


# Chapter 13

## AI Hallucination in Financial Systems: Challenges, Governance, and Risk Control Strategies

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### **ABSTRACT**

*This chapter examined AI hallucination, where artificial intelligence systems generated false, misleading, or non factual outputs, and analysed its impact on the reliability and governance of financial systems during 2015 to 2025. The study focused on key financial applications such as credit risk assessment, fraud detection, algorithmic trading, and investment forecasting, where such errors strongly affected decision making. A Systematic Literature Review was conducted using the PRISMA framework, drawing studies from Scopus, Web of Science, and Google Scholar to identify major patterns, causes, and governance related challenges of AI hallucination. The findings indicated that hallucinations mainly arose from poor data quality, limited contextual understanding within models, and excessive dependence on automated systems without sufficient human supervision. The chapter concluded that AI hallucination was not merely a technical issue but a broader governance challenge, emphasizing the importance of explainable AI, robust internal control mechanisms, ethical auditing practices.*

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## 1. INTRODUCTION

### 1.1 Why Mistakes Made by Artificial Intelligence Are a Big Deal in the Finance World?

Artificial intelligence mistakes are a problem. Artificial intelligence mistakes can cause a lot of trouble. In the finance world artificial intelligence mistakes can be really bad. The finance world is a place where artificial intelligence is used a lot. So when artificial intelligence makes a mistake in the finance world it can be very serious. The finance world is about money and numbers. Artificial intelligence is used to help with money and numbers in the finance world. When artificial intelligence makes a mistake it can cause big problems with money and numbers.

This is why artificial intelligence mistakes matter more in the finance world. Artificial intelligence mistakes can be fixed. In the finance world artificial intelligence mistakes need to be fixed fast. Because, in the finance world time is money. Artificial intelligence mistakes can cost a lot of money.

Artificial intelligence is really making a lot of decisions in the world of finance these days. It does things like say yes or no to loans and point out transactions that seem fishy. Artificial intelligence also helps people make investment choices and makes sure everyone is following the rules by creating reports. The reason people like intelligence so much is that it works very fast looks at a huge amount of information, and finds things that people might not notice. Artificial intelligence is very good, at finding patterns in all the data it looks at. In the ten years from 2015 to 2025 the promise of fintech has really taken off. This has happened quickly with banks, insurance companies, investment firms and fintech platforms all getting on board (Balogun et al., 2025).

Finance is not a place where you can try things out without worrying about the consequences. If something goes wrong with a tool that suggests what people should buy or a model that decides who gets credit, it can cause problems for a lot of people, banks and even the whole market. When artificial intelligence systems started to do more than just make predictions and began to explain things, tell stories and give advice a new problem came up that is not always easy to see. Intelligence hallucination. This artificial intelligence hallucination is a deal because it can make artificial intelligence systems give wrong information. Finance and artificial intelligence systems are closely linked, so this artificial intelligence hallucination can cause a lot of trouble.

So when we talk about AI hallucination, what happens is that the AI system comes up with answers that seem sure and make sense but are actually wrong or not true. This can be a problem in our lives. When it comes to money and finance, AI hallucination can be really bad. The thing about AI hallucination is that it can cause

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