



LITERATURE REVIEW

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The Computer Assisted Audit Technique (CAATs) Used as Accounting Information Systems in Audit Financial Report Services

ABSTRACT

Computerized technology is developing rapidly at this time by facilitating all activities in all fields, especially in financial report audit activities in the accounting information system. In auditing accounting information systems based on computerization used to help improve the provision of information to support the decision making process that will be carried out by management. Audit is an activity that carries out checks to assess and evaluate an activity or object such as the implementation of internal controls in the accounting information system, whose work is determined by management or the accounting function process that requires improvement. In carrying out the audit process there are obstacles encountered by the auditor in conducting audits with conventional methods in an electronic data processing environment. But often these obstacles tend to be ignored and receive less serious attention even by the auditors themselves. As a result, inefficiencies occur that are not realized. Therefore, the obstacles that occur can be resolved in various ways, including by using Computer Assisted Audit Technique (CAATs). This study uses the translated literature in articles, journals and books that discuss Computer Assisted Audit Technique (CAATs). This literature explains the use of the audit process with Computer Assisted Audit Technique (CAATs) and explains that the audit process using Computer Assisted Audit Technique (CAATs) is more effective and efficient in the results of auditing financial statements, so that the audit report can be found decision.

Keywords: *Information Systems, Auditing, Quality Audit, Accounting Information Systems, Computer Assisted Audit Techniques (CAATs)*

CHAPTER I. INTRODUCTION

Audit is an activity that carries out checks to assess and evaluate an activity or object such as the implementation of internal controls in the accounting information system, whose work is determined by management or the accounting function process that requires improvement. However, both the internal and external audit professions must continually work hard to improve and expand techniques because the profession will become unable to cope with developments in information technology and the increasing demands of accounting information users (Cangemi, MP, and Singleton, T., 2002). Accounting information systems are used in an organization and financial records, this is what most audits emphasize to carry out various types of audits.

In conducting audits with conventional methods in an electronic data processing environment, many obstacles are encountered, but often these obstacles tend to be ignored and received less serious attention. As a result, there are unconscious inefficiencies. Often in an Electronic Data Processing environment, the volume and complexity of the data that must be examined is far greater than the auditor's ability. Finally, shortcuts are often done, for example using random sampling without regard to whether the sampling is sufficient to represent or not. Then also do the print-out based manually which is not detected because the operating system has been computerized. This results in audit conclusions that can be ascertained inadequate, which ultimately opinions of the financial statements as a whole do not have an accurate background and can create incorrect information, resulting in making a wrong decision. In this literature aims to determine the accounting information system technology to prepare accurate and relevant reports and the suitability of the accounting system based on financial accounting standards using a variety of tools or techniques found in Computer Assisted Audit Techniques (CAATs).

1.1 Background: Use of Computer Assisted Audit Techniques (CAATs)

The concepts and principles of auditing, with manuals and computer-based information system environments, have not changed. What's changed is the method and technique only. Some of these techniques and methods are different because they are caused by: automation, which is the entire process in electronic data processing, from input to output tends to be automatic, forms of use and the amount of paper tends to be minimal, often non-

existent (paperless office) so as to audit tracing documents are reduced compared to manual systems that use a lot of documents and paper, secondly with the linkages of activities related to poorly maintained records; third with online systems resulting in output that is often not printed; fourth, "Audit Around Computer" which ignores computer systems, but what is seen or tested is input and output; fifth "Audit Through Computer" uses computer assistance (or software) to audit (Hall, J.A., 2001).

If the audit in a computer-based information system is carried out conventionally to the Electronic Data Processing (EDP) environment as in a manual system, then it tends not to produce satisfactory results, both by the client and the auditor itself, and even tends to be inefficient and not directed. For this reason, in developing a computer-based accounting information system in facilitating audit control and tracking, especially financial reports can use various types of computer use systems. In audits called Computer Assisted Audit Techniques (CAATs).

In a financial report audit with CAATs, an audit is carried out on a computer-based accounting system, whose scope and purpose are actually fixed, namely providing an opinion on the fairness and suitability of the accounting system with financial accounting standards (ISCA, 2005). The use of computers as a tool for audit activities (computer assisted audit) is carried out in various ways, including using a test deck, with the Integrated Test Facility (ITF), Parallel Test Facility (PTF) or parallel simulation, with software packages (generalized or specialized audit software), with tagging and tracing systems, and job analysis. IT-based methods in auditing always develop in line with technological developments. Audit technology is not only single, but there are a variety of tools and techniques that continue to develop that can be used adequately to achieve audit objectives. Some technologies require large costs, others can be implemented with relatively small costs. Some require the auditor's technical ability, but the tendency is that the cost of software is cheaper and more user friendly. On the other hand, auditors are also increasingly trained in the field of information technology (Romney, M.B., and Steinbart, P.J., 2005). With the rapid development of accounting information system technology to prepare financial reports that are up to date, accurate and relevant, in order to provide an opinion on the fairness and suitability of the accounting system based on financial accounting standards using a variety of tools or techniques found in Computer Assisted Audit Techniques (CAATs) .

1.2 Purpose of the Study and Review Questions

This literature review was written to find out about the use of various tools or techniques found in Computer Assisted Audit Techniques (CAATs), and was developed based on fundamental questions, as mentioned below:

1. How do auditors carry out an audit of accounting information systems using Computer Assisted Audit Techniques (CAATs)?
2. Are the audit results using Computer Assisted Audit Techniques (CAATs) accurate and effective in making a decision?

1.3 Methods of Literature Review

To answer two basic questions, this article reviews the literature on articles, journals, books related to Computer Assisted Audit Techniques. To have a broader understanding of developments and research on this topic, this literature uses journals, research, articles that have been published with keywords used for searching are information systems, auditing, quality audit, accounting information systems and computer assisted audit techniques.

CHAPTER II. LITERATURE REVIEW

2.1 Definition of Audit

Audit is an activity that carries out checks to assess and evaluate an activity or object such as the application of internal controls in an accounting information system, whose work is determined by management or the process of an accounting function that requires improvement.

Audit can be explained as a systematic process to objectively obtain and evaluate evidence regarding statements about economic actions and events to ensure the level of correspondence between those statements and established criteria and communicate the results to users who need them. This activity is carried out by gathering and evaluating certain evidences of information regarding statements about economic actions and events.

The main function of an audit is to ensure that the information affirmed by a company really matches what is stated by the company about its business and if not, the auditor must notify the relevant audience.

The purpose of financial statement audits is to determine whether financial statements are prepared in accordance with certain criteria such as generally accepted accounting principles (Arens and Loebbecke, 1991).

2.2 Definition of Accounting Information Systems

According to Wikinson (2000), accounting information systems in carrying out their activities require specific elements that vary depending on the level of automation of the accounting information system. According to Hall (2001), elements of a general model of accounting information systems include end users, data sources, data collection, data processing, database management, information producers and feedback. And according to Bodnar and Hopwood (2004), accounting information systems are collections of resources, such as people and equipment, designed to convert financial data and other data into information that is communicated to various parties to take decisions.

2.3 Definition of Computer Assisted Audit Techniques (CAATs)

According to Saryana (2003) the definition of Computer Assisted Audit Techniques (CAATs) is a device and technique used to test (both directly and indirectly) the internal logic of a computer application used to process data. In using CAATs, there are advantages, among others, for databases that contain thousands of transactions, which are not possible to do manually, then CAATs can help to focus the audit and audit process faster with the help of CAATs.

CAATs technique is the conduct of taking audit evidence using a computer, an audit carried out using a computer or software to support the implementation of the audit. Audit techniques are the methods used by auditors to collect audit evidence. According to Arens in his book *Auditing and Insurance Services*, 9th Edition, there are seven audit techniques, namely physical testing (physical examination), confirmation (confirmation), documentation (documentation), analytic analytical procedures), interviews with clients (client requests) , calculate reperformance, and observation.

CHAPTER III. ANALYSIS AND DISCUSSION

3.1 Auditing in the Electronic Environment

Electronic Data Processing (EDP) is when a computer of any type or size is used in the processing of a company's financial information that is significant for the audit. The procedure used by the auditor in obtaining an understanding and testing of control over the accounting system and internal control relating to the audit procedure.

The use of a computer can change the processing and storage of financial information and can affect the organization and procedures used by companies in achieving adequate internal control.

The auditor has expertise and competence in EDP audits if the auditor carries out his audit in electronic data processing, the auditor must have sufficient understanding of hardware, software and computer data processing systems to plan assignments and must understand the impact of electronic data processing on procedures used by the auditor in the use of CAATs. In the implementation of the audit depends on the audit approach used, the audit used is the audit around computer, audit through computer or audit with computer.

3.1.1 Audit Around Computer

In the audit approach around the computer, the auditor can step into the formulation of opinion by simply reviewing the control structure and carrying out the transaction testing and verification procedure for the estimated balance in the same way as in a non-PDE system.

3.1.2 Audit Through Computer

This approach is widely used in PDE audits. Auditors use computers to test functions and control them in the computer and the notes generated by the computer. The size of the computer's role in the audit depends on the complexity of the company's computer system being audited.

3.1.3 Audit With Computer

Audits are carried out using computers and software to automate auditor procedures. This approach can use several techniques can use several CAATs as follows: System Control Audit Review File (SCARF), snapshot. This approach focuses on the use of computers

equipped with general audit software, namely generalized audit software (GAS). Examples of GAS include ACL (Audit Command Language), IDEA (Interactive data Extraction and Analysis).

3.2 Use of Computer Assisted Audit Techniques (CAATs) with the Test Data Approach

The test deck approach is an audit conducted using "the auditor's data with client's software". The intention is to test the computerized audit system using the auditor's data. In this case, the auditor must create a set of dummy data to be used to test whether the internal control has been carried out as it should. Test data is created for each type of transaction that will be tested. A good test data must be designed so that it can represent all the common mistakes. The less data, the more complete the possibility of errors that can be tested will provide an opportunity for auditors to predict the results of their trials and draw conclusions from the evaluation results (Liang, D., F. Lin, and S. Wu., 2001).

The method used by the auditor in conducting the audit with the test data method is that the auditor generates dummy data, then processes it with an application system and the computer is audited. Test data made by the auditor must cover all possible unauthorized or wrong transactions in order to determine whether the tested computer program reacts appropriately to various errors, by checking the list of errors and the detailed outputs generated from the test data. The test data is usually intentionally made wrong by the auditor and he has predicted that the computer should have detected the error. If it turns out that the expected result that he calculated did not happen, then it means something is wrong with the application program. Test techniques are used in conducting audits by entering data into the client's computer system and comparing the results obtained with the results that are predetermined (designed / expected result) (Gondodiyoto, 2007). The test data system in CAATs according to Gondodiyono, 2007 can be seen in Figure 1.



Figure 1. Test Data System (Gondodiyoto, 2007)

3.3 Use of Computer Assisted Audit Techniques (CAATs) with Parallel Test Facility (PTF)

Parallel processing techniques are implemented with "client's data, auditor's software." The point is that the audit is carried out on the actual data (copied audit data) and is processed by the auditor's software or even the computer. This real data was previously processed as a routine activity that usually exists on a computer audit, then the data is copied and reprocessed (process simulation) on the auditor's computer. Reports generated at the time of simulation are compared with reports generated by routine company processing. If there is a difference, the difference assumption indicates that the company's software does not process the data according to the existing specifications (wrong auditor program).

The program used can be compared between auditor controlled copy of the client's program with certain audit software made by the auditor, microcomputer or with generalized audit program. (Lube, D.P., and Gualate, 2005) explained, basically the PTF system can be distinguished by 2 ways of parallel simulation and parallel processing. In parallel simulation, the auditor will copy the data and process it on the auditor's computer, but with a simulation system (a system made by the auditor with the same specifications as the original or audited). In parallel processing, the auditor will copy and process the auditor's computer with an application system that is also copied from the auditor's computer. (Gondodiyoto, 2007) illustrates the parallel simulation system in Figure 2.

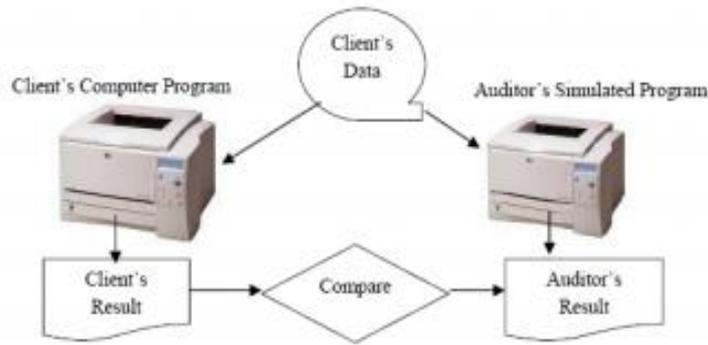


Figure 2. Parallel Simulation System (Gondodiyoto, 2007)

From Figure 2, it appears that this technique simulates the process carried out by the client by utilizing the auditor's program. The auditor enters the same data as previously processed in the company, then the real data is processed with a simulation program. Furthermore, the simulation report is compared with the report generated by the company's routine processing. If there is a difference, then the difference needs to be investigated for the cause.

3.4 Advantages and Disadvantages of Using Computer Assisted Audit Techniques (CAATs)

There are several advantages to using CAATs :

1. Increased or wider scope of investigations, which cannot be done manually

For a database that contains thousands of transactions, which is not possible manually, CAATs are very helpful for focusing audits.

2. Increased coverage

CAATs are able to check 100% of all transactions in a database in annual or more.

3. Better information

CAATs are able to provide information for data analysis and viewing data profiles.

4. Saving time

The time to do the audit process is faster and more efficient with the help of these CAATs.

Besides having several advantages, CAATs have several disadvantages, namely:

1. It takes a long time to learn audit techniques with CAATs.
2. Requires a large cost for training in using the software, because to become proficient, this software requires continuous development and maintenance of expertise.

3.5 Effects of Using Computer Assisted Audit Techniques (CAATs) in Audit Results

Technology that is always developing makes auditors always faced with different situations and challenges. Auditors are required to work with large clients who have millions of transactions per month. With the limitations of auditors as human beings, it is not possible for the auditor to analyze large amounts of data with a sampling method. Then the auditor needs an information system that is supported by a computer to get the efficient and effective results needed for decision making.

Auditors will benefit greatly, especially in the efficiency and effectiveness of audits if they care and use information technology in their work (Fefri, 2007). The suitability of work with technology has an impact on improving job performance as seen from the ability to obtain better information for decision making and time efficiency in completing a job, (Mueller and Aderson, 2002). According to Cavalluzzo & Ittner (2004) an auditor who has a perception of ease will facilitate the application of the benefits and use of information technology.

Saputra (2014), explains that the use of CAATs can improve the efficiency and effectiveness of auditors in carrying out audits by utilizing all the capabilities possessed by computers. According to research conducted by Praktiyasa (2016) and Legowo (2014), computer-assisted audit techniques have a positive effect on auditor performance. This is indicated by the more frequent auditors carry out checks and carry out audit processes using CAATs, the auditor's performance will increase. This is because with the help of CAATs the auditor can easily process financial statement data. Using CAATs will be more effective in getting audit results so that the audit report can be used as the right decision making.

Omunuk (2015), in his study found that audits using the help of CAATs in large companies produce positive audit quality. In PSA No. 59 (Section 327) states that audits using CAATs obtain effectiveness and efficiency in procedures, dossiers and results.

Harum,D and Dewa,N (2015), in his research conducted on BPK RI Bali Province representatives about the quality of audits conducted using CAATs has a positive and significant effect on the quality of audit results, meaning the more frequent the use of CAATs by an auditor, the better the audit quality generated. In this case the use of CAATs results in the accuracy and accuracy of a public auditor compared to using a manual.

In the audit process several transactions can be tested more effectively at the same cost level by using computers and applications to check all or more transactions when compared to if carried out manually. In applying analytical procedures, transactions or account balances can be reviewed and printed reports for unusual items in a more efficient way by using a computer when compared with the manual method. The use of CAATs can make additional substantive testing procedures more efficient than if the examiner places trust in the control and testing of the control in question.

CHAPTER IV. CONCLUSION

The benefits of computer support in addition to being felt by auditors, other benefits are also felt by management functions. The audit approach in presenting financial reports using the CAATs system is very useful for the audit method in substantive testing of company files or data or records. The audit software used by CAATs is a computer program used by the auditor to help test and evaluate the reliability of company files (substantive test). With computer-based systems (CAATs), auditors must consider computer assistance techniques in conducting audits. The CAATs approach includes using test data and parallel simulation approaches and using general audit software, namely generalized audit software (GAS). Examples of GAS include ACL (Audit Command Language), IDEA (Interactive data Extraction and Analysis).

By processing transactions that are already using a computer that is Computer Based Accounting Information System. The accounting process carried out for processing transactions / data, it is enough for the user / user only to input data / transactions, so that the data will automatically be integrated and can make up-to-date financial statement information. With the Audit with CAATs, it will run smoothly so that in presenting the audit results the financial statements meet the established criteria such as: relevant, reliable, understandable, testability, neutral, timely, comparative and complete. Thus the audit report or results can be the correct information as a basis for decision makers.

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