



GenAI and AI Ethics Implications for Finance Professionals

// October 22, 2024



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We Make It Real



7Rivers is a new-age technology services company that helps customers advance their data management practices by adopting modern cloud data warehouse technology, leveraging the emergence of mainstream AI, and creating insights-informed **Data Native™** applications and intelligent experiences.

We partner with **Snowflake** and **AI** service providers to augment the modern enterprise.

Generative AI Defined

- Generative AI creates new content (e.g., text, images, or data insights) by learning from vast datasets, enabling it to generate original outputs.

How It Works - Deep Learning Models

- Based on deep learning, a type of AI that uses neural networks structured like the human brain to analyze complex patterns in data.
- These models process vast amounts of information and "learn" from the data, enabling them to generate new, contextually accurate outputs.

Generative AI vs. Traditional Machine Learning

- Traditional ML: Learns patterns to make predictions or classifications (e.g., predicting trends).
- Generative AI: Creates new content (e.g., automated financial reports, personalized communications) based on learned data patterns.

Beyond Chatbots: Advanced Applications

- Content creation (articles, reports, marketing materials)
- Video, photo, audio, and data analysis and insights generation
- Planning
- Designing
- Collaboration
- Full custom, license-free, software application creation at the company and department level

The Exponential Growth of AI: A 10x/Year in Capabilities

What is Exponential Growth?

Implications for the Finance Industry

- GenAI use cases and abilities are expanding faster than adoption or education
- Need for Rapid adoption and integration of AI technologies
- Potential for significant disruption in traditional financial services
- Need for continuous upskilling and adaptation

The Exponential Growth of AI: examples

Recent News Headlines

GenAI in the Accounting World - Examples

Automated Bookkeeping and Reconciliation

AI systems process and categorize transactions in real-time

Intelligent Audit Assistance

AI analyzing large datasets to identify anomalies and potential fraud

Tax Compliance and Planning

AI-driven systems interpreting complex tax codes and optimizing strategies

Financial Forecasting and Scenario Analysis

GenAI creating financial models and running multiple scenarios

Natural Language Processing for Financial Documents

AI extracting key information from unstructured financial data

Enhanced fraud detection and risk assessment

AI analysis of communications to detect fraud and risks

Benefits

- Increased efficiency and productivity
- Enhanced accuracy and consistency
- Tailored to your company and department
- More time for high-value strategic tasks

Challenges

- Need for upskilling and adaptation
- Ensuring data privacy and security
- Maintaining human judgment and oversight

Impact on CPA Roles

- Shift towards higher-value advisory services
- Increased focus on data interpretation and strategic decision-making
- Need for AI literacy and ethical AI management skills

AI Ethics

Examples of AI Ethical Failures

News Headlines & Examples

Ethical Challenges of GenAI: Bias

Types of Bias

- Statistical: Errors in the data or model
- Social: Reflecting societal prejudices
- Cognitive: Human biases in AI development
- Gender: Bias in AI-Powered Hiring Tools - AI systems favoring male candidates for finance positions based on historical data

Cultural Bias in Global Finance

- AI models trained on predominantly Western data may misinterpret practices in emerging markets
- Example: Misclassification of legitimate transactions as suspicious due to unfamiliarity with local financial practices

Ethical Challenges of GenAI: Transparency

The "Black Box" Problem

- Complex AI models lack clear decision-making processes
- Importance in finance: Need for explainable decisions and audit trails

Strategies for Transparency

- Implement Explainable AI (XAI) techniques
- Provide clear documentation of AI decision-making processes
- Regular audits and third-party verifications of AI systems

Examples in the News

Ethical Challenges of GenAI: Trust

Building Trust in AI-Powered Financial Systems

- Essential for adoption and regulatory compliance

Challenges

- Data privacy concerns
- Potential for AI-generated misinformation in financial reports
- Overreliance on AI recommendations

Trust-Building Measures

- Regular system audits and certifications
- Clear communication of AI's role and limitations
- Human-in-the-loop processes for critical decisions
- Robust data governance and privacy protection measures

Ethical Challenges of GenAI: Mitigation Strategies

Regular Bias Audits and Testing

- Implement automated tools to detect bias in outputs
- Conduct periodic manual reviews by diverse teams

Fairness Constraints in AI applications

- Incorporate fairness constraints into GenAI applications
- Use techniques like adversarial debiasing or fair representation learning

Cultural Sensitivity Checks

- Develop global teams to review AI outputs for cultural appropriateness
- Implement multilingual and multicultural testing scenarios

Continuous Education and Training

- Regular ethics training for AI application developers and users
- Stay updated on evolving ethical AI guidelines and best practices

Ethical AI Frameworks

- Develop and implement company-wide ethical AI principles
- Create clear processes for ethical decision-making in AI development and deployment

Accountability and Responsibility in the Age of AI

Misuse - voice, exams, images, avatars, etc. - marcos license?

Human Oversight is Crucial:

- Example: Lawyer sentenced for not verifying AI-generated legal citations (2023 case)

Key Principles for CPAs:

- Always verify AI-generated financial data and reports
- Maintain professional skepticism when using AI tools
- Understand the limitations and potential errors of AI systems

Establishing Clear Chains of Responsibility:

- Define roles for AI system management
- Create protocols for reviewing and approving AI outputs
- Implement error reporting and correction mechanisms

Examples in the news

Demos – Introducing Marcos from 7Rivers

- Marcos is a GenAI accelerator
- Designed to help businesses quickly adopt AI and test out GenAI Proof of Concepts
- Integrates multiple Large Language Models (LLMs) to select the best model for specific tasks
- It uses advanced techniques like "chain of thought" reasoning and multiple AI agents to tackle complex problems.
- With Snowflake integration, it offers real-time insights, enhanced security, and scalability.
- Deployable across major cloud platforms
- Supports multimodal interactions like voice and document processing

Marcos accelerates the transition from Premise to Prototype to Production

GenAI Demos

Next Steps for Your Organization

Find a GenAI Application to start learning and testing

Leverage 7Rivers' Marcos GenAI Accelerator to get a POC up and running quickly

Establish an AI Ethics Committee

Include diverse perspectives: technical, legal, ethical, and domain experts

Define Core Ethical Principles

Examples: Fairness, transparency, accountability, privacy, and human-centricity

Develop Specific Guidelines for AI Use in Finance

- Bias detection and mitigation procedures, transparency requirements

Implement Ongoing Monitoring and Auditing Processes

- Regular ethics assessments of AI systems

Foster a Culture of Ethical AI Use

- Continuous education on AI ethics and evolving regulations for staff
- Stay informed about evolving regulations and best practices
- Encourage open discussion

Q&A

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**Thank
you!**