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## Evaluation Of Accounting Information System Security For Fixed Asset Procurement That Supported By Internal Control System At The Head Office Of PT. Bank SulutGo

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### ABSTRACT

*Accounting information systems for fixed asset procurement are prone to security risks that could interfere with the system. Due to the security procedures of accounting information systems, the procurement of fixed assets is protected from potential risks and threats in the operations, equipment, and associated data. This study aims to comprehend the security of the accounting information system supported by internal control and how it protects the accounting information system for procurement of fixed assets from the threats and risks at PT. Bank SulutGo's head office, and compare it with existing theories. This qualitative research applies a descriptive qualitative method to analyze the data. The result indicated that the accounting information system security at PT. Bank SulutGo's head office for the procurement of fixed assets is quite adequate, as proven by the procedure control activities that align with the theory. However, through data processing, there is still a weakness in internal control activities. Due to the lack of a backup archive, the internal control activities can not fully guarantee the security of the accounting information system for purchasing fixed assets at PT. Bank SulutGo's head office. Thus, a backup archive must be created so the internal control operations can optimally support the security of the accounting information system for the procurement of fixed assets.*

*Keywords: Security; Accounting Information System; Procurement of Fixed Asset*

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## 1. INTRODUCTION

The rapid development of technology has a positive impact on the company. The effect on the accounting and finance department can be seen from the accounting information system that produces a computerized accounting information system. The accounting information system for the procurement of fixed assets is part of the accounting information system that focuses on the management and coordination of information, transactions, and documentation related to the management of fixed assets. However, being part of a system means that the accounting information system for the procurement of fixed assets is not free from threats and risks that threaten its existence. Accounting information system risks and threats from external and internal companies can disrupt the accounting information system process. The level of system security can judge the quality of accounting information systems. The need to assess the safety of accounting information systems is significant because the number of security lapses and fraudulent activities in the financial and banking industry is increasing daily.



PT. Bank SulutGo is a limited liability company that offers modern banking concepts to the people of North Sulawesi and Gorontalo. In line with the modern and ideal banking concept, the head office of PT. Bank SulutGo supports the company's operations by procuring fixed assets held by the general division of the head office of PT. Bank SulutGo. Head Office PT. Bank SulutGo itself implements a computerized accounting information system. In the accounting information system for the procurement of fixed assets, the head office of PT. Bank SulutGo is responsible for protecting the accounting information system for procurement of tangible assets, processes, facilities, and data related to the accounting information system for the procurement of tangible assets from existing threats and risks such as theft or misuse, data or error information, fraud, and the risk from technology's built-in systems.

To provide security for the accounting information system, the company's internal control plays a role in testing the truth and accuracy of accounting data and related processes. Rather than just the process of fixed asset's accounting information system, this research evaluates the accounting information system for fixed asset procurement in its security section. This research is very beneficial to avoid disruption so that the accounting information system for procuring fixed assets in a company, in this case, the head office of PT. Bank SulutGo, will not be disturbed from the process to the output. From the evaluation results of this study, the authors found the threats that interfere with the company's accounting information system security. The threat once interfered with the security of the accounting information system for the procurement of fixed assets at the head office of PT. Bank SulutGo, was the procurement that did not appear the same as the order. Other risks that threaten the system's security include malfunctions and errors or unexpected actions, such as omissions or errors when entering data. The authors also found the disturbance and weakness in the security through control activities that can potentially become problems for the company's future accounting information system for fixed asset procurement if not addressed immediately.

## **2. LITERATURE REVIEWS**

### **2.1. Concept of Accounting**

According to Hasransyah, Asmapane, and Diyanti (2018: 3), accounting is a tool to report the state of a company or organization on its finances. Financial transactions are identified, recorded, and communicated to the company. Accounting produces quantitative and relevant financial information for stakeholders.

### **2.2. Concept of Financial Accounting**

According to Rolaskhi et al. (2022: 1), Finance is the heart of a company, so financial accounting becomes very important. Financial accounting is a field of accounting that is basically for determining the financial position at the end of the company's financial year. Financial accounting creates financial information from financial statements. The implementation of financial statements must be based on applicable accounting standards. According to Sastroatmodjo and Purnairawan (2021: 1), financial accounting is made to be published.

### **2.3 Accounting Information System**

According to Romney and Steinbart (2021: 31), information systems are the people and technology that produce information within a company. The components of the information system itself consist of humans, companies, and technology. According to Romney and Steinbart (2021: 36), an accounting information system is a system that collects, records, stores, and processes data to produce information for decision-makers. Sagala (2020: 1) said that the accounting information system is one of the elements of internal control.

## 2.4 Accounting Information System For Fixed Assets

An accounting information system for fixed assets is a collection of data and processes to manage the company's fixed assets. It can provide information that is processed from transactions and activities of fixed assets. According to Mulyadi (2016: 243), companies use the Accounting Information System to purchase the necessary goods. Fixed Assets Procurement Accounting Information System is an accounting information system used to identify all processes in acquiring fixed assets needed by the company. Information about fixed assets can enhance the organization's decision-making effectiveness (Ahmed Khamis et al., 2020: 2). This system can be implemented in both a manual and computerized system.

## 2.5 Accounting Information System For Fixed Asset Procurement

According to Mulyadi (2016: 518), this system aims to record the acquisition cost of fixed assets resulting from acquisition or purchase. The source documents are cash outflow receipts, including investment approval requests from authorized parties, purchase orders, goods receipt reports, supplier invoices, and memorial evidence (attached to the work order). The procedures related to the fixed asset purchase system are as follows:

- 1) Procedure for requesting the investment to authorized parties
- 2) Procedure for bidding and evaluating suppliers
- 3) Procedure for purchasing order
- 4) Procedure for receiving the acquired fixed assets
- 5) Procedure for placement of fixed assets
- 6) Procedure for recording the cost of fixed assets

## 2.6 Accounting Information System Security

According to Hariyadi, Fitri, and Arisandi (2019: 5), the purpose of information system security is to prevent existing threats to the system and to detect and repair the damages due to system failure. System security is an indicator of the quality of accounting information systems (Delone, quoted in Wahyuddin 2018: 5).

According to Alabady, quoted in Bustami (2020: 2), network or information system security is the process by which information assets are protected and includes protecting the confidentiality, integrity, and availability of the asset's information. According to Turner (2017: 322), the security of accounting information systems protects the purchasing process of a company, in this case, the purchase of company assets, against fraud and transaction errors. It can be controlled using the following control methods:

- 1) Transaction Authorization

Designated individuals within the company are responsible for maintaining procurement or request approvals, including asset approvals for purchases, purchase orders, and supplier selection. Only authorized personnel can perform this task. For most companies, approval of purchase requisitions is the first step in the buying or acquisition process. Minimize the risk of invalid suppliers, excessive credit limits, and fraudulent prices or amounts when transacting for procurement.

- 2) Function Separation

In general, responsibilities for the authorization, custody, and recording functions should be segregated to avoid the possibility of error or fraud. The authorization function includes approving purchase transactions and other tasks such as data entry, programming, IT operations, and security. The storage function consists of the activities of managing and receiving goods and is related to the task of distributing cash. For the record-keeping role, the responsibility is to prepare purchase orders and financial reports such as purchase journals, accounts payable ledger, inventory, general ledger, and financial statements. This step is beneficial to minimize the risk of fraud, namely fraudulent purchases or theft.

- 3) Sufficient Records And Documents

Proper documentation and records must be maintained for purchase transactions. These data must be organized by date, item number, and supplier name in alphabetical order. With well-organized documents and records, it can be ensured that the transaction is valid and completed and that nothing is left behind.

4) Document and Asset Security

Backup and purchasing systems must use electronic controls, such as passwords and physical controls, to protect against unauthorized access, fictitious purchases, lost purchases, timing issues, duplicate purchases, wrong quantities, wrong vendors, and accumulated issues.

5) Independent Checking and Reconciliation

Independent verification can increase the effectiveness of the fixed asset procurement process. This independent verification is carried out by an independent party, the party that performs the functions of authorization, storage, and recording functions. This control can protect the system against incorrect posting, incorrect account numbers, fake purchases, missing purchases, invalid purchases, timing issues, duplicate purchases, wrong quantities, and vendors. Existing discrepancies can indicate a lost or stolen purchase.

**2.7 Threats to Accounting Information Systems**

According to Susanto (2017: 1), there are four threats faced by the security of accounting information systems: natural or social disasters, errors and malfunctions, unintentional errors, and computer sabotage. The threats to the security of accounting information systems, according to Romney and Steinbart (2021: 250), are:

**Table 1. Accounting Information System Security Threats**

Accounting Information System Security Threats	Example
Natural disasters and politics	Fire or excessive heat
	Earthquakes, floods, landslides, hurricanes, tornadoes, blizzards, snowstorms
Software errors and equipment malfunctions	War and terrorist attack
	Errors in hardware or software
	Errors and bugs
	Operating system failure
	Power outage
Unintentional acts	Undetected errors in data transmission
	Accidents caused by human carelessness, failure to follow procedures, and poorly trained or supervised personnel
	Innocent errors or omissions
	Lost, erroneous, destroyed, or misplaced data
	Logic errors
Intentional acts and computer crimes	Systems that do not meet company needs or cannot handle intended tasks
	Sabotage
	Misrepresentation, false use, or unauthorized disclosure of data
	Misappropriation of assets
	Corruption
	Financial statement fraud
	Computer fraud, social engineering, malware, etc

Source: Romney and Steinbart (2021: 250)

## 2.8 Internal Control System

According to Muna and Haris (2018: 1), Internal control is the process of achieving goals, which consists of policies that involve people to achieve goals both within the infrastructure and within the entity. A good understanding of internal control can improve the quality of financial reports (Lestari and Dewi 2020: 9).

## 2.9 Internal controls in the electronic data processing environment

According to Mulyadi (2016: 141), In the procurement system, management focuses on personnel responsible for implementing control procedures and techniques to protect assets and verify the accuracy and reliability of accounting data. Computers are used as data processing tools, shifting from human-oriented to computer-oriented systems. The control system consists of general control and application control. General control consists of administrative control, system and program control, and control of data processing facilities. Controls over computer operations in data processing facilities include:

- 1) Access to the computer room is limited to certain employees only
- 2) Control the use of archives that have been stored in the library or archive center
- 3) Making clear instructions on converting data from source documents into computer-readable form
- 4) Procedures for storing archives in the library or archive center
- 5) Physical security of archives and computers
- 6) Creation of record reconstruction procedures
- 7) Procedure for creating backup archives
- 8) The password that is used to regulate the authority to use data stored in the computer

## 3. RESEARCH METHOD

### 3.1. Data

The type of data used for this research is the type of qualitative data. Qualitative data itself is data and information in the form of verbal, not in the form of numbers. This study's data sources were from two sources, namely primary data and secondary data. Primary data is data obtained from first-hand informants and not intermediaries. According to Anggito and Setiawan (2018: 159), primary data can be obtained through interviews and field observations. This study's primary data were obtained from field observations and interviews with informants. The resource persons in this study were Mr. Edwin Langi, a senior analyst in the procurement department of the general division of the head office of PT. Bank SulutGo, Mr. Rommy Purwanto, an analyst II of the public service department of the general division, Mr. Agus Yulyanto as an analyst of the physical asset management department, and Ms. Lucky Putong as senior analyst of the physical asset management department of the general division. While the secondary data in this study are company documents that help clarify the primary data.

### 3.2. Method of analysis

The data analysis method in this study is descriptive qualitative, the data analysis which describes and compares data. It describes the information to conclude the research. In this research, the data analysis method is intended to explain the evaluation of the security of accounting information systems for the procurement of fixed assets. The process of data analysis in this study is as follows:

- 1) Collecting data and documents needed for research from observations, interviews, and documentation.
- 2) Identify the software used by the company for accounting information systems, especially accounting information systems for the procurement process for fixed assets supported by the internal control system at the Head Office of PT Bank SulutGo.

- 3) Identify the risks and threats that have threatened the security of the accounting information system for the procurement of fixed assets at the Head Office of PT. Bank SulutGo.
- 4) Identify internal control and control procedures implemented by the company to protect the accounting information system for the procurement of fixed assets from existing threats and risks.
- 5) Evaluating the security of the accounting information system for the purchase of fixed assets and comparing the internal control and control procedures carried out by the company for the security of the accounting information system for the procurement of fixed assets with existing theories.
- 6) Presenting the results of data processing, namely a description of the computerized accounting information system for the procurement of fixed assets, descriptions, and details of threats and risks that affect the security of the accounting information system for the acquisition of fixed assets in the company, control procedures, and internal controls by the company for the security accounting system information for the purchase of fixed assets. And also to present the evaluation results of comparing control procedures with existing theories.
- 7) Draw conclusions based on research results and provide suggestions regarding the security of the accounting information system for the procurement of fixed assets supported by an internal control system at the Head Office of PT. Bank SulutGo.

## **4. RESULTS AND DISCUSSIONS**

### **4.1. Results**

#### **4.1.1 Accounting Information System for Procurement of Fixed Assets at the Head Office of PT. Bank SulutGo**

According to the facts obtained from the observation process, the head office of PT. Bank SulutGo has implemented a computerized accounting information system. As for the interview with the resource person, Mr. Edwin Langi, the software used for the accounting information system process for the procurement of fixed assets is Microsoft Office. Head office of PT. Bank SulutGo also provides training to employees. From the interview, the training had not been carried out thoroughly, and there are still employees who have not received the training.

From the interviews with interviewees, the authors were able to process data and find that the accounting information system process for the procurement of fixed assets started from a request from the work unit. Request to the general division for the procurement of fixed assets which the procurement department processed. The request will be processed again by the authorized party, depending on the asset's value, and will be held in this case by the main director, directors, and the head of the general division. The general division prepares its estimated prices and invites suppliers for evaluation. The next step after the supplier selection is clarification and negotiation. The general division prepares the required documents. Bookkeeping is carried out by the information technology and operations division and verified by the accounting division.

#### **4.1.2 Threats and Risks in the Accounting Information System for the Procurement of Fixed Assets at the Head Office of PT. Bank SulutGo**

As for the security of the accounting information system for the procurement of fixed assets at the head office of PT Bank SulutGo has never been plagued by natural and political disasters, software errors, employee fraud, and computer crimes. However, it was found that the security of the accounting information system for the procurement of fixed assets at the head office of PT. Bank SulutGo was once threatened by products that were not in line with what was ordered. There is also a threat of equipment malfunction. In this case, the printer to print the system output malfunctioned—the head office of PT. Bank SulutGo has also been

threatened by an unexpected factor, namely an error when placing data when inputting. However, the head office of PT. Bank SulutGo immediately took action as soon as possible to overcome the security threat of the accounting information system for the procurement of fixed assets at the head office of PT. Bank SulutGo, thus the accounting information system for the procurement of fixed assets at the head office of PT. Bank SulutGo can be free from more fatal security threats.

#### **4.1.3 Procedures for Control and Security of Accounting Information Systems for Procurement of Fixed Assets at the Head Office of PT. Bank SulutGo**

Head office of PT. Bank SulutGo, in the activities of control procedures, security checks have been carried out from the first contract process itself. When the work unit creates a memo requesting fixed assets to the purchasing department for processing, at the beginning of the procurement process, there must be an agreement signed by the authorized party for security reasons and to avoid things that are not desirable when buying fixed assets. There are three types of fixed asset procurement: direct procurement, procurement worth less than 250 million rupiahs, and the authority given by the general division leader. The director holds procurement with 250 million to 2.5 billion rupiahs. The last procurement method is procurement with asset values above 2.5 billion Rupiah. Investment authorization or the authority to approve procurement is the board of directors. The general division handles the procurement of fixed assets and has three departments under its auspices: the procurement department, the fixed asset management department, and the public service department.

Based on the results of the examination found, documents and records in the accounting information system for the acquisition of fixed assets at the head office of PT. Bank SulutGo is published in a format that is easy to understand and process. Head office of PT. Bank SulutGo stores documents by date, month, and year. The order is arranged by serial number box, so it is easy to find when there is a request or need. Assets are labeled or numbered to secure them and physically inspected every six months. For document security and electronic records, efforts from the head office of PT. Bank SulutGo consists of securing each individual's computer with a different password to reduce the risk of unwanted access and data security daily. Head Office PT. Bank SulutGo, in terms of monitoring, is responsible for routine monitoring to verify every process and transaction. The head office of PT. Bank SulutGo also has a control card for transactions reconciled by the system with checking accounts. Head office of PT. Bank SulutGo also constantly reviews documents before entering and reconciling the current output.

Head Office PT. Bank SulutGo also carries out supervision and security related to access to the division, such as: Restricting access with access doors, places with appropriate temperatures, fire alarms, and CCTV connected to the leader's room. Data from source documents is inputted into the employee's computer to match it with records from the beginning, namely the request memo to the book-entry slip. There is the possibility of errors in the input process, so the activity and procedure to support it is the reconstruction of records. The recovery is to close the account and open a new account. For the search, documents and archives are stored in the archive center by listing the subject, summary or content of information, and the box's location before being stored. Those who have access to the records and are responsible for keeping them are chosen by the leadership and are responsible for administration. Maintain, secure, and store documents in a state where the contents are not read and only see the subject because there is no authority for those responsible for reading document information for information security reasons.

Regarding backup archives, the head office of PT. Bank SulutGo does not create backup archives, but documents are still copied every day to be used as proof of cash and stored, while the accounting department keeps the original documents. The company restricts access to computer documents and records by setting a password on each employee's

computer with a different password that combines letters, numbers, and special characters to reduce the risk of unexpected access to documents. Maintenance is also carried out with daily backups in three different areas: the head office in Manado, West Java, and East Java.

#### 4.2. Discussions

Based on research and data processing, to evaluate control procedures at the head office of PT. Bank SulutGo, the author compares it with the theory according to Turner (2017: 322), which consists of transaction authorization, function separation, sufficient records and documents, document and asset security, and independent checking and reconciliation. The results of the evaluation are as follows:

**Table 2. Evaluation of the security of the accounting information system for the procurement of fixed assets with control procedures from Turner's theory.**

Number	Control Procedures	Implementation	Conclusion
1	Transaction Authorization	The fixed asset procurement at the Head Office of PT Bank SulutGo must be approved by the authorized party according to the value of the asset to be purchased. Authorization is held by the head of the general division, the director, and the board of directors.	Fits the theory
2	Function Separation	Procurement of fixed assets at the Head Office of PT Bank SulutGo is carried out by the general division consisting of three departments with different tasks in each process, namely the procurement department, the physical asset management department, and the public service department.	Fits the theory
3	Sufficient Records And Documents	Records and documents for the accounting information system for the procurement of fixed assets at the Head Office of PT Bank SulutGo have been well maintained, and documents are stored in the order provided.	Fits the theory
4	Document and Asset Security	Head Office PT. Bank SulutGo limits access to documents and archives to certain parties, and the security is carried out by certain individuals selected by the company's leadership.	Fits the theory
5	Independent Checking and Reconciliation	Independent checks and reconciliations have been carried out well with control cards. The employees consistently check on what is inputted and recorded.	Fits the theory

Source: Data processed by authors, 2022

Based on table 2, it can be seen that the control procedures implemented at the head office of PT. Bank SulutGo follows Turner's theory. There is also a theory to evaluate the



internal control system at the head office of PT. Bank SulutGo. In this case, the control on data processing the results are as follows:

**Table 3. Evaluation of Internal Controls that support the security of accounting information systems for the procurement of fixed assets through data processing controls.**

Number	Internal Control Procedures	Implementation	Conclusion
1	Access to the computer room is limited to certain employees only	In the procurement department, room access is limited by an access door	Fits the theory
2	Control the use of archives that have been stored in the library or archive center	Archive access is only given to concerned parties.	Fits the theory
3	Making clear instructions on converting data from source documents into computer-readable form	The instruction is to only look from the request memo to the book-entry slip	Fits the theory
4	Procedures for storing archives in the library or archive center	Archives are stored in the archive center by individuals directly selected by the company director.	Fits the theory
5	Physical security of archives and computers	The archive center has officers to maintain and maintain archives, and office computers are also equipped with anti-virus, passwords, and restrictions on internet access.	Fits the theory
6	Creation of record reconstruction procedures	The record reconstruction procedure is to close the account, open a new account, and publish the news event of correction attached to the book-entry slip.	Fits the theory
7	Procedure for creating backup archives	There is no backup archive, the head office of PT. Bank SulutGo does not create backup archives	Does not fit the theory
8	The password that is used to regulate the authority to use data stored in the computer	Passwords on different computers. Each employee has a different computer from one another.	Fits the theory

Source: Data processed by authors, 2022

## 5. CONCLUSION

Based on the research, the authors can conclude from this study that the security of the accounting information system for the purchase of fixed assets is still under control and running according to theory, as seen from the control procedures whose activities run smoothly, according to Turner's theory. However, according to Mulyadi's theory, data processing control has not been implemented optimally. Bank SulutGo cannot fully support the security of the accounting information system for the procurement of fixed assets from existing security threats. The vulnerability lies in the lack of backup archives.

Therefore, to strengthen the control activities and to support the optimization of the security of accounting information systems for the procurement of fixed assets, the author

suggests that the head office of PT. Bank SulutGo must create a backup archive because this element supports the security of accounting information systems for the procurement of fixed assets to achieve maximum security points.

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