

Assessing Internal Controls in Firearms Warehouse Management: A Case Study of XYZ Agency

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ABSTRACT

This study evaluates internal control practices in the management of firearms warehouses at the head office of the XYZ Agency. The research is motivated by the significant risks associated with the misuse of firearms and audit findings that reveal discrepancies in firearm records, indicating weaknesses in internal control systems. Addressing these issues is critical to ensuring accountability and effective resource management. Adopting a qualitative methodology with a case study approach, the study analyzes internal control deficiencies specific to firearms warehouse management. Data were collected through interviews, observations, and document reviews, enabling a comprehensive exploration of the subject. The analysis employed content analysis to extract meaningful insights from verbal and textual data. The evaluation framework was based on the Internal Control – Integrated Framework (COSO 2013), with a focus on the components of risk assessment and control activities. The findings reveal significant deficiencies in the internal control procedures governing firearms warehouse management. These shortcomings underscore the need for strengthened measures to mitigate risks and enhance operational effectiveness. The study offers recommendations aimed at improving internal control mechanisms and ensuring better compliance at the XYZ Agency. Additionally, the findings may serve as a valuable reference for other agencies with similar responsibilities.

Keywords: Firearms; COSO 2013; Internal Control; Internal Control Integrated Framework.

Evaluasi Pengendalian Internal Pengelolaan Gudang Senjata Api pada Kantor Pusat Instansi XYZ

ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi pengendalian internal dalam pengelolaan gudang senjata api di kantor pusat instansi XYZ. Evaluasi ini penting dilakukan karena adanya risiko penyalahgunaan senjata api dan temuan audit terkait selisih pencatatan senjata api pada Instansi XYZ yang mengindikasikan adanya kelemahan pengendalian internal. Melalui metode kualitatif dengan pendekatan studi kasus, penelitian ini berfokus pada analisis kelemahan pengendalian internal. Data diperoleh dari wawancara, observasi, dan telaah dokumen. Teknik analisis data menggunakan analisis isi yang sesuai untuk mengekstrak informasi dari data berbentuk verbal dan teks dengan dasar evaluasi mengacu pada Internal Control Integrated Framework COSO 2013, khususnya komponen penilaian risiko dan aktivitas pengendalian. Hasil penelitian menunjukkan terdapat kelemahan pengendalian internal dalam prosedur yang ditetapkan atas pengelolaan gudang senjata api. Penelitian ini memberikan rekomendasi perbaikan agar dapat meningkatkan upaya pengendalian internal pengelolaan gudang senjata api pada kantor pusat instansi XYZ dan dapat menjadi rujukan bagi instansi dengan kewenangan serupa.

Kata Kunci: Senjata Api; COSO 2013; Pengendalian Internal; Internal Control Integrated Framework.

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INTRODUCTION

Official firearms are essential security tools utilized by authorized agencies for self-protection and specific operational purposes (Polri, 2022). Their use is governed by strict regulations to prevent misuse, as the loss or improper use of firearms can have severe consequences. Such incidents may result in disciplinary actions, compensation claims, and criminal sanctions, as they pose significant risks to public safety (Pemerintah RI, 2023). Despite the presence of robust regulatory frameworks, cases of firearm misuse continue to occur in Indonesia, highlighting regulatory loopholes (Pusiknas Bareskrim, 2023). As internal control systems operationalize these regulations at the technical level, it is crucial to assess whether they are effective in mitigating the misuse of official firearms.

The XYZ Agency is one of the government institutions authorized to use, store, and manage official firearms (Pemerintah RI, 1996). This agency oversees the management of over three thousand firearms distributed across its offices nationwide. However, audit findings have revealed discrepancies between the physical inventory of firearms and their recorded quantities in the accounting system. These discrepancies signal deficiencies in the internal controls governing firearms warehouse management. Addressing these gaps is essential for improving internal controls and ensuring effective oversight of firearm management.

Prior research underscores the importance of internal control systems in organizational governance. Effective internal controls play a significant role in reducing fraud in local governments in Greece (Boufounou et al., 2024), enhancing compliance in Peru's public transportation sector (Banda et al., 2024), and curbing excessive executive benefits in Chinese state-owned enterprises (Pan et al., 2023). In Vietnam, internal controls have helped reduce bribery and legal violations (Le et al., 2022). Studies in Indonesia further demonstrate that robust internal controls improve administrative performance and mitigate fraud in local governments (Sensia & Salomo, 2019; Shonhadji & Maulidi, 2022; Winarna et al., 2021).

Despite their importance, internal control systems are not without flaws. Larger agencies often face greater challenges in maintaining effective internal controls (Pamungkas et al., 2019; Sari & Darmastuti, 2023). Deficiencies often stem from inconsistent implementation of Standard Operating Procedures (SOPs) and inadequate monitoring and evaluation (Indriani & Siswantoro, 2023; Shonhadji & Maulidi, 2022). The absence of SOPs may lead to employees relying solely on routines, resulting in unclear authority divisions and increased risk of errors (Ikaputri & Fatima, 2023; Lestari & Hermawan, 2023). Additionally, financial constraints can exacerbate internal control weaknesses, negatively impacting core organizational functions such as internal reporting and accounting (Cao et al., 2024; Kim & Matkin, 2020; Wilford et al., 2020). These weaknesses hinder the ability to detect and prevent fraudulent behaviors that pose risks to organizational integrity (Antón, 2020).

Internal control deficiencies in the management of official firearms present even greater risks. In the United States, a Department of Homeland Security (DHS) audit revealed significant weaknesses in internal controls over firearms and other sensitive assets, with the loss of over 2,100 items between 2014 and 2016 due to

policy noncompliance and poor judgment by personnel (DHS, 2017). Such failures can compromise national security and public safety. In Indonesia, several high-profile cases highlight similar issues, including the murder of Brigadier J in 2022 and recent shootings involving police officers in Solok and students in Semarang (CNN, 2024; Kompas.TV, 2024). These incidents underscore the negative public perception of firearm management and the urgent need for improved internal controls in agencies like the Indonesian Police.

Efforts to address internal control deficiencies have been extensively studied. Identifying weaknesses can provide valuable insights for corrective actions (Schantl & Wagenhofer, 2021). Research shows that fragmented regulations negatively impact internal controls (Xu, 2024), while strengthening internal audit functions can facilitate early detection of irregularities (Hendryani & Siswanto, 2024). Establishing clear SOPs and organizational structures is critical to overcoming internal control weaknesses (Fathah, 2019; Kusnia et al., 2020). Separation of duties and authority further reduces fraud risks (Khumaira, 2021). Leadership commitment is essential in fostering a robust control environment (Leke et al., 2022). Transparency and disclosure of deficiencies also enhance accountability and effectiveness in internal control systems (Deng et al., 2022; Wang et al., 2021).

The purpose of this study is to evaluate internal control in the management of firearms warehouses at the head office of the XYZ Agency. This research addresses a gap in the literature, as previous studies have not focused on internal control over fixed assets with specific characteristics like firearms. By contributing new insights to the field of internal control research, particularly in the context of firearms warehouse management, this study aims to provide practical recommendations for improving internal controls. The findings are expected to serve as a valuable reference for agencies with similar responsibilities and inspire future research in this domain.

RESEARCH METHOD

Qualitative research using a case study approach was selected for this study due to its emphasis on understanding processes, interpreting the meaning of events, and producing descriptive outcomes (Sekaran & Bougie, 2019). This methodology is particularly suited to exploring the activities involved in firearms warehouse management and analyzing these activities descriptively in relation to the COSO (2013) internal control framework. The case study approach is ideal for examining activities within a single unit of analysis and within a specific contextual framework, such as internal control systems (Yin, 2018). Case studies can focus on decision-making, evaluation, or problem diagnosis (Ellet, 2018). This research adopts an evaluation-oriented case study design to assess the implementation of internal control concepts in practice within the selected unit of analysis.

Data collection relied on both primary and secondary data sources. Primary data refers to information gathered directly from research subjects, while secondary data is obtained from indirect sources and serves to complement and reinforce the primary data (Saunders et al., 2019). Primary data was collected through semi-structured interviews with key stakeholders and non-participatory observations conducted at the firearms warehouse site. The interviews were

designed to extract detailed information from individuals directly involved in the activities under study, while observations allowed for direct examination of processes and practices (Sekaran & Bougie, 2019). Secondary data was gathered through the review of relevant documents, reports, and regulations pertaining to the management of firearms warehouses. A detailed list of interviewees involved in this research is presented in Table 1.

Table 1. List of Interviewees

Code	Position	Involved in
Interviewee 1	Head of Operation Facilities Section II	Custodial Activity
Interviewee 2	Staff of Operation Facilities Section II	
Interviewee 3	Staff of Operation Facilities Section II	
Interviewee 4	Head of Administration and Distribution Subdivision	Recording Activity
Interviewee 5	Functional Goods Handler	

Source: Research Data, 2024

The data analysis in this study employs content analysis techniques, which are well-suited to the textual nature of the collected data. Content analysis is used to interpret the contextual substance of the information obtained through interviews, observations, and document reviews, enabling a deeper understanding of the phenomenon under investigation (Yin, 2018). This method facilitates the extraction of meaningful insights and supports the descriptive conclusions drawn from the analysis (Saunders et al., 2019). The stages of the data analysis process utilized in this research are illustrated in Figure 1.

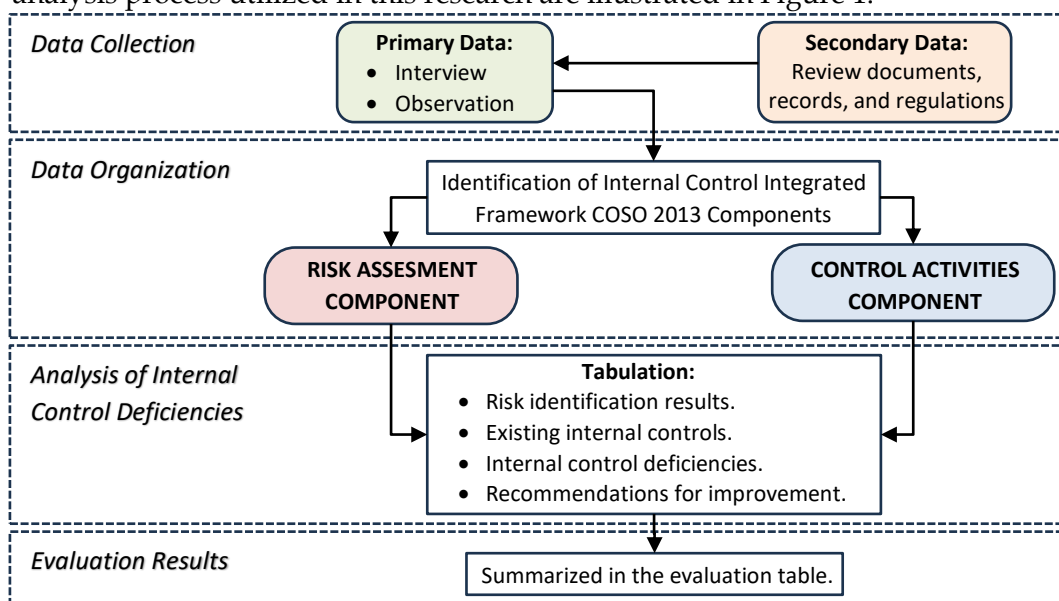


Figure 1. Data Analysis Stages

Source: Self-Processed, 2024

This study adopts a single-case study design, focusing on the head office of the XYZ Agency as the research subject. The head office manages over 900 firearms, representing nearly one-third of the national total. Additionally, it serves as the central coordinator for firearms management across all XYZ Agency offices nationwide, making it a representative example of the agency's overall firearms warehouse management practices. The research specifically examines activities

related to the storage and recording processes within the firearms warehouse management system.

RESULT AND DISCUSSION

The analysis and identification of risks were derived from interviews with participants who provided insights based on their daily work routines. These findings were further developed through risk analysis, taking into account internal and external factors that influence the business processes observed in the firearms warehouse. Interviewees 1, 2, and 3, who are responsible for custodial activities, highlighted several potential risks. Interviewee 1 identified short circuits and water leaks as significant concerns, stating:

"(...) maybe firstly short circuit, we are worried about short circuits, then the second one if it leaks, that's the most we are worried about (...)."

Similarly, Interviewee 3 emphasized that leaks frequently occur in the firearms warehouse, posing a further risk of firearm corrosion. Interviewee 2 also raised concerns about the potential for short circuits to trigger fires. This risk is particularly critical given that the ammunition warehouse is located adjacent to the firearms warehouse, both situated within the same building and under the same roof. Observations confirmed that the proximity of these two facilities amplifies the risk, especially considering their location near residential areas, making fire hazards and security vulnerabilities more pronounced.

Interviewee 1 also highlighted the issue of obsolete firearms, noting that ammunition for some firearms is no longer manufactured. Additionally, Interviewee 3 addressed operational challenges due to insufficient personnel for firearms storage activities. He stated:

"(...) maybe we lack of personnel, because we have only a small number of employees. Meanwhile, there are many weapons to take care of, for example, in our warehouse there are approximately 900 weapons. Maybe two people are lacking, we hope we can add one more person (...)."

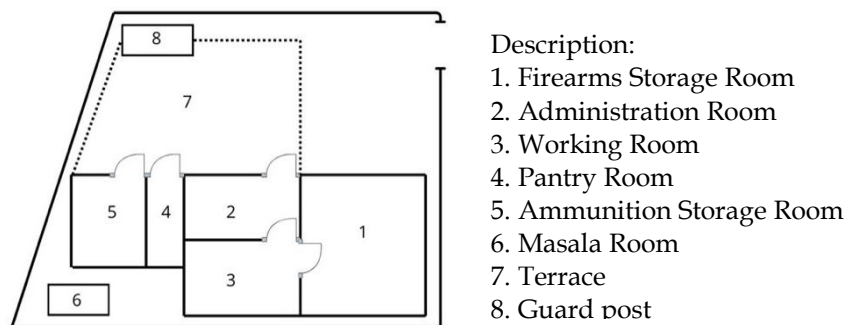


Figure 2. Plan of the Firearms Warehouse

Source: Self-Processed from Observation, 2024

According to Interviewee 2, honorary staff are still relied upon for key responsibilities in the firearms warehouse, including holding all access keys. Field observations confirmed that honorary staff currently possess all three keys required to access the firearms storage areas, which consist of rooms 1, 2, and 3 as illustrated in Figure 2. This arrangement presents significant risks and creates opportunities for abuse of authority, as the honorary staff can access the firearms warehouse at any time without supervision or accountability.

Interviewees 4 and 5, who oversee recording activities, highlighted several challenges related to document management. Interviewee 4 explained:

"(...) the difficulty that we face is the archive documents are not found for the procurement of weapons carried out more than 10 years ago. The change of people, officials, policies, and storage buildings makes the documents hard to locate. We have made efforts, but they were not found (...)."

This issue is attributed to employee turnover, inconsistent document storage policies, and outdated manual archive systems. Interviewee 5 echoed these concerns:

"(...) it was also a bit difficult to trace archive documents. Because it's already from the 1970s. Unlike the new procurement recently, we make sure the documents are digitally stored (...)."

The lack of complete archive documents also hampers the proper identification of firearms in the accounting system, where the serial number serves as the primary unique identifier. Interviewee 5 noted the importance of transaction document archives for correcting issues with serial numbers in the system, such as missing, duplicate, or inaccurate entries. Without accurate serial number records in the accounting system, firearms are difficult to distinguish and susceptible to misplacement or switching. Furthermore, the absence of physical labels on the firearms exacerbates these identification challenges.

Errors in serial number data have also led to double asset recordings in the accounting system, resulting in discrepancies between the recorded and physical quantities of firearms. Interviewee 5 explained:

"(...) The impact is that currently the data is less valid. So it is prone to BPK findings. But so far, we have started to improve internal communication (...)."

Digital recording in the accounting system has been beneficial in addressing some issues associated with manual recordkeeping. However, problems arose during the migration from Accounting System Version 1 to Version 2. According to Interviewee 5:

"(...) We have tried to complete the data in the accounting system version 1, but then the data was lost in the migration process to accounting system version 2. This serial number is all gone, it becomes an additional task for us. So we use the manual excel work papers that we have compiled before because of the issues of this system (...)."

The incomplete data migration caused significant loss of firearms records, necessitating a labor-intensive re-recording process using manual archives and spreadsheets.

Based on information obtained from interviews, direct observations of the firearms warehouse at the XYZ Agency head office, and a review of firearms administration documents, potential risks have been identified. Table 2 presents these risks alongside an analysis of their internal and external causes, providing a comprehensive understanding of the vulnerabilities in firearms warehouse management.

Table 2. Risk Identification with Cause Analysis of Internal and External Factors

Fire Risk (R1)	
Internal factors:	External factors:
<ul style="list-style-type: none"> Electrical short circuit in installation. Side-by-side location of ammunition and firearms warehouse. 	<ul style="list-style-type: none"> Fire spread from the residential area nearby to the warehouse.
Firearms Damage Risk (R2)	
Internal factors:	External factors:
<ul style="list-style-type: none"> Leaks in the roof of the building. Age of the firearm. 	<ul style="list-style-type: none"> Changes in weather conditions and humidity.
Obsolete Firearms Risk (R3)	
Internal factors:	External factors:
<ul style="list-style-type: none"> Non-optimal write-off of obsolete firearms. 	<ul style="list-style-type: none"> Discontinuation of ammunition production by the manufacturer.
Losing Firearms Risk (R4)	
Internal factors:	External factors:
<ul style="list-style-type: none"> The key is given to one honorary staff. Lack of supervision due to limited staff. 	<ul style="list-style-type: none"> The warehouse location is directly next to a residential area.
Employee Error Risk (R5)	
Internal factors:	
<ul style="list-style-type: none"> Lack of personnel competence as there are no specific competency requirements. Limited number of staff (only 2 people for 900 firearms). Conflicting office agendas (meetings, duty trip, and work leave). Dependence on honorary staff for daily operations. 	
There are no causes from external factors.	
Recording Difference Risk (R6)	
Internal factors:	
<ul style="list-style-type: none"> Unorganized and lost archiving of past documents. Double recording in the official SAKTI-SIMAN and CITAC applications (applications developed by the Operations Facilities Section II). No periodic reconciliation of SAKTI-SIMAN and CITAC records. 	
There are no causes from external factors.	
Identification Error Risk (R7)	
Internal factors:	
<ul style="list-style-type: none"> Inaccuracy of firearm serial numbers in SIMAN application. No adequate attachment of the NUP label to the firearm. 	
There are no causes from external factors.	
Interconnection Failure Risk (R8)	
There are no causes from internal factors.	
External factors:	
Incomplete migration of firearms recording data in the SIMAN version 2 application.	

Source: Research Data, 2024

Based on the analysis in Table 2, risks R1 through R4 in firearms warehouse management are influenced by both internal and external organizational factors. In contrast, risks R5 through R7 are solely attributable to internal factors, highlighting significant instances of internal mismanagement that require immediate attention. Risk R8, however, is unique in that it is caused exclusively by external factors.

The subsequent analysis involves estimating the impact of these risks. At this stage, the frequency of occurrence has not been estimated due to the lack of sufficient quantitative data and historical records to support such an analysis. Instead, the risk impact analysis focuses on evaluating the likelihood of threats and the potential damage they may cause. According to COSO (2013), analyzing risk impact is critical for predicting the adverse outcomes and severity of identified risks. The results of the risk impact analysis are presented in Table 3.

Table 3. Analysis of Risk Impact

Risk Register	Analysis of Potential Impact
Fire Risk (R1)	<ul style="list-style-type: none"> • Potential for a large explosion due to side-by-side location of ammunition warehouses. • Total damage to firearms. • Casualties due to close to residential areas. • Very significant material losses. • Operational disturbance of XYZ agency due to inability to use firearms. • Negative reputational impact for XYZ agency.
Firearms Damage Risk (R2)	<ul style="list-style-type: none"> • Firearms are not fit for use due to corrosion. • Additional cost to repair or replace firearms. • Disruption of XYZ agency operations due to not being able to use firearms. • Potential safety hazard if the damaged weapon is still used.
Obsolete Firearms Risk (R3)	<ul style="list-style-type: none"> • Firearms cannot be used even though the condition is still good. • Waste of storage space in the warehouse. • Maintenance cost inefficiency.
Losing Firearms Risk (R4)	<ul style="list-style-type: none"> • Potential loss of firearms. • Potential misuse of firearms by irresponsible parties. • Threat to public security and safety. • Legal impact and sanctions for the person in charge of the warehouse. • Negative reputation impact for XYZ agency.
Employee Error Risk (R5)	<ul style="list-style-type: none"> • Disorganized warehouse administration and administration. • Non-optimal supervision of firearms storage. • Greater potential for human error in firearms storage and security procedures.
Recording Difference Risk (R6)	<ul style="list-style-type: none"> • Invalid recording data. • Potential misstatement of quantity and value of firearms assets in the financial statements.
Identification Error Risk (R7)	<ul style="list-style-type: none"> • Difficulty tracking and monitoring assets so that firearms are vulnerable to mix-ups. • Difficulties in the administrative process of transferring firearms. • Difficulty in investigation in the event of an incident.
Interconnection Failure Risk (R8)	<ul style="list-style-type: none"> • Loss of important data during data migration to the latest version of the application.

Source: Research Data, 2024

The head office of the XYZ Agency must address the potential impacts of risks associated with firearms custodial activities (R1–R5), which could endanger lives through events such as warehouse explosions or the misuse of firearms.

Similarly, risks related to firearms recording activities (R6–R8) may result in inaccuracies in firearm records and potential misstatements in financial reports, undermining accountability and operational integrity.

The subsequent analysis examines the management’s response to the identified risks. Risk responses are typically categorized into four options: accept, avoid, reduce, or share (Romney & Steinbart, 2021). The responses adopted by management were identified from existing policy instruments, regulations, and procedures implemented to manage firearms warehouses. These responses were then aligned with the relevant risks identified in the analysis. Each risk and its corresponding control procedure have been codified and presented in Table 4 for a comprehensive overview.

Table 4. Codification of Risks and Control Activity

Risk Register	Code	Existing Internal Controls	Code
Fire Risk	R1	Provision of light and medium fire extinguishers.	C1
		Periodic monitoring of warehouse electrical conditions.	C2
		Request for warehouse repairs to the general department.	C3
		Periodic lubrication of firearms.	C4
Firearms Damage Risk	R2	Self-repair of firearms.	C5
		Repair to firearms manufacturer.	C6
		Periodic monitoring of warehouse roof condition.	C7
Obsolete Firearms Risk	R3	Request for warehouse roof repairs to the general department.	C8
		There is no internal control yet.	-
Losing Firearms Risk	R4	The warehouse key is entrusted to one honorary staff.	C9
		Fencing of the warehouse area at three meters high with barbed wire.	C10
		CCTV installation.	C11
		Warehouse guarding for 24 hours every day.	C12
Employee Error Risk	R5	There is no internal control yet.	-
Recording Difference Risk	R6	The fixed asset census is conducted once every five years.	C13
Identification Error Risk	R7	There is no internal control yet.	-
Interconnection Failure Risk	R8	Perform data backup using digital platforms such as Google Drive and OneDrive.	C14

Source: Research Data, 2024

The analysis of internal control deficiencies was conducted by evaluating the adequacy of existing controls in addressing each identified risk in the management of firearms warehouses, as outlined in Table 4. This assessment determined whether the current controls are sufficient or require enhancement, thereby identifying areas of internal control deficiencies. The results of the risk response analysis were subsequently paired with recommendations for control improvements, categorized as preventive, detective, and/or corrective measures.

The detailed analysis of internal control deficiencies, along with the corresponding recommendations, is presented in Table 5.

Table 5. Analysis of Internal Control Deficiencies and Recommendations

Risk	Deficiencies	Recommendations
R1	<ul style="list-style-type: none"> • Periodic monitoring of warehouse electrical conditions is inadequate because it is performed by warehouse administration staff who are not certainly capable. • Preventive and detective controls could be improved. 	<ul style="list-style-type: none"> • Corrective controls are needed through policy changes for mandatory periodic checks carried out by technicians from the general department as building managers. • Preventive controls are needed in the formalization of rules prohibiting smoking activities by installing special signs along with sanctions for violations. • Additional detective controls can be implemented in the form of smoke detection sensors and fire sprinkler systems that automatically turn on when they detect smoke and/or an increase in room temperature.
R2	<ul style="list-style-type: none"> • Periodic monitoring of warehouse roof conditions is inadequate because it is performed by warehouse administration staff who are not certainly capable. • Preventive controls could be improved 	<ul style="list-style-type: none"> • Corrective controls are needed through policy changes for mandatory periodic checks carried out by experts from the general department as building managers. • Additional preventive controls can be implemented by installing a dehumidifier in the firearms storage room to keep the air dry and reduce the potential for corrosion.
R3	<ul style="list-style-type: none"> • No controls have been implemented to mitigate risks. 	<ul style="list-style-type: none"> • Corrective controls are needed through a policy of proposing write-offs for each obsolete firearm so as not to burden storage activities.
R4	<ul style="list-style-type: none"> • Honorary staff who hold all warehouse keys can access the firearms warehouse without the supervision of other parties. 	<ul style="list-style-type: none"> • Corrective control is needed by dividing responsibilities, i.e. not all keys are held by one person. • Additional preventive controls can be implemented by using smart door locks such as fingerprint sensors or pin codes.
R5	<ul style="list-style-type: none"> • Honorary and other section staff who assist do not always have proper competence. 	<ul style="list-style-type: none"> • Detective control needs to be applied by analyzing workload to determine ideal employee needs. • Corrective controls is needed by proposing additional management staff.
R6	<ul style="list-style-type: none"> • Relying on fixed asset census activities is not enough, more routine checks are needed. 	<ul style="list-style-type: none"> • Detective control is needed by conducting more routine reconciliation activities to match the identity and quantity of firearms physically and recording SAKTI.
R7	<ul style="list-style-type: none"> • No controls have been implemented to mitigate risks. 	<ul style="list-style-type: none"> • Preventive controls are needed by attaching appropriate labels or sensors such as RFID plates to each firearm.
R8	<ul style="list-style-type: none"> • Existing controls are adequate. 	<ul style="list-style-type: none"> • None, existing controls are adequate.

Source: Research Data, 2024

The interviews and document review reveal that the primary cause of the deficiencies identified in Table 5 is the absence of a Standard Operating Procedure (SOP) for managing firearms warehouses. Currently, no formal SOP has been established, despite its critical importance in ensuring the effectiveness of internal control systems. SOPs not only provide a standardized framework for operations but also require periodic evaluation to monitor and improve control effectiveness (Indriani & Siswantoro, 2023; Shonhadji & Maulidi, 2022).

Interviewee 1 acknowledged this gap, stating:

"(...) until now there is no SOP regarding the firearms warehouse; there is a circular letter for storage and security (...)."

Similarly, Interviewee 3 confirmed:

"(...) there is no SOP. So far there is no plan to make an SOP. So far, the routine is based on the circular letter, and the requirements for storage and security of the firearms warehouse are also explained (...)."

Interviewees 4 and 5 also agreed that no SOP currently regulates firearms warehouse management. Interviewee 4 expressed the hope that an SOP would be implemented soon:

"(...) in the future, besides checking the validity of formal documents for the use of firearms, we also hope that the SOP problem will be fulfilled, the SOP for the use of firearms (...)."

Interviewee 5 added:

"(...) I think we don't have (SOP) yet. At least it refers to SE, what is SE number 6, huh (...)."

The absence of an SOP has resulted in unstructured firearms warehouse management, as evidenced by the evaluation results summarized in Table 6. This aligns with the findings of Lestari & Hermawan (2023). The internal control procedures outlined in Table 4 are primarily informal routines derived from past practices, a condition similar to that observed by Ikaputri & Fatima (2023). Effective internal control procedures should be based on standardized SOPs that clearly define responsibilities and authority (i.e., persons in charge) at each stage of the process.

The findings from the risk assessment, control activities, and internal control deficiencies are summarized in the internal control evaluation table. A detailed overview of the evaluation results is presented in Table 6.

Table 6. Resume of Internal Control Evaluation

Risk Code	Existing Internal Control Code	Adequate / Inadequate	Description
R1	C1; C2; C3	Inadequate	Need improvement
R2	C4; C5; C6; C7; C8	Inadequate	Need improvement
R3	-	Inadequate	Need improvement
R4	C9; C10; C11; C12	Inadequate	Need improvement
R5	-	Inadequate	Need improvement
R6	C13	Inadequate	Need improvement
R7	-	Inadequate	Need improvement
R8	C14	Adequate	No need improvement

Source: Research Data, 2024

The evaluation of internal controls in the management of firearms warehouses reveals that nearly all identified risks are associated with internal

control deficiencies. Specifically, deficiencies for risk codes R3, R5, and R7 stem from the complete absence of controls to mitigate these risks. For risk codes R1, R2, R4, and R6, internal controls are in place; however, they remain insufficient to meet the intended control objectives. Only risk code R8 has adequate internal controls, with no indications of deficiencies. Recommendations for improving the internal controls for risk codes R1, R2, R3, R4, R5, R6, and R7 are detailed in Table 5, aiming to enhance the quality of internal control systems in firearms warehouse management at the head office of the XYZ Agency.

CONCLUSION

The management of firearms warehouses at the head office of the XYZ Agency must address several critical risks, including fire risks, firearms damage, obsolescence, loss, employee errors, recording discrepancies, identification errors, and interconnection failures. Seven of the eight identified risks exhibit internal control deficiencies, indicating that current internal controls are largely ineffective in achieving their objectives. The primary cause of these deficiencies is the absence of a Standard Operating Procedure (SOP) for firearms warehouse management. To address this issue, the head office must develop and formalize internal control procedures into a comprehensive SOP. A well-structured SOP will introduce a clear separation of authority and responsibility, facilitating monitoring and evaluation processes and ensuring more organized management of firearms warehouses.

This study has several limitations. It focuses solely on the risk assessment and control activities components of the COSO (2013) framework within a single office of the XYZ Agency that manages firearms warehouses. Consequently, the findings cannot be generalized to all government agencies with similar authority due to the unique characteristics of each organization. Additionally, this research does not include an analysis of the frequency of risk occurrence in evaluating the impact of identified risks. Future research should broaden the scope by comparing internal control practices across similar agencies on a larger scale. Further studies could also incorporate risk frequency analysis and expand the evaluation to include additional components of the COSO framework.

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