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Abstract-The main aim of this study is to analyze and report on the advantages provided by Computer Assisted Tools and Techniques (CAATTs) especially during the testing phase of financial audits. Design/Methodology/Approach: To realize the aim of this study, the literature and applications regarding specifically designed computer software and hardware, known as Computer Assisted Audit Tools (CAATs) or interactive Data Extracting and Analysis Systems (DEASs) in general, have been reviewed and searched. In order to give a clearer demonstration of the advantages of CAATs and DEASs, a number of audit tests and procedures focusing on the Sales Cycle accounts of a food processing company in Turkey are presented in this study. Findings: It is firmly believed that various products of computer and information technology have provided great benefits to Certified Public Accountants. These include the improvement of quality and reliability of certain audit tasks and reaching a final audit opinion, as well as time and money saved while completing various audit procedures in a more comprehensive manner, and higher levels of efficiency and effectiveness achieved by the auditors. Originality/Value: The research was conducted in a manner that would enable the audit of the whole data without omitting any accounting records in the desired fields. This enables the auditor to test the whole database without the inconvenience of selecting appropriate samples. As a result, the reliability of the tests conducted and opinion reached increase. It is hoped the findings will contribute to understanding of benefits provided by CAATs/DEASs while performing financial audits. Key Words: Financial Audit, Information Risk, (CPA), Computer Assisted Audit Tools and Techniques (CAATTs), Data Extracting and Analysis Systems (DEASs), Electronic data Processing (EDP)

I. INTRODUCTION

Audits of financial statements are the most comprehensive attestation services provided by Certified Public Accountants (CPAs). Credit companies, shareholders, both individual and institutional investors and all other users of fundamental financial statements, namely balance sheets and income statements, rely on the information disclosed on these statements while making their decision. One of the biggest concerns of these users is the reliability of the information provided, that is information risk, since it directly affects the appropriateness of their decisions. Remoteness of information, biases and motives of information providers, voluminous data and complex transactions are the main factors affecting information risk (Arens, Elder and Beasley: 2008). The most logical and economical way to eliminate information risk is the audit of statements by a qualified, independent CPA. It is necessary to remember that auditing of financial statements is a comprehensive process requiring expertise and experience in the industries, business types, product lines, raw materials, business practices including complex transactions such as transfer pricing, rules and regulations as well as tax laws all of which affect the company to be audited. Moreover, an auditor is expected to be competent in the area of Generally Accepted Accounting Principles (GAAP), to be independent and qualified to evaluate and understand the internal control structure through which all transactions are documented, recorded, classified, summarized and reported. Such an auditor is also expected to be knowledgeable about types of evidence and techniques for accumulating the necessary data in order to form an opinion about whether financial statements have been prepared in compliance with GAAP and is free from any material misstatement. An independent audit requires a careful investigation of all documents, files, records and other related pieces of data, including footnotes that constitute the figures and assertions on financial statements. The need for reasonable assurance of the accuracy and reliability of information disclosed in financial statements obviously creates a burden on CPAs as professionals. The consequences of the failure to carry out this great responsibility can be extremely costly, as can be seen from the Enron case. Therefore, besides meeting all ethical standards, CPAs need to constantly improve skills in order to meet the demands of ever changing business practice and technological environment. Therefore, American Institute of Certified Public Accountants (AICPA) has made it mandatory for CPAs to take at least 40 hours a year or 120 hours over 3 years of professional training and education. One of the most important areas emphasized by AICPA is the applications of tools and techniques such as CAATTs, DEASs Neural Networks (NNs) and Expert Systems (ESs) in the context of financial audits.
II. **COMPUTER TECHNOLOGY AND AUDITING**

Almost all of businesses today exploit computer technology to its full extent. Data and documents related to business transactions are processed in Electronic Data Processing (EDP) environment and stored in electronic files, along with all other information and documents, such as contracts, company policies and bylaws. Since all information regarding business transactions are documented, recorded, classified, summarized and reported by the use of an electronic database, businesses seem to be operating in almost a paperless environment at the present time (Kanter, 2001). Therefore, it is almost impossible to conduct a high quality and reliable audit using traditional methods in the companies where a paper trail has almost disappeared. Conducting an audit in an EDP environment requires the knowledge and skills to work with mainframe terminals and electronic databases where all accounting records are stored. This explains the emphasis given to Information Technologies (IT) by the AICPA.

The tools and techniques provided by computer technologies have made it possible for CPAs to conduct high quality audits in a manner more suited to the needs and expectations of the present (Ethier, Jan/Feb 2000). Moreover, CAATTs in general have enabled the auditors to improve efficiency and effectiveness while decreasing the cost and time taken to complete an audit. Computer technology utilized by auditors can be seen in every phase of audit cycle, namely client acceptance/continuation phase, planning phase, testing phase and reporting phase.

Auditors of major CPA firms such as PricewaterhouseCoopers (PwC) and Earnst & Young (E&Y) employ various computer tools and techniques at every stage of audit process. During the procedures applied in client acceptance/continuation phase, qualitative information i.e. background information about owners, partners affiliates, main suppliers and retailers, product line, industry specifications, bylaws, minutes of meeting along with quantitative information such as financial ratios of the company in a comparable format with industry averages, assertions on both actual and projected financial statements and budgets are taken into consideration and careful evaluation. Computer and telecommunication technologies save these auditors a great deal of time and labor while improving the quality of the tasks completed. A number of companies have built their own intranet system such as Network of Excellence and Knowledge Curve of PwC, where information about both current and potential customers and their industries are updated to assist the auditors of PwC worldwide. In addition to conventional computer software and systems, innovative tools such as artificial intelligence modules embedded hybrid systems, neural networks and expert systems are fully utilized by major CPA firms to perform various procedures in this first phase of audit. An important example is FRISK, a hybrid system employed by PwC auditors in client acceptance/continuation decisions.

There are also various software and system that can be utilized during the planning phase of audit cycle, including a number of CAATs and DEAs available for the use of auditors store information as desired. The internal audit division of the First National Bank of Omaha reported reducing time taken to perform the tests from 80 hours to 1 hour while increasing the number of fields to be tested from 40 to 180 by employing a DEAS named Audit Command Language (ACL) (Kastner, 1999). It is also possible to take advantage of various CAAT and DEAS software as well as many commonly used package programs (Words, Excell) in the reporting phase (Salamasick 1995). It is worth mentioning that nearly all CAATs and DEAs available for the use of auditors store all procedures in files, a great help in preparation of working papers, saving a great deal of time and energy in preparing both current and permanent files.

III. **CAATT’S IN TESTING PHASE**

In this study, special emphasis will be given to the application of DEAs in testing phase. There are various reasons for selecting this stage in order to examine the benefits of DEAs. Firstly, most of the data taken into consideration during the client acceptance phase are qualitative and subjective. It is believed that working with qualitative data would not be appropriate for the content of this study. Secondly, types of the tests selected, materiality and risk levels determined during planning phase are subject to change or revision after actual applications start. Plans in advance rarely match the actual consequences. Besides, plans and their actual applications take place almost simultaneously in the use of DEAs. Therefore, it is believed to be more appropriate to omit the planning phase and concentrate directly on the field study. Thirdly, the reporting phase involves many routine and standard procedures that can be performed by various commonly used general-purpose package programs such as Windows. Applications in reporting phase are therefore not believed not to have much to prove in terms of understanding the advantages provided by CAATs and DEAs. Finally, it is believed the findings of the tests performed with a proper DEAS will help to emphasize the contribution of these tools to labor and cost savings, quality improvements of audits and effectiveness of auditors.
IV. METHODOLOGY
The economic entity audited in this study is a poultry processing company. There are various reasons for selecting this company. Firstly, most of the businesses are unwilling to share financial information even if for academic reasons. Therefore, the understanding and cooperation of the management are greatly appreciated. Secondly, the company had been provided with certain management advisory services for two consecutive years prior to this study. This has saved time and effort during client acceptance and planning phase, since auditors already possess most of the necessary information obtained through background investigation, analysis and evaluation of structure of the internal control system along with Management Information System (MIS) and Accounting Information System (AIS). However, this was to be the first audit performed by these auditors in this company and in addition the first time these auditors work with a well known DEAS called Audit Command Language (ACL). Since the auditors do not possess the knowledge and skills to fully utilize ACL, necessary assistance is provided to them by the branch of ACL in Turkey. It should also be noted that due to request by the company and the sensitive nature of the information, it is impossible to provide full demonstration of actual results in this study. Instead, a more narrative approach is used in explaining the results.

The company owns and operates eight poultry farms within 10 km radius of a meat processing facility and works with more than 12 subcontracted poultry farms under the close supervision of five full-time veterinary. These subcontractors are provided with chicks and feed, vitamins and other necessary supplies along with necessary training and advice. The company processes various products and sells them to a big portion of domestic market. Although the company has initiated some efforts, it has no market share in foreign markets yet. Some of the products among which are produced and sold by the company are whole chicken, partial chicken products, burgers and sausages. As the company is only engaged in wholesale trade, the terms of sale and wholesale are used interchangeably in this study. Since the wholesale of whole chicken constitutes the biggest portion of sales, it is thought to be more comprehensive to conduct an audit related to whole chicken sales cycle. This kind of an audit includes records and documents related to accounts of Sales Revenue, Sales Returns & Allowances, Sales Discounts, Cash and Equivalents, Accounts Receivable, Notes Receivable, Cost of Goods Sold and Value-Added Taxii. The emphasis is given to trade receivables accounts, namely accounts receivable and notes receivable, since most of the sales generated are on credit.

The Audit procedures to be applied during the testing phase are going to be conducted not only to gather evidence but also to assess the length of time taken to scan the related fields in electronically stored database and extract the necessary information in the desired format. The Audit Procedures to be applied are as fallows:

Procedure 1: Prepare a trial balance of trade receivables and assess them in descending order according to the size of balance.

Procedure 2: Retrieve the data related to shipment orders and sales invoices from the database for the whole fiscal year. Prepare lists of both shipment orders and sales invoices and assess them on an individual customer basis in chronological order. Merge orders and invoices the same folder and scan for any mismatch or duplicates.

Procedure 3: Calculate the totals in both quantity and in monetary terms for both shipment orders and sales invoices.

Procedure 4: Compare the total of sales invoices with the total of Sales Revenue Account for any inconsistencies. Determine the names of companies responsible for inconsistencies and possible causes.

Procedure 5: Calculate the total amount of discounts on sales invoices and compare with Sales Discount Account totals. In case of an inconsistency, identify the company involved and the reason for inconsistency.

Procedure 6: Confirm trade receivables with a customer via e-mail. (During this procedure, confirmation will be conducted directly on the customer’s website if necessary permission for access is obtained from the customer).

Procedure 7: Prepare two aging schedules for trade receivables at 10 day and 30 day intervals separately for the current fiscal year. Age the trade receivables the same way for the last 5 years and compare Allowance for Doubtful Accounts for the last 6 years. List the trade receivables more than 10 days overdue in descending order according to amounts for the current year.

All accounting information namely uniform chart of accounts, policies, procedures, books, journals, files, records, documents and financial statements are stored electronically through an accounting software called Logo Gold Open Version. In order to apply the procedures mentioned above the electronic data processing environment of the company should be understood thoroughly. Therefore, the auditor is provided with the assistance of an employee familiar with the EDP environment.

Procedure 1:
There were two main goals in of conducting this procedure. The first was to test existence/occurrence, completeness and classification assertions of management while cross-checking and testing mechanical accuracy of related accounts. The second aim was to measure the time taken for an auditor using a DEAS to retrieve specified data from the related fields in database and create a working trial balance for trade receivables including information such as subsidiary account and customer codes, name/title of the customer and balances of each customer in the desired format.

The specifications of information required, such as customer code, customer name and address, debit total, credit total, debit balance, were loaded onto the DEAS and then retrieve command was given. Although there were many different sampling methods that could be utilized by DEAS, the approach of scanning all related records in
The database was adopted entailing a complete scan the entire database to extract a specific data and store it in the files of auditors’ computer in the desired format. It took approximately 16 minutes for the DEAS to scan, extract and retrieve the desired information; create and store files prepared according to determined criteria in descending order. These files stored in auditor’s computer could be re-assessed and used for various audit tests and reporting purposes. For example, the list of 100 customers with highest value purchases and the 100 with lowest value purchases were prepared in less than 4 minutes after the specifications were determined and command was given. Moreover, the cut-offs of accounts were recalculated and a report of current balances on the subsidiary ledgers of each customer account for the whole period in chronological order were prepared by tracing the amounts and types of payments (cash, checks received, wire-transfers to banks) made over the whole fiscal year. Preparing and storing this report in current and permanent files took approximately 18 minutes. After the completion of Procedure 1 by utilizing a DEAS, the auditor was able to scan more than 2,250,000 accounting records in trade receivables, cash, checks and wire transfers received without skipping a single record. As the results of tests conducted above, the completeness and validity objectives of audit were met. In other words, there were no imaginary transactions recorded without proper documentation recorded and all existed transactions had been recorded without missing anyone. Also, during the mechanical accuracy tests of trade receivables and all other related accounts, namely, cash in hand, checks received and banks, it was discovered that the debit and credit totals and balances of all these accounts were accurate and in accordance with each other. This was considered as an indication of an effective and efficient internal control structure regarding the accounts mentioned above.

Procedures 2&3

The main purpose of performing procedure 2 and 3 was to check the agreement of records regarding quantities on shipping documents and sales invoices. Also, the time taken to scan, extract and retrieve the desired data, in specified format through applications of the DEAS in use, was measured to assess its contribution to quality of work, time, energy and cost for completing these procedures as well as its contribution to the efficiency and effectiveness of auditor. Once again, all relevant fields of database were scanned without the need for sampling procedures.

Firstly, the related fields in database covering all information regarding sales invoices (INVOICE) were successfully accessed the DEAS. At this point, a list of data categories related to sales invoices under menu option of the DEAS appeared on the screen. According to specifications required by the auditors categories could be selected and filed created. In this study, the specifications required that data related to whole chicken sales for the current fiscal year be listed and displayed in alphabetical. In addition, details were displayed and stored in a designated file under the headings: Invoice Reference Number, Shipment Order Reference Number, Customer Name, Date, Net Weight, Unit Price, Gross Totals, Total Discounts, Net Totals and Net VAT. Knowing this, the fields in database, where the information about shipment orders (STFICHE) stored, were accessed and a separate file for shipment orders including same categories of information and specifications for display was transferred to auditor’s computer. During these procedures DEAS scanned over 2.8 million pieces of data, extracted the information meeting the pre-determined specifications, transferred them to the auditor’s computer and created two separate files. By doing, so 163,104 sales invoices and 201,114 shipment orders (multiple shipments could be recorded on a single sales invoice for the same customer when the orders were received separately but processed on the same day) were listed in details. The whole task took 38 minutes to complete.

The data collected in two or more separate files in the auditor’s computer could be re-assessed, merged and used for different tests and analytical procedures determined by the choice of auditor through certain applications of DEAS. Therefore, it was decided to merge the separate files mentioned above to perform some analytical procedures. The main purpose of this was to cross-check the totals on both sales invoices and shipment orders. Several methods to merge the information on these two separate files in a logical manner could be employed. Invoice Reference Numbers and Shipment Order Reference Numbers were used in order to relate and cross-check the pieces of data transferred from two separate files into a new 3347 page file. Moreover, grand-totals of columns, namely Net Weight, Gross Totals, Total Discounts, Net Totals and Net VAT and differences in subtotals (i.e. GROSSTOTAL_DIFFERENCE) of similar groups were calculated and also displayed in this new file in a process completed less than 10 minutes. All shipment orders were matched with the related sales invoice in a merged file. Also the grand-totals were found to be in accordance. The grand-total of gross totals on sales invoices was 45,556,708.465557 YTL whereas it was 46,556,708.465459YTL on shipment orders. Therefore, GROSSTOTAL_DIFFERENCE was only 0.000098YTL, which was caused by the rounding ups which occurred while multiplying net weight by unit price and considered immaterial. Further investigation revealed that the remaining of the grand-totals matched and there was no evidence of material errors or irregularities regarding the records existed in sales invoices and shipment orders. The auditor was satisfied with the results of analytical tests and procedures performed thus far and considered that the objectives of validity, completeness, mechanical accuracy and cut-offs had been met.

Procedure 4

This procedure was performed to compare the total gross sales figure obtained from sales invoices with the balance of Sales Revenue account. Since the grand-total of gross sales was previously calculated during Procedure 3, the main task here was to scan the field of Sales Revenue in database and extract the sales totals for whole chicken sales only for the current fiscal year to enable total amounts of
whole chicken sales could be calculated easily. The account code of Sales Revenue account is 600 in Turkish Uniform Accounting System. In this account, the total of all the sales generated by the company had been recorded. However, the auditor was only interested in whole chicken sales generated for the current fiscal year. The company’s account chart gave the account code for whole chicken sale, with the extension as 600.24.01. In order to extract and retrieve total of sales with 600.24.01 code among all sales generated for January 01–December 31 of the current year, four data scanning and extracting filters were electronically incorporated into DEAS. Determining the criteria for data and placing the filters took approximately 20 minutes. Upon giving the command DEAS scanned 998,695 records under 600.Sales Revenue account and extracted and transferred 174,467 records matching the determined criteria in less than 4 minutes.

174,467 records with the code 600.24.01 were found, a greater number than that previously found in Procedure 2, 163,104. Moreover, when the total of records with the code 600.24.01 was calculated, it was discovered to be 1,548,832.328280 YTL more than the grand-total of gross totals on sales invoices of whole chicken calculated during Procedure 3. Before starting the testing stage, the materiality level was set at 5% of total net sales, and the difference found here constituted up to 3.49% of total net sales, that is, below the materiality level. In spite of this, the difference of 1,548,832.328280 YTL was considered to warrant further investigation.

During a more careful and comprehensive review of data received, it was discovered during a comprehensive review that a number of items such had been recorded under 600.Sales Revenue with the same extension code as whole chicken These item include insulation material, fuel oil, painting supplies, gloves, that had been sold to subcontractors (it was previously mentioned that the company had subcontracted poultry farms and those were provided with necessary supplies by the company). An example of this was the sale of coating material used to insulate pens recorded on March 24 of the current fiscal year. The inventory code of coating material was 150.04.04.002, whereas the code of finished goods such as whole chicken started with the code of 152 according to company’s account chartiv. Such an error may be thought acceptable considering that approximately 1,000,000 sales transaction had been manually recorded. However, it was firmly believed the accounting program used by the company should have been designed to prohibit these types of errors and should have warned the user. Although this was not an intentional error and had no material impact on the overall accuracy of the financial statements, it was obvious that this was a violation of classification assertion of the management and therefore, the control procedures related to the sales portion of the internal control structure could be considered weak in this case. The management and Information Technology personnel were informed of the situation.

**Procedure 5**

The objective of performing Procedure 5 was to compare the grand-total of total discounts column on sales invoices calculated during Procedure 3 with the balance of Sales Discounts related to discounts given for the sale of whole chicken. The account code for sales discount under which discounts were given on sales of all material & supplies, semi-finished and finished goods recorded was 611. However, the auditor was only interested in sales discount records for whole chicken sales. Therefore, ten data scanning and extracting filters were placed in DEAS that would allow the system to enter and scan the entire records for 611.Sales Discount accounts and extract and retrieve those with the extension code 611.24.01, related to sale of whole chicken.

Setting the specifications and placing the filters took approximately 22 minutes. Then, DEAS extracted and transferred the desired information in under 4 minutes. During this process, DEAS extracted and retrieved 109,351 records matching the determined specifications after scanning 900,698 records in the 611.Sales Discounts file. In addition, the total balance of 611.24.01 accounts was calculated and compared with the grand-total of total discounts figure on sales invoices. Total balance of sales discounts recorded for sales of whole chicken found to be 219,758.039068 YTL more than grand-total of total discounts calculated for sales invoices. The difference constituted 0.0387% of total net sales well below the materiality level set initially. However, the difference was investigated in a more detailed manner and it was found to be caused by a similar error discovered during Procedure 4. Although considered to be a minor error, such a misclassification caused by weaknesses of control procedures embedded in internal control system for related field was reported to the management and Information Technology department. Without utilizing the DEAS, this weakness in internal control structure and misclassifications would have remained undetected. Under normal conditions without the use of a DEAS, a procedure including sampling of sales invoices with the highest values and tracing them to Sales Revenue and Sales Discounts would have been employed since it would have been impossible to scan all records in the Sales Revenue, Sales Discounts accounts and sales invoices as it was done with DEAS. Such a procedure would fail to indicate any error, because the data on sales invoices related to whole chicken sales were consistent with the data in the 600.24.01 and 611.24.01 accounts

**Procedure 6**

Confirmations provide some of the most reliable audit evidence. However, they are also among the most time consuming and costly procedures. The main purpose in performing Procedure 6 was to determine whether improvements could be obtained in time and costs involved with preparing and sending confirmation letters and receiving replies. Also improvements in quality of the task to be performed, that is, opportunities for a more comprehensive analysis regarding trade receivables would be taken into consideration. With this considerations in
mind, it was decided to obtain the cooperation of an important customer, a grocery business, located approximately 100km away, was contacted and management agreed to cooperate. It was initially planned to get necessary permissions to access into the store’s website and accounting database for scanning trade payables files for the purpose of extracting and receiving records showing the grocery store’s debt to the company that was being audited. However, neither was there a suitable intranet infrastructure for these applications nor did the management have the authority to give permission for such an access. One of the purposes of this initial attempt was to assess in general terms the efficiency and effectiveness of DEAS in performing on-line audits. However, it should not be forgotten that the majority of the companies in Turkey had not built the necessary infrastructure that would allow on-line audits at this time. Besides, the laws and regulations related to on-line commerce and commercial information transfer had not been set up sufficient enough yet to solve a conflict that might arise between participants. Therefore, the initial attempt had to be abandoned before it had even begun. Upon cancellation of this initial attempt, a different approach was taken. A standard confirmation letter was prepared and sent to the management of the grocery store via e-mail requesting a detailed list of trade payables to company audited for January 1-December 31 of current year. Using Sequential Query Language (SQL), the accounting personnel of the store extracted from their records the trade payables to the company being audited and sent the list to the auditor via e-mail. The reply was received in one hour upon request. Meanwhile, trade receivables related to the grocery store were extracted from database and transferred to the auditor’s computer in approximately 17 minutes including the time taken to set specifications of data and install the data scanning and extracting filters. The auditor decided to continue with the Excel program (although the procedure could be carried out by DEAS in use) in order to test the compatibility of DEAS with other commonly used programs. The trade payables file received from the customer and trade receivables file retrieved from database by the auditor were merged in a separate Excel file. This information needed to be sorted once again by using similar criteria for proper crosschecking and matching purposes. The task of resorting was completed in 3 minutes, after which the totals per day, week, month and grand-totals per the whole year were calculated. Every single item, record and total in both files seemed to match perfectly. It took around 30 minutes to complete all desired tests to the satisfaction of auditor, thus meeting validity, completeness, mechanical accuracy, classification objectives regarding the field of trade receivables, can also be successfully utilized in other phases of audits. The advantages of DEAS applications in financial audit can be summarized as follows:
- Improved efficiency and effectiveness due to decreased time and costs in scanning, extracting and retrieving data.
- Improved confidence in decisions made due to ability to scan and test all relevant information in its entirety without omissions, as well as the elimination of human error in calculations and mechanical accuracy tests.
- Minimization of human errors in every procedure and test applied.

Furthermore, the internal control structure was tested and control procedures related to trade receivables were found to be reliable.

**Procedure 7**

Aging trade receivables are among the most commonly applied procedures in financial audits. There are various computer-assisted tools and techniques for aging trade receivables and determining whether the accounts have passed due date. During the application of Procedure 7, SQL commands were employed in order to prepare aging schedules of accounts 10 and 30 days overdue. Utilizing SQL in such procedures requires at least a medium level expertise in programming languages as well as analytical thinking ability and familiarity with structure and features of databases especially the one to be scanned. However, the auditor still needs to be very careful while preparing the commands in SQL, since an extra/missing comma or even a dot may cause totally unrelated results. The DEAS used in this procedure had an SQL module compatible with any database available. It took around 36 minutes to complete all desired tests and investigation. No problems were experienced while performing Procedure 7 and the findings of auditor were similar to previous aging of trade receivables table prepared by the accounting personnel of the company.

The aging schedules of trade receivables have been prepared in exactly the same way for the previous 6 years without omitting a single record. They were merged in a single file for conducting a trend analysis. The provisions for doubtful accounts were recalculated to check for compliance with company policies regarding doubtful trade receivables. The results were found to be consistent with each other and in compliance with percentages determined by the management. The application of these procedures raises the importance of the fact that new age auditors needed to improve their skills in computer-assisted tools and techniques that will allow them work efficiently and effectively in Electronic Data Processing (EDP) environment.

**V. Conclusion**

As a result of this study, it is possible to state that CAATs and DEASs greatly improve the efficiency and effectiveness of performance in a number of audit tests. All relevant databases were audited in their entirety, the desired evidence was collected and results were stored in permanent files within a period of 12 hours including breaks. The auditors expressed satisfaction with the scope of the test performed. It can also be stated that DEASs,
• A more comprehensive evaluation of internal control structure.

Finally, it should be emphasized that the applications of computer technology in financial auditing are not limited to those reported in this study. The extent and types of tests which can be performed with DEASs and CAATs in audits of financial statements are limited only by desires and imagination of auditors. For example, after specifications and criteria set with ACL the DEADS used in this study, more than 1000 audit tests can be performed with a single command.

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1 According to Turkish Uniform Chart of Accounts which is mandatory for every company operating under Turkish Commercial and Tax Laws, there are special codes for each account. The accounts analyzed in this study are 100.Cash, 101Checks Received, 102.Banks (all three are in the classification of cash and equivalents), 120.Accounts Receivable, 122.Notes Receivable, 391.VAT, 600.Sales Receivable, 610.Sales Returns, 611.Sales Discounts, 620.Cost of Goods Sold.

1 YTL is the currency of Turkish Republic. 1YTL = 0.624USD at the time of the research

1 The inventory accounts have the following codes according to uniform chart of accounts in Turkey: 150.Materials Inventory, 151.Work-in Process Inventory, 152.Finished Goods Inventory.

VI. REFERENCES


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