

Digital Fraud Risks and Artificial Intelligence

Shaping the Hybrid Auditor in the Public Sector

A Practical Perspective from Albania

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ABSTRACT & RESEARCH CONTEXT

This paper examines three interconnected themes:

1 Digital Fraud in Albania

How digital transformation of public services creates new fraud opportunities in e-procurement, digital tax platforms, AFMIS etc.

2 AI as an Audit Tool

How AI can be used to detect fraud, automate repetitive tasks, enable full-population analysis and support risk-based auditing.

3 The Hybrid Auditor

Why auditors must combine traditional audit competencies with digital skills, AI literacy and critical professional judgment.

Literature Review :

- International standards (**ISSAI 100, ISSAI 4000**) emphasize evidence-based, risk-oriented auditing.
- **INTOSAI** and **IDI** identify digital transformation and data analytics as key priorities for modern SAIs.
- Academic research shows that AI can improve **risk assessment, fraud detection, and data analytics**, while human judgment remains essential.
- Experiences from **GAO, ECA, TCU Brazil, SAI Korea, and the Netherlands Court of Audit** demonstrate growing adoption of AI in public auditing.
- OECD (2026) reports that **87% of surveyed public audit institutions already use at least one AI tool.**

AI in Supreme Audit Institutions - Key Statistical Evidence

OECD Report — The State of AI in Public Audit (2026)

87%



of SAIs use at least one AI-based tool in their activities

67%



have adopted a formal AI strategy or implementation plan

80%



have established AI governance mechanisms for responsible use

87%



provide AI-related training to their staff

INTOSAI Global Survey — INCOSAI XXV (2025)

92%



of SAIs believe AI can improve audit outcomes

87%



identify significant benefits of AI for risk assessment

90%



plan to integrate AI into audit processes (coming years)

>50%



expect AI to substantially reduce routine and administrative tasks

AI in Practice - 24 Use Cases Identified Across 13 SAIs Worldwide

24

Practical AI use cases
identified globally

13

SAIs actively using
AI tools

SAI / Institution	AI Tool / Platform	Main Application Area
European Court of Auditors	AWARE Platform & AI Tools	Document analysis, risk-based auditing, intelligent search
French Court of Audit	ChatJF (Generative AI assistant)	Summarization, translation, drafting audit findings
National Audit Office of Norway	Satellite Analytics Pilot	Satellite imagery for agriculture & food security audits
GAO — United States	AI Accountability Framework	Assessment and auditing of AI systems in gov. institutions
National Audit Office — United Kingdom	AI-enabled Data Analytics	Risk analysis, anomaly detection, digital transformation
Board of Audit and Inspection of South Korea	AI Research Cooperation	Data analytics and AI models for public auditing
Netherlands Court of Audit	Algorithm Audit Framework	Auditing algorithms and AI systems used by government
Federal Court of Accounts of Brazil	Alice, Sofia, Monica (AI Tools)	Procurement analysis, anomaly detection, corruption risk

DIGITAL TRANSFORMATION IN ALBANIA

Key Digital Systems

AFMIS

Automates budget planning and execution across ministries

APP Platform

Electronic procurement - all public tenders digitally; 5,766 procurement procedures during 2025

e-Albania

Connects databases: tax, civil registries, social security; Provides 1,277 online public services

Digital Tax

Electronic tax filing and compliance monitoring

Treasury

Centralized state payment and financial management

✓ Opportunities

- Increased transparency
- Reduced face-to-face corruption
- Efficiency and speed
- Better service delivery

⚠ New Risk Surfaces

- Digital fraud & manipulation
- Cyber attacks on public systems
- Algorithm-hidden corruption
- Automated illegal payments

DIGITAL FRAUD RISKS IN THE PUBLIC SECTOR



E-Procurement Manipulation

- Criteria for predetermined companies;
- Manipulation of submission deadlines;
- Unauthorized access to bid data.
- Corruption appears formally compliant inside the digital platform.



Unauthorized System Access

Weak access controls allow changes to vendor banking details, budget allocations, or sensitive records. Shared accounts mean no clear audit trail of authorization.



Digital Smoke Screen

Large illegal payments split into hundreds of small digital transactions to avoid detection thresholds, specifically designed to hide from traditional sampling-based audits.



Cybersecurity Failures

Albania experienced major cyber incidents affecting public infrastructure. Cyberattacks are now a public governance issue, not just an IT problem.

KEY INSIGHT: *Digital fraud is designed to be invisible to manual, sample-based audit approaches.*

WHY TRADITIONAL AUDIT APPROACHES ARE NO LONGER SUFFICIENT ?

Traditional Methods

- Designed mostly for paper-based systems
- Based on sampling of transactions.
- Backward-looking, periodic review
- Manual verification — time-intensive
- Misses fraud hidden in unchecked data
- Cannot detect pattern across millions of records

VS

Modern Digital Audit Needs

- Full-population transaction analysis
- Real-time risk monitoring
- Cross-system pattern recognition
- AI-supported anomaly detection
- Understanding digital access rights
- Cybersecurity awareness

ARTIFICIAL INTELLIGENCE AS A SUPPORT TOOL FOR AUDITORS



Comprehensive Data Analysis

- Audits 100% of transactions (not just samples)
- Automatic identification of anomalies and irregularities
- Comparison of millions of records within seconds



Efficiency & Time Savings

- Automation of routine tasks (reports, document checks)
- Human resources focused on complex analyses
- Audit cycle significantly shortened



Fraud Detection

- ML models uncover hidden fraud schemes
- Real-time transaction monitoring
- Continuous (ongoing) auditing



Transparency & Accountability

- Clear visualisation of budget data
- Automatic tracking of public expenditure
- Accessible reports for the wider public



Audit Quality

- Reduction of human errors
- Uniform application of standards
- Stronger factual basis for findings

Risk Assessment

- Prioritisation of high-risk areas
- Prediction of potential problems
- Optimal allocation of audit resources

LIMITATIONS AND RISKS OF AI



HIGH

Algorithmic Bias

If datasets are incomplete or biased, AI may produce inaccurate or discriminatory outcomes.



HIGH

Lack of Transparency - "Black Box"

When auditors cannot explain how AI produces outputs, audit conclusions may be compromised.



HIGH

Cybersecurity, Data Protection & Ethics

AI systems process sensitive data. Cyber attacks, data leaks and GDPR violations pose serious risks to public institutions and citizens.



MEDIUM

Overreliance on Technology

Auditors may automatically accept AI-generated results without critical evaluation, risking audit quality and professional judgment.



MEDIUM

Poor Data Quality

"Garbage In, Garbage Out" - AI produces unreliable results when input data is incomplete, inaccurate, or non-standardized. Strong data governance is essential.



MEDIUM

Capacity & Skills Gap

Successful AI adoption requires investment in infrastructure, training and qualified professionals. Many SAIs face resource constraints.

THE HYBRID AUDITOR

Because fraud moves at the speed of software, public auditors can no longer afford to be purely reactive.

I Technological Literacy

- AI & machine learning skills
- Data analytics and pipelines
- 100% transaction coverage
vs sampling
- Anomaly detection tools

II Professional Judgment

- Human interpretation
- Professional skepticism
- Institutional & legal context
- Evidence-based conclusions

III Ethical Responsibility

- Governance & accountability
- Algorithmic oversight
- Transparency of AI findings
- Audit independence

WILL AI REPLACE AUDITORS ?

VERDICT: AI will not replace auditors - it will transform how they work. **The future of auditing is Human + AI.**



WHAT AI CAN DO

- **Analyze** millions of transactions at once
- **Detect** fraud patterns and anomalies
- **Automate** repetitive, rule-based tasks
- **Support** continuous monitoring
- **Generate** summaries and draft reports



WHAT AI CANNOT DO

- **Exercise** professional skepticism
- **Apply** ethical judgment
- **Understand** institutional context
- **Evaluate** evidence independently
- **Make** final audit conclusions



KEY INSIGHT: Auditors who adapt and combine human judgment with AI tools will be more valuable - not redundant.

ALBANIAN CONTEXT: CHALLENGES & OPPORTUNITIES

Practical Challenges for ALSAI

► **Procurement Data:**

E-procurement data may look compliant while hiding anti-competitive behavior

► **Treasury Volume:**

Massive data volumes cannot be reviewed by manual Excel-based sampling

► **Access Control:**

When entities restructure, stale user permissions create unauthorized access risks

► **Excel Dependency:**

MS Office remains the primary audit tool - creating a gap vs. digital systems

► **Skills Gap:**

Upskilling auditors in data literacy without losing core auditing strengths

Opportunities: AI Use Cases

✓ **Risk Scoring Agent:**

AI scores each public institution by budget execution, procurement patterns, past audit findings

✓ **Full Data Coverage:**

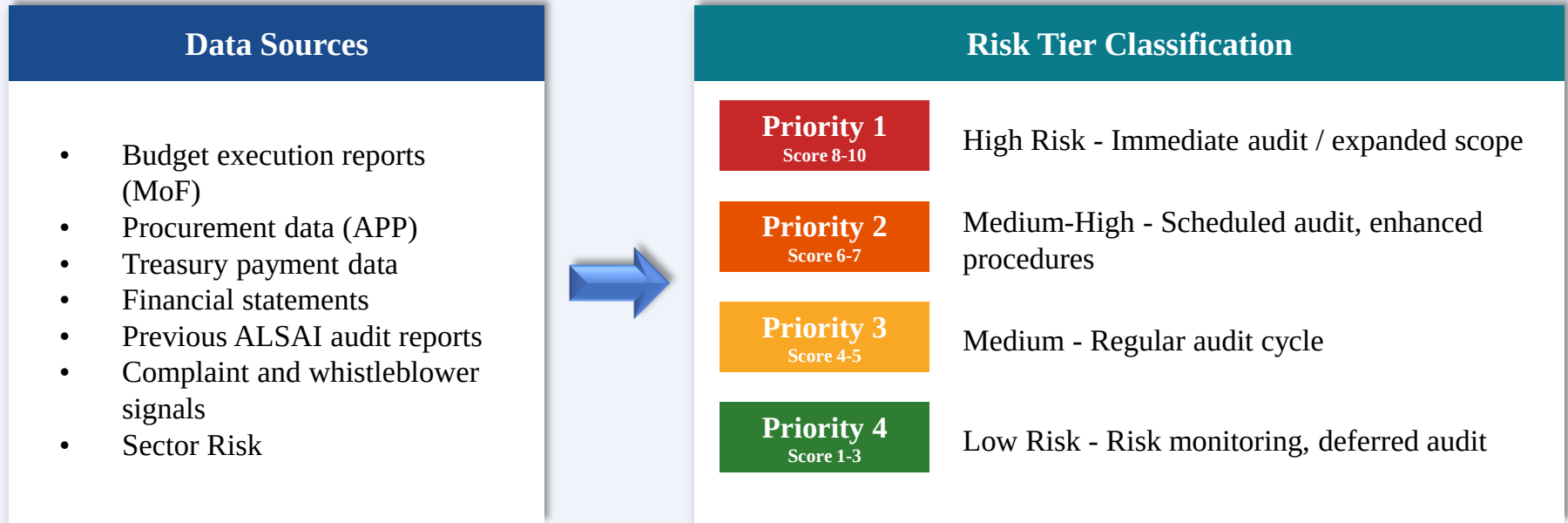
Analyze 100% of AFMIS and APP transactions instead of samples

✓ **Anomaly Flags:**

Detect split payments, duplicate invoices, suspicious winning patterns in real time

AI USE CASE: RISK SCORING AGENT FOR ALSAI

Automated risk profiling for each public institution:



The final audit selection decision remains with auditors. AI provides evidence-based input to improve efficiency, consistency and transparency of audit planning.

RECOMMENDATIONS

Digital Tools

- Invest in digital audit tools and analytical software
- Build and pilot the Risk Scoring Agent

Capacity Building

- Develop specialized IT and cybersecurity audit units
- Expand auditor training on digital risks, data analysis and AI in overall

Collaboration

- Strengthen cooperation with cybersecurity authorities
- Promote interdisciplinary audit approaches

Governance

- Improve transparency of public digital systems
- Strengthen procurement controls and access management
- Ensure regular independent reviews of government systems

CONCLUSION

1

Digital transformation does not eliminate public corruption - it changes its nature, making fraud faster, more automated and more invisible to traditional audit methods.

2

The hybrid auditor is the profession's answer: a professional who wields both human judgment and digital intelligence, using AI to expand professional reach while keeping ethics and skepticism at the centre.

3

Albania's digital reforms create both opportunities and challenges. Effective auditing will remain essential for safeguarding accountability, protecting public funds and maintaining citizens' trust.

4

Technology and Artificial Intelligence should not replace public oversight. Instead, it should strengthen auditors' ability to detect risks, promote transparency and support better governance in an increasingly digital world.

Thank You !

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