APPLICATION OF AI IN FINANCIAL ACCOUNTING

Human Oversight in AI-Assisted Financial Record-Keeping: A Study of Error Detection and Accountability

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Abstract

Many businesses make use of AI based systems to manage financial information and complete accounting processes. These systems have been widely adopted by many businesses to record financial transactions, manage invoices, manage financial data, monitor spending and generate financial reports. This means many parts of financial management have been made more efficient. However, there may be issues in using solely automated systems for financial management.

Within AI based financial record keeping, human oversight is very important. Despite large volumes of financial information being processed by Artificial Intelligence quickly, inaccuracies within data and limitations within AI itself, or within the processing of data may cause incorrect information. This may cause issues within a business's financial records meaning that correct accounts may be difficult to manage. Therefore, having humans involved within these processes to check financial data, identify potential issues and correct any errors is very important.

This research looks at how human decision making should be considered when analysing financial information generated by AI. Within these processes, it is important to consider who is responsible for errors in financial information. It is important to find a balance between the automation provided by AI, and human involvement within accounting processes. Possible issues for businesses using AI based financial systems are discussed in this research, including reliability of data and verification within data. Additionally, responsibility may also be an issue.

Secondary data was taken from research articles, academic texts, journals and other relevant resources. This research aims to gain understanding into how human oversight can be used responsibly to support financial information management. Overall, although the use of technology within financial processes can be very beneficial, human decision making, regular verification and responsibility must be considered to ensure accurate and reliable financial data.

1 Introduction

1.1 Background

Within modern businesses, Artificial Intelligence (AI) is becoming increasingly common. As technology advances, businesses have implemented new methods, processes and systems to improve their business. AI is present in computer systems and programmes. It allows computers to perform processes that otherwise would require human intelligence. AI can allow computers to analyse, discover patterns in information, understand information, solve problems and support decision making. AI has been implemented in various sectors within business. This includes the financial industry, healthcare, education, manufacturing and financial services.

Within businesses, the introduction of AI has allowed information to be efficiently managed. Previously, many processes within business required employees to perform actions manually, requiring large amounts of time to complete. However, with the implementation of digital systems and programmes, many manual processes can be efficiently performed. Additionally, with the introduction of AI into these systems, information can be efficiently processed, patterns can be discovered and processes previously requiring manual input can be assisted by AI.

Within businesses, AI can be applied to processes to allow large amounts of information to be analysed. This can allow businesses to highlight key pieces of information. Thus, it can be a useful tool within businesses that frequently deal with financial data, customer data and any other business records. The usefulness of AI in businesses will depend greatly on the quality of data provided and analysis of the information produced by the AI.

1.2 Application of AI in financial services

Within financial services, developments in technology have caused many changes. Businesses and companies within the financial industry often deal with large volumes of financial information. This can include information relating to transactions, payments, invoices, costs, profit statements and other financial documents. This information must be correctly managed and monitored.

Traditionally, financial processes are performed either manually or using simple computerised systems. Employees will enter transaction information, manage records, create statements and analyse financial information. Although these methods are effective, they may be very time consuming for businesses with high volumes of transactions. Additionally, manual input may lead to errors within data. These errors could be due to incorrect calculations, missing data or incorrect classifications.

With the implementation of digital accounting programmes, financial information within businesses can be more efficiently organised. With AI incorporated into these systems, financial information within businesses can be processed, documents can be examined and anomalies within financial data can be identified. Many modern financial programmes contain automation and AI features, so that standard accounting processes can be supported. This has allowed improvements in how financial data is managed within businesses.

Care must however be taken with AI within financial services. Accurate financial data is key to understanding the financial position of a business. If inaccuracies occur in the recording or processing of data, it may cause issues with statements and reports. To avoid this, businesses within financial services must carefully implement technology and ensure the financial data is accurately verified.

1.3 AI-assisted financial record keeping

Financial record keeping is the process of recording, managing and analysing financial transactions within a business. It is an important part of accounting, as it allows businesses to track information on income, costs, payments, money received and other financial activity. Having accurate financial records also allows businesses to create financial statements within the business and understand how well they financially performed.

Within financial record keeping, AI can be used to assist with multiple processes. AI based systems can be used to process information in invoices, categorise costs, manage transaction information and

identify particular anomalies. Within some systems, information can be extracted from digital documents and arranged in a clear form. This can reduce repetition within financial record keeping.

AI can process large volumes of information quickly. Within businesses with frequent financial transactions, large volumes of data may be difficult to manage manually. Using automated systems can allow employees to manage the information more efficiently. It can also allow key entries within the data to be highlighted for further attention. This can make analysing financial records more systematic.

AI assisted financial record keeping can also allow summarised financial information to be created. Processing information, particular tools can allow categorisation of income/ costs and produce summaries of information. However, in all situations information provided by these systems must not necessarily be assumed to be correct.

2 Literature review

AI is beginning to be used within accounting processes. As a result, many researchers have written literature on the effects of AI within accounting. Some research focuses on reducing errors and other research discusses potential issues which may occur in businesses using AI. Five pieces of research have been chosen in order to understand how AI is being applied within accounting, the importance of human input and the responsibility of organisations in cases of errors occurring.

2.1 Al Najjar et al. (2024)

In this piece of research Al Najjar et al. (2024) explore how AI can be used to reduce errors within accounting processes. Data was gathered via questionnaires. Two different groups of individuals were questioned; these were developers of accounting software and certified public accountants.

The research identified several types of errors that can occur within accounting. These include incorrect tax codes, incorrect accounting periods, math errors, hidden entries, and manipulation of financial information. It was found that AI can be used to reduce several errors in accounting. However, this does not apply to all types of error. From the responses in this research, it was found that AI did not reduce errors in mathematical calculations or principles in accounting to the same extent.

Interestingly, it was found that developers of the AI had higher confidence in AI reducing errors in accounting than the professional accountants. Therefore, there seems to be a discrepancy between expectations and real-world application.

This is relevant to the current research as it shows that even with AI being used, results must be considered. Furthermore, it provides understanding as to why financial professionals should not fully rely on AI. (Al Najjar et al., 2024).

2.2 Zhang et al. (2023)

Zhang et al. (2023) explore the ethical issues that may occur within managerial accounting by using AI. In this research, they focus on how the use of AI in accounting processes affects the responsibility of individuals and organisations.

Several ethical issues were explored in this research. These include securing data, having accountability, ensuring transparency and building trust. As financial information is being handled within

accounting, it is important to consider these issues. If AI is introduced without considering the limitations, it may be difficult to know how particular outcomes have occurred or who is accountable.

It was explained that responsibility for appropriately applying AI should be shared across multiple stakeholders within the implementation process. This means that not only those developing the software should be responsible, but also organisations, and individuals within them.

This research is useful within the current research as it links AI to responsibility. It can be understood that implementing AI within accounting processes is not simply for efficiency. Within businesses, consideration must be made for verifying, securing and managing financial information. (Zhang et al., 2023).

2.3 Ashraf (2025)

Musaib Ashraf (2025) explores whether automating processes improves financial reporting within organisations. In this research, the effect of AI, machine learning, and robotic process automation on financial reporting are considered.

The research found that companies that have implemented automation within their financial reporting processes saw improvements in quality of reporting. It also found that weaknesses in internal financial controls decreased. Therefore, it appears that automation can be beneficial in managing financial information in order to support accounting processes.

However, this research discussed an important point. Once automated processes are implemented within organisations, routine monitoring of processes may become less frequent. If employees begin to fully rely on the AI, with little consideration of the outputs, problems may occur. Therefore, this research highlights an important consideration regarding how much oversight is required within organisations with automation.

This is relevant to the current topic of research as it shows that even though using AI may improve financial reporting, employees must still ensure financial information is correctly reviewed. Important financial information must be assessed by employees to ensure that internal control processes are functioning effectively. (Ashraf, 2025).

2.4 Choi and Xie (2026)

Choi and Xie (2026) explore how professional accountants are utilising generative AI in their processes. They obtained results from 277 professional accountants in surveys, information from AI enabled accounting systems and experimental results of performing accounting tasks.

It was found that within accountancy, AI is primarily used in completing mundane tasks such as data entry, administration and business communication. The use of AI can help to save time, allowing accountants to spend more time on tasks requiring careful consideration and professional knowledge.

Interesting findings in this research included how accountants interact with AI. In some cases, accountants have modified or verified AI suggestions, particularly when the confidence level provided was low. However, if AI suggestions are followed without sufficient verification, it may lead to errors.

This research is particularly relevant to the current research as it shows the relationship between human input within accounting and AI. AI can be very useful in completing mundane tasks; however,

accountants must utilise their knowledge to ensure financial information is correctly checked. It is clear from this research that accountants may not always want to follow all the suggestions from an AI as it may not be appropriate. (Choi and Xie, 2026).

2.5 Murikah et al. (2024)

Murikah et al. (2024) explore ethical issues within using AI in auditing. In this research, previously published papers on AI, accounting, finance and auditing were reviewed.

Several issues were identified in the use of AI in auditing. These include data issues, biased algorithms, a lack of transparency and concerns relating to privacy. Using automated processes in auditing may change the way information is assessed by professionals. If individuals place too much reliance on AI, their personal judgment and questioning of outcomes may be reduced. This research also identified solutions to these issues. Regular monitoring, appropriate risk assessments and human supervision in AI assisted auditing was highlighted as important. In addition to this, auditors play an important role in ensuring AI systems are working correctly and producing accurate results.

This research is relevant to the current research as it highlights why human input is necessary when financial information is processed with AI. It demonstrates that human oversight is important to ensure fair, transparent and accountable processes. (Murikah et al., 2024).

3 Research gap

There has been much research into AI in accounting and financial processes. This research has focused on the benefits of AI to businesses including accurate recording, improved reporting and increased efficiency. Some research has also looked into issues, such as data security, transparency, and responsibility and ethical use. This research can be useful in understanding how AI can be used in financial management.

However, there are still gaps in this research. While much of the research has focused on the benefits of automating processes, the accuracy of AI applications and ethical issues, less research has focussed on the relationship between human control, identification of errors and responsibility in everyday financial management.

While financial information can be collected and processed quickly by AI applications, errors may occur. If incomplete, inaccurate or misclassified information is input into the AI application, errors may occur. In order to avoid errors in AI applications, employees must check the information, so they can identify any potential errors and make changes where necessary. Therefore, whilst AI can support financial processes, human involvement remains necessary in some situations.

In situations where errors have occurred in AI supported financial processes, it may be difficult to determine whether this was due to incorrect data, technical issues or inadequate checks by employees. To ensure that accurate financial records are created, it is important to understand the responsibilities within organisations and among employees.

This research looks at these issues. It explores the importance of including human control in AI supported financial management, to identify errors and ensure accountability. While there are many benefits to using AI, this research also explores why human verification must be included in financial information processing.

Therefore, this research aims to provide greater understanding on how AI and human input can be combined, to produce accurate and responsible financial management.

4 Objectives of the study

This study aims to understand the importance of human input within AI based accounting procedures. The following aims have been established within this study:

1. **How AI is used in accounting processes.** Understand what roles AI based tools play in accounting processes, including accurately recording data, managing invoices, organising data and creating reports.
2. **Importance of human input.** Understand why it is important to implement human input when using AI based accounting systems. Understand how staff members check and verify financial data.
3. **Common errors made in AI based accounting processes.** Understand what common errors happen within AI based accounting processes. This includes inaccurate data entries, misclassification of data and inaccuracies during processing.
4. **Role of human verification in identifying errors.** Understand how double-checking data entries and the results of AI processing can help identify any errors in the financial data.
5. **Responsibility in AI based accounting processes.** Understand why responsibility should be clearly defined within AI based accounting processes. Understand the importance of assigning clear responsibility within AI based accounting processes to deal with any errors.
6. **Suggest improvements to accuracy.** Suggest appropriate methods of implementing both AI based tools and human input so that a greater accuracy within financial data can be obtained by companies.

5 Research questions

Throughout this report, the following questions will be answered:

1. How is AI utilised within financial records?
2. What benefits do AI assisted tools provide in financial record management?
3. What errors can occur within financial records processed by AI?
4. Why is it important for people to be involved in financial processes that involve AI?
5. How can manual verification help correct errors in financial records?
6. What responsibility should be placed on an individual if a mistake is made in AI assisted financial processes?
7. What improvements can be made by organisations to increase the accuracy and responsibility within AI assisted financial record management.

6 Research methodology

This section details the method of research. This study has focused on human involvement in AI based accounting.

6.1 Research type

This study is descriptive. It allows understanding of Artificial Intelligence in accounting processes and highlights the importance of human involvement in ensuring accurate accounting. Within this study the potential for errors within automated processes and the roles employees have in verifying accounting information are discussed.

6.2 Type of research

This research is primarily qualitative. Rather than quantitive experimentation, the study provides understanding of various elements of AI based accounting. Within the study, the advantages and limitations of AI in accounting, the importance of human verification and the responsibility in creating accurate accounting information is discussed.

6.3 Data sources

The data used within this study is secondary data. It has been sourced from research papers, journals and articles, reports and other reliable sources relating to Artificial Intelligence, accounting and accounting management.

Published studies have been referenced in order to find out what views have been formed by previous researchers into automated processes, errors within accounting, accurate accounting and accountability. This has allowed for a wider understanding of this research question.

6.4 Data collection

The information within this study has been found within appropriate published resources. These resources have been analysed to find key points relating to AI within accounting processes, errors within automated processes and human supervision within automated processes.

The information has been ordered to match the aim of this study. Different ideas and findings have been compared in order to understand the relationship between automated accounting processes and human involvement.

6.5 Extent of research

Within this research only AI based accounting processes have been looked at. This includes recording transactions, processing invoices, managing financial data, identifying errors, verifying accounting information and accountability.

This study looks to understand how human supervision can be used to create accurate and reliable accounting information within AI based processes.

6.6 Limitations

Within this study there are some limitations. To start with, no primary data was gathered, meaning information was not gathered via surveys or interviews. Furthermore, the conclusions drawn from this study rely on the available information from published research and references. Finally, AI technology is constantly evolving meaning that new applications and limitations may appear in the future.

Despite these limitations, the research aims to provide useful understanding as to why human supervision in AI based accounting processes is still important.

7 Analysis and discussion

The following section discusses key points within research papers and sources in relation to the application of AI in financial bookkeeping. Key points include the application of AI, possible errors within financial books, and why human oversight and accountability are important.

Purpose: To evaluate whether AI is sufficient for accurate financial information to be recorded, or if human input is required.

7.1 Application of AI in financial bookkeeping

AI can be applied to many financial and accounting processes. AI within systems can help with processing invoices, recording information within transactions, categorisation of expenditure, and managing lots of financial information. This reduces repetitive tasks within businesses, so that standard tasks can be completed quicker.

For example, if there are many invoices to be processed, AI can extract key information within the invoices including invoice reference, date, value and supplier details. Similarly, automated systems can process transactions into certain categories within the business. This makes recording financial information more efficient.

A research paper by Al Najjar et al. (2024) explored the impact of AI on reducing errors within accounting. Views from software developers and certified public accountants were explored, highlighting that the benefits of AI must be considered from different professional perspectives.

Despite the AI application within financial bookkeeping, it cannot be guaranteed that all financial information will be recorded correctly. The accuracy of the information relies upon the information inputted and the way AI is used. AI should therefore be viewed as an aid to financial bookkeeping, rather than a replacement for human verification.

7.2 Possible errors in AI processing financial information

Accurate information must be included in financial bookkeeping. If errors occur during recording or categorisation, differences can be seen in financial reports. This makes understanding the true position of finances within an organisation difficult.

Possible errors in AI processing financial information:

- **Incorrect data inputted within financial information.** If incorrect or incomplete data has been inputted, errors within the data can occur. For example, if incorrect values or dates have been inputted, this could mean errors occur within financial records.
- **Incorrect categorisation within financial information.** If financial information has been incorrectly categorised within expenditure or incomes, the presentation and analysis of financial information can be impacted.
- **Errors in processing.** Due to technical issues or limitations with an automated system, errors may occur within financial information processing. These errors may not be easily noticed by employees.
- **Incomplete data.** If certain information is missing from an invoice, data may not be processed correctly.
- **Over reliance on AI data.** If employees do not check the outputs produced by AI, mistakes may occur in the recording.

As automation increases speed in financial processes, it is still important to verify information to improve the quality of financial information.

7.3 Importance of human oversight

Human oversight can occur in financial information where employees oversee and verify the data produced by AI in order to make sure the information is appropriate.

If expenditure has been incorrectly categorised by AI, human oversight may be able to detect this and put it into the correct category. Or, if incomplete information has been found within an invoice, a human can check the original document to see if further information is needed.

Choi and Xie (2026) studied human and AI collaboration within accounting. They found that human oversight is important, especially if AI recommendations need to be double checked.

Sometimes professional knowledge is needed to make decisions in relation to financial records. Although data may be processed by AI, employees must consider if they agree with the results and if the information fits with the situation the business is in.

Human oversight is therefore important to detect possible errors within financial records, and to check abnormal transactions to ensure the bookkeeping is done accurately.

7.4 Responsibility in AI-assisted financial bookkeeping

Responsibility within AI assisted bookkeeping means taking responsibility for producing accurate and appropriately handled financial information. Within traditional accounting processes, individual employees will usually have responsibility for recording, verifying and maintaining financial documents.

However, within AI assisted systems, many people may be involved in processing financial data. An employee may input the data, the information may be processed by software, and then finally another employee may verify the processed information. If there are errors within the financial data, it is important to know where in the process the error occurred and who had responsibility for verifying the data.

Ethical concerns have been raised in relation to AI within managerial accounting in businesses. Concerns include transparency, trust, safe data handling and responsibility (Zhang et al., 2023). This shows that not only must AI systems be well considered within businesses, but also who has responsibility within using the AI.

Clearly defining roles within these processes, recording processes, and regularly verifying can help companies in these situations. Employees should be clear about which processes have been completed by AI, and which results require human verification. Responsibility remains an important factor in financial bookkeeping, even with advanced technologies within organisations.

7.5 Relation to internal controls

Internal controls refer to processes within an organisation to secure financial information, reduce errors, and ensure processes are completed appropriately. Examples of internal controls include double checking invoices, verifying payments and verifying entries within transactions.

8 Findings of the study

The research undertaken has identified the following findings:

- **AI can assist in managing financial processes.** AI can aid financial processes such as recording, processing invoices, spending categorisation and organisation. This reduces repetition within financial processes, making them more efficient.
- **Accuracy may not be guaranteed.** Using AI within financial processes may lead to inaccuracies. Inaccuracies may occur due to incorrect data being entered, incomplete information and system limitations.
- **Staff involvement is important.** When using AI to manage financial information, staff should be involved in to ensure there are no inaccuracies within financial information.
- **Mistakes can be identified early.** By regularly checking financial transactions, invoices and entries within the system, any potential inaccuracies can be identified.
- **Too much reliance on AI may cause issues.** If too much reliance is placed on results created by AI systems without proper checks, it may be more likely for inaccuracies to go undetected. Staff should know the importance of checking information in these systems.
- **Responsibilities should be clear.** Within the business, roles in entering, processing and checking financial information should be clearly set out for staff members. This allows for any inaccuracies to be easily identified as to why they have occurred and corrective measures to be taken.
- **Checks should still be in place.** Although AI has been implemented, checks should still regularly occur in order to ensure that reliable financial information is recorded.
- **Combining human and AI management can improve financial management.** By combining AI within financial processes (to allow for repeated processes) and human staff (to provide judgement, validation and oversight), a more well organised and accountable management of financial information can be achieved.

8.1 Conclusion of the findings

In conclusion, AI can be useful in managing financial information. However, in order to be effective, AI should be used appropriately, regularly validated, and with clear responsibilities. Human involvement remains an important factor into ensuring accurate and reliable financial information.

9 Recommendations and suggestions

To improve Artificial Intelligence within financial record keeping processes several recommendations can be made. These include implementing suitable monitoring controls.

1. **Supervision by staff.** Important information within financial records, including data from invoices and amounts, should be regularly checked by staff.
2. **Staff training.** Staff should be given appropriate training, to ensure they understand how financial processes assisted by AI work. It is important that staff are trained to spot any inaccuracies, investigate suspicious information and submit problems that have occurred with the technology.
3. **Accurate record keeping.** Accurate records should be kept within financial processes. Transaction details, amendments and approvals should be noted, so that they can be checked when needed.

4. **Defined role.** Roles within the handling of financial records should be clearly defined. It should be clear what role each employee is playing. Who is inputting data, checking outputs provided by AI and approving important financial records should be identified.
5. **Periodic checks of AI.** AI should periodically be assessed to ensure it is providing accurate and appropriate results. If there are any technical issues or recurring errors these should be brought to light and resolved.
6. **Improving data accuracy.** Ensure data input into automatic systems is accurate and complete. Before making note of important information, original documentation (invoices, receipts) should be checked.
7. **Effective controls.** Once AI is implemented, existing controls should still be in place. Invoices, payments and transactions should be appropriately checked.
8. **AI as support.** AI should be used as a support within processes. If further investigation is required for financial information, staff should use their knowledge and judgement.
9. **Data protection.** Suitable data protection measures should be put in place. Only certain people should be allowed access to financial information. Confidential business information should be carefully managed.
10. **Balance between AI and staff knowledge.** To achieve a good balance between efficiency and responsibility, systems should be designed so that appropriate repetitive processes are performed by AI, whilst important checks, investigations and decisions regarding financial records can be done by staff. This will mean that reliability in financial records can be improved.

10 Conclusion

Using Artificial Intelligence within financial processes has made many improvements. The overall process of recording financial data, creating invoices, categorising expenses, and managing financial data, can be completed more efficiently using AI. As a result, repetitive tasks within financial recording have been reduced.

However, there is still a risk of errors occurring within financial records. Inaccurate data and missing data, as well as system limitations, can cause errors when using AI. If these errors are not picked up in a timely manner, issues can occur within financial records, and reports may be affected. Therefore, in order to ensure accurate data, we must not solely rely on AI.

10.1 Human involvement

It is very important to include human involvement in financial recording. Employees within the system can make sure financial entries are correct, confirm documents, and ensure that information provided from AI systems is correct. With knowledge within the field, employees can identify when corrections or investigations may be required for AI results. This means that human involvement is very important in appropriately managing financial records.

10.2 Responsibility

Within organisations, specific roles of responsibility should be assigned to employees within financial recording. In order to identify errors and understand how they have occurred, processes should be well documented, regularly monitored, and good internal controls should be in place. Just because AI is implemented into financial processes, it should not mean that less responsibility is placed onto employees. Checks should still be carried out.

10.3 AI should not fully replace human employees

While AI can be used to complete repetitive tasks, and those requiring data, humans can provide checks, professional judgements and confirmation. If AI and employees are appropriately used, then financial processes will be more efficient. However, the accuracy and responsibility within the process should still be considered.

10.4 Final conclusion

Although Artificial Intelligence can be a valuable tool in financial recording, how responsibly it is used in the processes determines its efficiency. To manage reliable data in financial recording, human involvement, correct training, accurate data, and clear responsibility must be in place. Going forward with financial recording, careful balance should be considered so that although more automation is taking place within financial recording, human judgement is properly balanced with technological advancements.