness of its five internal control components, which include the control environment, risk assessment, control activities, information and communication, and monitoring.

To measure the level of effectiveness in implementing each of these COSO components, the researchers used an observation sheet and a structured questionnaire (checklist) with response options of “Yes” (if implemented) and “No” (if not implemented). The results from these instruments were then calculated using the ideal score formula proposed by Jean D. Champion (Afriyani et al., 2021) as follows:

Next, the percentage score obtained will be interpreted based on the following criteria for classifying the degree of compliance:

$$\text{Percentage} = \frac{\text{Jumlah Jawaban "YA "}}{\text{Jumlah Pertanyaan}} \times 100\%$$

Next, the percentage value obtained will be interpreted based on the assessment criteria for the classification of compliance measurement according to the Ministry of Home Affairs, Ministerial Regulation (Afriyani et al., 2021) as follows:

Table 1.
Percentage Calculation

Percentage	Criteria
0%–20%	Implementation Criteria Not Met
21%–40%	Criteria Partially Met
41%–60%	Sufficient Implementation
61%–80%	Implementation of Standards: Fully Met
81%–100%	Implementation of Standards: Fully Met

Source: processed data, 2026

This analysis was conducted to provide a clear picture of the reasons for and the impact of these unrecorded procedures on the quality of inventory reporting for the company (Bunda, 2023) . To ensure the validity and credibility of the analysis results, the researcher applied triangulation techniques. Validity testing was conducted through source triangulation by comparing information

from several different informants, as well as technical triangulation by cross-referencing the results of in-depth interviews with the results of direct field observations to ensure the consistency of the data obtained

RESULTS AND DISCUSSION

The operational management of commodity inventory at CV. Enigma Pasifik Seafood operates at a highly dynamic pace, as evidenced by direct observations and in-depth interviews with informants in the field. Physical activities in the warehouse area begin simultaneously with the unloading of fish shipments that have just arrived from fishing vessels or supplier partners, followed by bulk weighing using digital scales to determine the initial gross weight. Once the weighing process is complete, field workers immediately conduct a quick yet thorough visual sorting to separate the fish into two categories: those meeting the quality criteria for primary export, and the remaining sorted fish (rejects). Products of the highest export quality are immediately transferred to special containers for direct placement in the cold storage room to preserve their natural freshness. Conversely, fish classified as rejects or production byproducts are immediately placed in open fiber boxes located in the outdoor area, before eventually being completely emptied for resale to local fish merchants in the domestic market.

Although the physical handling of the commodities proceeds constantly, the main challenge faced by the company actually lies in the efficiency of processing its basic inventory documents. The high frequency of daily loading and unloading at the warehouse dock area results in the accumulation of stacks of physical receipt sheets, averaging up to 200 sheets per month. These receipts from the field's digital scales are not directly entered into a structured, real-time computerized database system. The situation on the ground shows that all these receipts are simply collected and piled on open work desks, then manually processed or recorded by hand by warehouse clerks into the main ledger at the end of the week when loading and unloading activities are slow (in batches). This conventional administrative approach—which is prone to delays and lacks digital archiving—serves as the starting point for errors, data loss, and a decline in the quality of the company's inventory reporting for remaining production output.

An evaluation of the reliability of the company's internal control system for commodity inventory is comprehensively outlined by analyzing field findings using the five main components of the COSO (Committee of Sponsoring Organizations of the Treadway Commission) framework. When viewed through the first component—the control environment—CV. Enigma Pasifik Seafood has generally succeeded in establishing a solid operational foundation in several aspects of its warehousing operations. The company has demonstrated excellent implementation of the principle of segregation of duties, whereby field staff fully responsible for physically weighing fish commodities have identities and roles that are entirely distinct from those of the Karani staff tasked with recording summary data in the general ledger. This practice is considered highly effective in mitigating and minimizing the risk of data manipulation or fraud involving weight discrepancies in the field. In addition to the segregation of duties, the level of awareness regarding workplace safety among employees at the warehouse is also observed to be very high. This is clearly reflected in the workers' daily discipline in using a full set of safety gear, such as safety shoes to prevent slipping on wet floors and special gloves when sorting fish to avoid physical injuries from sharp fish spines.

Although it has strengths in terms of division of labor and physical safety, the environmental control component at this company still faces significant challenges because it is not yet supported

by formal, written disciplinary procedures. Based on in-depth observations in both the office and warehouse areas, no official bulletin boards, written documents regarding work rules, or employee codes of conduct were found displayed on strategic walls in the warehouse. Management acknowledges that the absence of an official organizational chart posted in the work area is largely influenced by the high turnover rate among daily field workers. Within the COSO framework, administrative weaknesses such as the absence of a formal written organizational structure and the lack of clear sanctions are major obstacles to creating an optimal control environment (Febriani et al., 2024) .

The negative impact of these weaknesses is that all operational work instructions, the limits of staff's functional authority, and standard procedures regarding fish quality sorting standards have never been documented in the form of written SOPs. The prevailing management approach ultimately relies solely on verbal instructions or simply uses digital messaging group platforms such as WhatsApp, where staff accountability is driven purely by subjective understanding and practical experience that employees have self-taught over time.

The second component of the COSO framework analyzed by the researcher is risk assessment. In this context, the management of CV. Enigma Pasifik Seafood has actually demonstrated concern for certain forms of operational risk mitigation, particularly those that directly impact the smooth flow of its primary exports. Management has demonstrated that it has identified risks to the physical security of goods by actively installing CCTV cameras that directly monitor the commodity weighing area. Additionally, to anticipate the risk of delays in export shipping documents which could hinder international distribution management has implemented very strict daily reporting deadlines for all staff. Risk mitigation efforts are also applied within the cold storage facility through the implementation of the First In First Out s (FIFO) method. This layout system ensures that fish stock that entered first is placed at the very front near the exit for earlier distribution, thereby minimizing the risk of product quality degradation or spoilage as effectively as possible.

Although management has designed mitigation measures for the main export product lines, risk assessments regarding leftover production inventory or rejected fish are still very weak and neglected. The company appears to allow the risk of weight loss due to the ice-melting process to occur unchecked without any specific record-keeping documentation, as it considers this a natural cycle in the fresh seafood business. Furthermore, a critical vulnerability was identified in the management of basic documentation due to the limited space in the cramped warehouse office. The accumulation of approximately 200 physical daily receipts is at high risk of physical damage, faded writing, or even loss because they are simply piled on an open desk without a dedicated, secure, and water-resistant filing cabinet to protect them from exposure to warehouse ice vapor. This blind spot in risk assessment is further exacerbated by the fact that the primary measuring instrument—a digital scale—has never been periodically calibrated by an official external agency or department. Accuracy testing of the scales has so far been conducted only conventionally and independently by employees using standard ice blocks—a practice that increases the risk of cumulative measurement errors, which compromise the quality of the company's inventory reporting.

The third component of the COSO framework that is the primary focus of this study is control activities. Based on field findings, this component has proven to be the most critical point triggering systemic vulnerabilities in the reliability of inventory reports for sorted fish rejects. The

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fundamental obstacle stems from the frantic pace of the ship unloading process, which results in the disregard of basic control procedures—specifically, the physical receipt forms for recording rejected fish are often not signed off by field personnel at all. This lack of authorization also extends to external transactions, where the sale of leftover fish to local traders around the port takes place without written approval from the operations manager. This occurs because the manager is highly mobile and is not always present at the warehouse, so transaction validation relies solely on verbal trust without any formal documentary controls.

The vulnerability of these control activities is further exacerbated by technical constraints in the secondary recording process carried out by Karani staff. Due to the double workload in the field, Karani staff are forced to delay (backlog) the entry of data from hundreds of physical receipts into the main ledger until the weekend. This delay in data entry poses a very high risk, as the handwriting of the weighers on the receipt sheets is prone to fading or smudging due to frequent exposure to ice water in the warehouse, which in turn increases the potential for misinterpretation of numerical data during the final bookkeeping process. On the other hand, physical access restrictions to the warehouse storage area are also observed to be lax. The fiber box storage area is left completely open without any protection or strict supervision, allowing outsiders such as truck drivers, fishermen, and external porters to easily enter the area, which increases the risk of physical tampering or undetected loss of goods.

From the perspective of the fourth component—information and communication—CV. Enigma Pasifik Seafood exhibits both functional strengths and structural weaknesses in the reporting of inventory data. On the positive side, the basic document format—the field receipt—has been designed to be very concise and practical. This simple document was intentionally created to facilitate quick data entry by workers operating directly in the wet, slippery, and bustling warehouse area. Although concise, the information contained in these slips is sufficiently comprehensive, as it covers crucial details such as the fish species, the weight of the commodities, the date of recording, and the full name of the field staff member who performed the weighing.

In addition, the use of digital communication channels, specifically a WhatsApp group, is considered highly effective and responsive as the primary channel for resolving various operational challenges in the field in real time. This digital channel is also actively used by Karani staff to periodically send photographic documentation of the daily ledger summaries to company management. However, a fundamental weakness that is very apparent in this component is the absence of a structured, computer-based internal inventory data processing system, such as a Microsoft Excel program specifically designed for warehousing. As a result, when external parties or export buyers request comparative reports on inventory history, the company is unable to present them professionally and promptly.

Furthermore, regarding the fifth component—monitoring activities—the oversight functions carried out by management over the warehouse's internal control system are still considered very lax and passive. It was observed that operational managers have never conducted routine daily or weekly checks, verifications, or surprise inspections of the stacks of physical fish inventory receipts on the warehouse desks. One reason for this weak periodic monitoring function is the high workload and the numerous external matters that managers must handle, such as managing the bureaucratic paperwork for export ships and negotiating with foreign buyers. In addition to this busy schedule, there is also a complete lack of formal performance evaluations regarding the record-keeping performance of warehouse staff (employee performance reports) at

this company. This situation arises from the deeply ingrained family-like culture in day-to-day operations, where a high level of interpersonal trust overshadows the need for objective, written performance evaluation mechanisms.

The lack of standardization in these monitoring components is compounded by the absence of an independent internal audit team established by the company to periodically assess the adequacy of the warehousing system. Cross-checking functions by parties outside the warehouse department—such as the finance department at headquarters or direct involvement by the company’s owners—are also completely absent when it comes to verifying the accuracy of daily inventory reports. As a result of this lack of multi-layered oversight, all monitoring activities within CV. Enigma Pasifik Seafood tend to be reactive.

Management will only initiate an investigation to identify the root cause of the problem once a complaint has been received regarding a significant negative discrepancy between the general ledger records and the actual physical inventory during the closing period or when storage containers are completely emptied at the end of the month. To objectively measure the level of compliance and the effectiveness of the company’s internal control system implementation, the researcher used a structured observation sheet (based on observations and interviews). The responses obtained from these observation sheets were classified into dichotomous options: “Yes” (if the control indicator was met/implemented) and “No” (if the control indicator was not met/not implemented).

To calculate the index value or compliance percentage for each COSO component, the quantitative data obtained were processed using the ideal score formula according to Jean D. Champion, as described in the Research Methodology section. Details regarding the availability of control indicators based on the results of field observations and in-depth interviews are presented in detail in the following table:

Table 2.
Observations on the Availability of COSO Indicators

No.	COSO Control Component	Indicator	Number of Questions	Number of “Yes” Answers	Number of “No” Answers
1	Control Environment	Ethics and Integrity	2	-	2
		Commitment to Competence	1	1	-
		Implementation of structure, authority, and responsibility	3	1	2
		Oversight responsibilities	1	-	1
		Accountability for the internal control system	2	1	1
2	Risk Assessment	Determining Objectives	2	1	1
		Identifying and analyzing risks	3	1	2

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		Assessing fraud risk	3	2	1
		Identifying and analyzing significant changes	3	1	2
3	Control Activities	Developing control activities	3	-	3
		Developing controls over technology	2	-	2
		Refer to policies and procedures	2	2	-
4	Information and Communication	Using relevant communication	2	2	-
		Effective internal communication	3	2	1
		Effective external communication	1	-	1
5	Monitoring Activities	Ongoing and separate evaluation	4	-	4
		Evaluate and report any weaknesses	3	2	1

Source: processed data, 2026

Next, the results of the calculations from the summary data above were converted into percentages per component to determine their effectiveness levels based on the classification criteria from “ . The results of the percentage analysis and classification of responses are presented in Table 3 below:

Table 3.
Percentages and Classification of Responses for COSO Control Components

No.	COSO Control Components	Percentage	Compliance Classification
1	Control Environment	33.33%	Partially Met
2	Risk Assessment	45.45%	Moderately Met
3	Control Activities	28.57%	Partially Met
4	Information and Communication	66.67%	Met
5	Monitoring Activities	28.57%	Partially Met
Total		40.00%	Not Fully Met

Source: processed data, 2026

After mapping the operational characteristics and identifying weaknesses in each COSO component, the researcher then simplified the quantitative data to draw objective conclusions. Jean D. Champion’s formula was applied to calculate the overall percentage of the results from the analysis of internal controls over inventory at CV. Enigma Pasifik Seafood. This calculation process is based on a comparison between the total weight of affirmative responses (“Yes”)—which reflect compliance with control criteria—and the cumulative total of all questions asked in the observation instrument. The mathematical formulation and step-by-step breakdown of this assessment are presented as follows:

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$$\begin{aligned}\text{Percentage} &= \frac{16}{40} \times 100\% \\ &= 0.4000 \times 100\% \\ &= 40.00\%\end{aligned}$$

Based on the results of the quantitative analysis presented through the above calculation, the calculated relative value or control compliance index yields a final figure of 40.00%. If this percentage is confirmed and re-aligned with the effectiveness measurement criteria that serve as the standard in this model, then this achievement score absolutely falls into the “Insufficient Implementation” category. This figure also provides an inverse mathematical indication that 60.00% of internal control aspects have not been met or have not been ideally implemented by CV. Enigma Pasifik Seafood. Based on these conditions, the researcher conducted an in-depth analysis of each component to identify unmet indicators, the concrete impacts resulting from them, and the corrective actions required by the company.

The first component classified as “Inadequately Met” is the control environment, with a compliance rate of 33.33%. This means the company has not implemented written ethical standards, a formal commitment to competence, a clear authority structure, oversight responsibilities, or accountability for the internal control system. The direct effect of failing to meet these control environment indicators is the emergence of a permissive work culture toward negligence due to the absence of sanctions or legally binding oversight standards. The impact on the quality of inventory reports is a lax approach to recording discipline, where there is no formal sense of responsibility to present data in a timely manner, resulting in biased and questionable validity of information regarding remaining production stock.

The second component—risk assessment—falls into the “moderately met” category, with an achievement rate of 45.45%. This “moderately met” status indicates that management actually possesses an intuitive awareness of the risk of inventory discrepancies but has not yet translated this into a structured system. To upgrade this component to “fully met,” company management must implement corrective measures by formally adopting risk identification methods. Management needs to create written documentation regarding the mapping of warehouse operational risks, conduct periodic analyses of potential fraud, and establish logically acceptable tolerance limits for weight or quantity discrepancies in fish per period.

The third component—control activities—scored very low at 28.57%, placing it in the “partially met” category. This indicates that the company has failed to meet the indicators for developing control activities, which include segregation of duties, information technology controls, and the establishment of formal policies and procedures. The effect of this failure to implement control activities is the loss of checks and balances in warehouse operations, where the flow of fish in and out is carried out without valid authorization documents from the operations manager. The impact on inventory reports is the emergence of opportunities for data manipulation or unintentional input errors, which ultimately result in periodic stock reports that are inaccurate and fail to reflect the actual quantity of goods stored in the warehouse.

The fourth component—information and communication—achieved the highest score at 66.67%, and is therefore classified as met. This indicates that indicators regarding the use of relevant communication and effective internal communication have been well implemented by the company due to its still-lean organizational structure. A positive impact of fulfilling this component is that the flow of operational information among employees is conveyed quickly. This effective system

contributes significantly to the smoothness of daily coordination, so management only needs to maintain the consistency of the existing communication patterns.

The fifth component is monitoring activities, which are also at the “partially met” level, with a percentage of 28.57%. This indicates that the company has not yet implemented independent, ongoing evaluations and lacks a reporting system for any control weaknesses identified in the field. The consequence of this failure to conduct monitoring activities is that the internal control system loses its early-detection function, leaving management without a metric to determine when and where recording errors begin to occur. The critical impact on the quality of inventory reports is that management will only become aware of significant negative inventory variances at the end of the accounting period, causing the remaining fish inventory data to lose its function as a reliable tool for strategic decision-making.

Given the numerous critical indicators that remain unmet due to informants’ inability to explain standard procedures and their lack of understanding regarding the urgency of internal control governance, this final project was undertaken. This research serves as an academic bridge and a concrete solution to enhance the understanding and awareness of operational staff within the company regarding the importance of internal control accounting. As a comprehensive recommendation for improvement to enhance control effectiveness, CV. Enigma Pasifik Seafood is expected to promptly develop binding written Standard Operating Procedures (SOPs), implement a strict separation of duties, schedule periodic independent physical inventory counts (stock opname), and implement a simple Excel-based computerized recording system to restore the integrity of operational inventory reports in the future.

CONCLUSION

Based on the results of the analysis and discussion regarding the implementation of internal controls over inventory in accordance with the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework at CV. Enigma Pasifik Seafood, it can be concluded that, quantitatively, the company’s internal control system has cumulatively achieved only 40.00%. In accordance with the standard classification criteria of the Minister of Home Affairs Regulation (Permendagri), this achievement places the company’s inventory internal control system in the “Insufficiently Met” category. This supports the research objective that the implementation of internal controls at the company is still not functioning optimally in terms of both s and substance, with mathematical evidence indicating that 60.00% of control aspects have not been met or have not been ideally implemented in warehouse operations.

An in-depth review of the five COSO components revealed mixed results while identifying the company’s key weaknesses. The Information and Communication component recorded the highest score of 66.67% (Met) because the organization’s lean structure facilitates the rapid flow of operational information. However, the Risk Assessment component was only in the “Partially Met” category (45.45%) because existing mitigation measures focus solely on the main export product lines, while risks such as significant shrinkage, damage to physical receipt documents, and the accuracy of digital scales for production rejects remain unaddressed. The most critical vulnerabilities were found in the Control Environment (33.33%), Control Activities (28.57%), and Monitoring Activities (28.57%), all of which fall into the “Insufficiently Met” category due to the lack of written SOPs, the absence of formal authorization, the absence of unscheduled physical inventory counts

(stock opname), delays (backlogs) in data entry by Karani staff, and a management oversight system that remains lax and reactive.

These systemic weaknesses in various components of internal controls have a concrete impact in the form of a decline in the quality of the company's inventory records (fish stock). The lack of regular physical data summaries, informal record-keeping, and the loss of check-and-balance functions have caused periodic inventory reports to become inaccurate, biased, and of questionable validity. Consequently, inventory report data has lost its function as a reliable tool for management in making strategic decisions.

As a practical recommendation to restore the integrity of this data, CV. Enigma Pasifik Seafood is expected to immediately take corrective actions that specifically address each of the above weaknesses in sequence. The company is advised to promptly develop binding written Standard Operating Procedures (SOPs) to clarify staff functional authorities. In addition, management needs to implement strict transaction authorization procedures to address the issue of transaction authorizations that have not been formally documented to date. To ensure data consistency, the company must schedule periodic physical inventory counts (stock opname) as well as unannounced spot checks of storage facilities.

To put an end to the practice of delayed data entry by Karani staff, management must implement a daily update system supported by a simple, Microsoft Excel-based digital recording system so that data is presented in real time. Finally, the management oversight system, which is currently lax and reactive, must be transformed into a preventive oversight system through periodic reviews of inventory movement reports. This study is expected to help the company identify critical points where fish inventory loss (shrinkage) occurs and transition from manual record-keeping to more modern methods. Additionally, this study serves as a reference to raise awareness among management and operational staff regarding the importance of implementing internal controls in inventory management.

REFERENCES

- Afriyani, C., Ruliana, T., & Indrawati, A. (2021). *Analysis of the Effectiveness of E-Filing for Individual Taxpayers in Reporting Income Tax Article 21 for Employees*. 1–8.
- Azhari, D. M., Marliyah, & Harahap, R. D. (2024). *Analysis of the Implementation of Accounting Information Systems and Internal Controls for Raw Material Inventory at Coffee Station*. 3 , 1740–1750. <https://doi.org/10.56672/assyrakah.v3i3.333>
- Buana, A. W., Harmain, H., & Rahamani, N. A. B. (2023). *Analysis of the Implementation of a Sales Accounting Information System at CV. Advertising Arjuna Pematang Siantar*. 3, 161–172.
- Bunda, N. A. (2023). *Analysis of the Implementation of Primary Product Cost Accounting and the Accounting Treatment of Raw Material Surplus at PT. Madina Agro Lestari (MAL)*. UIN Syekh Ali Hasan Ahmad Addary Padangsidimpuan.
- Febriani, S., Arif, M., & Nurwani. (2024). *Analysis of the Internal Control System for Merchandise Inventory Using the Committee of Sponsoring Organizations of the Treadway Commission (COSO) at Oriens Jaya Motor Vehicle Spare Parts Distributor, Medan*. 2(1).
- Hanum, L., Panjaitan, B., Samri, Y., & Nasution, J. (2022). *Analysis of the Payroll Accounting Information System in Supporting Internal Control at PT Perkebunan Nusantara III, Bandar Selamat Plantation*. 3(6), 1206–1224.
- Marisya, F., Aryanti, R., Desliana, T., & Putri, V. W. (2024). *Procedures for Conducting a Physical Inventory*

- of Spare Parts at PT United Tractors Tbk, Palembang Branch.* 325–334.
- Maruta, H. (2016). Internal Control in Accounting Information Systems. *IQTISHADUNA: Our Economic Scientific Journal*, 5(1), 16–28.
- Qomaruddin, Q., & Sa'diyah, H. (2024). A Theoretical Review of Data Analysis Techniques in Qualitative Research: Perspectives of Spradley, Miles, and Huberman. *Journal of Management, Accounting, and Administration*, 1(2), 77–84.
- Renur, A. N., Nasution, N. A., Syahputra, H., Laheng, S., Susila, G. H. A., Utari, S. P. S. D., Firdaus, A. N., Sahidin, D., & Purwaningsih, S. (2025). *Marine Economic Governance*. PT Penerbit Qriset Indonesia.
- Rozika, A. T., Samri, Y., Nasution, J., & Syafina, L. (2025). *The Effect of Accounting Information Systems and Internal Controls on Financial Performance at PT Dhirga Surya North Sumatra*. 8 (3), 1188–1200. <https://doi.org/10.57178/paradoks.v8i3.1510>
- Sherly, E., Simon, N., Akuntansi, P. S., Ekonomi, F., Nipa, U. N., Dince, M. N., Akuntansi, P. S., Ekonomi, F., & Nipa, U. N. (2023). *Analysis of the Implementation of a Sales Accounting Information System to Support the Effectiveness of Internal Controls at CV Agung Mandiri Motor*.
- Sumarna, A. D., & Novitasari, N. F. (2022). The COSO Framework as a Basis for Assessing the Effectiveness of Internal Controls over Cash Receipts (A Case Study of PT LEP). *Jurnal Akun Nabelo: A Journal of Neutral, Accountable, and Objective Accounting*, 4(2), 656–670.