

Quiz: Introduction to AI-Based Detection of Hedge Fund Fraud

Section 01 – Digital-AI-Finance

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Question 1: Global Hedge Fund AUM

What is the approximate AUM of the global hedge fund industry as of 2025?

- a) \$2.0 trillion
- b) \$3.5 trillion
- c) \$4.5 trillion
- d) \$6.0 trillion

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Answer

c) \$4.5 trillion

The global hedge fund industry manages assets exceeding \$4.5 trillion as of 2025, having grown substantially from roughly \$2 trillion at the onset of the 2008 financial crisis.

Source: Section 1.1

Question 2: Madoff Losses

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The collapse of Bernard L. Madoff Investment Securities in December 2008 revealed a Ponzi scheme with estimated losses of \$65 billion in stated account value, making it the largest financial fraud in history.

Source: Section 1.1

Question 3: AI/ML Advantages

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- b) Real-time monitoring
- c) Cost reduction
- d) Multi-modal integration

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c) Cost reduction

The four fundamental advantages are: (1) scalability, (2) pattern recognition, (3) real-time monitoring, and (4) multi-modal data integration. Cost reduction is not listed as a primary advantage.

Source: Section 1.2

Question 4: Principal Contributions

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b) 3

The survey makes three principal contributions: C1 (Detection Pipeline Taxonomy), C2 (Adversarial and Regulatory Readiness Assessment), and C3 (Actionable Research Roadmap).

Source: Section 1.3

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Why does this survey NOT conduct a quantitative meta-analysis?

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- c) Legal restrictions
- d) Time constraints

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b) Heterogeneity of datasets, metrics, and definitions

A qualitative synthesis approach is adopted because the heterogeneity of datasets, fraud definitions, evaluation protocols, and reporting standards across the existing literature precludes meaningful statistical aggregation.

Source: Section 1.3

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c) 4,600

The SEC employs approximately 4,600 staff to oversee thousands of registered investment advisers, broker-dealers, and fund complexes, creating a stark mismatch between regulatory capacity and industry scale.

Source: Section 1.2