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4th Workshop of the project "101101784 — 2022-IT-FRED2"
Fraud Repression through EDucation2

«DATA DRIVEN APPROACH AND ITS USE IN CONTRASTING THE EUROPEAN FUNDS FRAUD PHENOMENON»

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Indicators of fraud - A preliminary taxonomy

Francesca **Iandolo**, PhD, Tenure-track Lecturer in Management, Department of Management, Sapienza University of Rome

francesca.iandolo@uniroma1.it

Introduction

Definition of Fraud

Context: Fraud involves deliberate deceit with the intent to secure an unfair or unlawful gain. It includes false representations, concealment of material facts, and deceptive practices.

Example: A company submits falsified financial statements to secure a bank loan, misrepresenting its financial health and ability to repay.

Importance of Identifying Fraud Indicators

Identifying fraud indicators is crucial to prevent financial losses and maintain organizational integrity.

Example: A non-profit organization detects unusual transactions in their financial reports, indicating potential misappropriation of funds.

Principles of Fraud Prevention

- Deterrence: Measures to discourage fraudulent activities
- Detection: Systems to identify fraud
- Investigation: Thorough investigations to uncover fraud
- Sanction: Penalties to prevent future occurrences

Approach to Fraud Risk

Assessment and Self-evaluation of Fraud Risk
Conducting thorough fraud risk assessments to identify vulnerabilities

A financial institution identifies its online banking services as vulnerable to cyber fraud and implements additional security measures.

Proactive and Structured Fraud Risk Management
Implementing a structured and proactive approach to manage and mitigate fraud risks

Example: A government agency conducts an annual self-evaluation of its fraud prevention measures and updates protocols accordingly.

Frauds on EU Funds

Assessment and Self-evaluation of Fraud Risk

In the context of EU funds, fraud involves misrepresentation or **deceit to improperly obtain or use funds** allocated by the European Union for various projects and initiatives.

Importance of Identifying Fraud Indicators:

Identifying **indicators of fraud is crucial** for maintaining the integrity of EU funds. These indicators help in early **detection** and **prevention** of fraudulent activities, ensuring that funds are used for their intended purposes and reach the beneficiaries who genuinely need them.

Objectives of the presented Taxonomy:

- **Raise Awareness**: Increase awareness about the types and indicators of fraud related to EU funds.
- **Provide Tools:** Equip stakeholders with tools and techniques to detect and prevent fraud.
- **Promote Transparency:** Encourage transparency and accountability in the use of EU funds.
- **Enhance Monitoring:** Improve monitoring mechanisms to identify and address potential frauds promptly.

Common Types of Fraud on EU Funds:

- **Misappropriation of Funds:** Unauthorized use of funds for purposes other than those approved.
- **Falsification of Documents:** Altering or forging documents to mislead auditors or officials.
- **Conflict of Interest:** Undisclosed relationships or interests that influence decision-making.
- **Double Funding:** Claiming funds from multiple sources for the same project or expense.
- **Non-Existent Services or Goods:** Reporting fake services or goods to claim funds.
- **Cost Overstatement:** Inflating costs or expenses to receive higher reimbursements.

Impact of Fraud on EU Funds:

- **Financial Losses:** Significant financial losses impacting the budget and allocation of resources.
- **Reputation Damage:** Erosion of trust in institutions managing and distributing EU funds.
- **Legal Consequences:** Legal actions against individuals and entities involved in fraudulent activities.
- **Operational Disruptions:** Delays and disruptions in the implementation of genuine projects

Key Stakeholders in Preventing Fraud:

- **EU Institutions:** European Commission, European Anti-Fraud Office (OLAF), European Court of Auditors.
- **National Authorities:** Government agencies, financial regulators, law enforcement bodies.
- **Beneficiaries**: Organizations and individuals receiving EU funds.
- **Auditors and Inspectors:** Independent bodies conducting audits and inspections to ensure compliance

The proposed fraud indicators taxonomy

- first part: descriptive (funds & companies);
- second part: quantitative

Typology of Funds

Types of Funds: Various types of funds include grants, subsidies, and loans

Measurement: Assessing the scope and impact of each fund

Amount: Evaluating the financial magnitude

Temporal Extension: Considering the time span over which funds are utilized

Grant/Lump Sum: Distinguishing between different funding mechanisms

 aim: setting the descriptive elements of the funds to preliminarily assess potential future frauds

Beneficiary Company Description (1/2)

- **Types of Funds:** Various types of funds include grants, subsidies, and loans
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- **Legal Form**

- *A beneficiary company is a limited liability company (LLC) with three major shareholders.*

Beneficiary Company Description (2/2)

- **Shareholder Composition**
- **Legal Headquarters**
- **Country of Residence of the Legal Representative**
- **Presence of Consortia/ATS**
- **Track Record**
- *Example: The company has successfully completed five government-funded projects over the past decade.*
- **Company Age**
- **Ongoing Procedures**
- **Pre-existing Banking Relationships**

Balance Sheet Derived Indicators

- **Capitalization**

Example: A company shows a high equity-to-asset ratio, indicating strong capitalization and lower financial risk.

- **Debt Level and Anomalous Equity Changes**

Example: A sudden increase in short-term debt raises red flags about the company's liquidity and potential cash flow issues.

- **Equity-to-Assets Ratios**
- **Composition of Fixed Assets**
- **Capitalized Costs**

Financial Indicators

- **Financial Balance**
- **Net Financial Position (Short-term, Long-term, Total)**

Example: A company's long-term financial position shows a significant portion of its assets are financed through equity.

Current Asset Composition

Stock Rotation Index

Receivables Deterioration Indices

Example: An unexpected spike in overdue receivables suggests potential collection issues.

- **Analysis of Current Debt Composition**

Economic Indicators

- **Profitability Analysis (ROS, ROI, ROE)**

Example: The company's Return on Sales (ROS) has decreased over the past year, indicating declining profitability.

- **EBITDA (MOL)**
- **Added Value Analysis**
- **Non-Monetary Economic Items**
- **Extraordinary Items Analysis**

Example: A company reports substantial gains from the sale of a non-core asset, affecting its ROI.

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Case Study 1 - Financial Statement Fraud Detection

Overview:

Scenario: An organization receiving EU funds is suspected of inflating its financial performance to meet eligibility criteria or secure additional funding.

Indicators:

- **Revenue Recognition:** Sudden, unexplained increases in revenue, especially near the end of financial periods.
- **Expense Manipulation:** Understating expenses or delaying the recording of expenses to inflate profits.
- **Unusual Transactions:** Significant transactions recorded at the end of reporting periods.

Analysis:

- **Revenue Analysis:** Comparing revenue growth with project milestones and industry averages.
- **Expense Analysis:** Reviewing expense accounts for unusual patterns or changes, especially those related to the project funded by the EU.
- **Audit of Transactions:** Conducting a detailed audit of significant transactions to identify any that do not align with project activities.

Outcome:

- **Findings:** The investigation revealed that the organization had recognized revenue prematurely and manipulated expense records to meet funding criteria.
- **Action:** The organization's financial statements were restated, funding was adjusted or revoked, and legal action was taken against responsible parties.

Case Study 2: Fraud in Grant Allocations

Overview:

Scenario: A non-profit organization receiving EU grants is accused of misusing funds intended for community development projects.

Indicators:

- **Grant Usage:** Funds were not spent according to the grant agreement.
- **Documentation:** Lack of proper documentation for expenses.
- **Financial Discrepancies:** Inconsistencies between reported expenses and actual expenses.

Analysis:

- **Grant Agreement Review:** Examining the terms of the grant and the reported usage of funds.
- **Expense Verification:** Cross-referencing expenses with receipts, invoices, and other documentation.
- **Financial Audit:** Conducting a thorough audit of the organization's financial records to identify discrepancies.

Outcome:

- **Findings:** The non-profit had diverted funds to unrelated projects and failed to maintain proper documentation.
- **Action:** The grant was revoked, the organization was required to repay the misused funds, and corrective actions were implemented.

Case Study 3: Detection of Anomalous Equity Changes

Overview:

Scenario: An investment firm managing an EU-funded project noticed unusual changes in the equity of a portfolio company involved in the project.

Indicators:

- **Equity Fluctuations:** Significant, unexplained changes in equity.
- **Related Party Transactions:** Suspicious transactions with related parties.
- **Debt-Equity Ratio:** Unusual changes in the debt-equity ratio without a clear business rationale.

Analysis:

- **Equity Analysis:** Reviewing changes in equity over time and investigating the reasons for these changes.
- **Transaction Analysis:** Identifying and examining transactions with related parties.
- **Ratio Analysis:** Calculating and analyzing the debt-equity ratio to identify any anomalies.

Outcome:

- **Findings:** The company had engaged in complex financial transactions with related parties to manipulate its equity and create a favorable financial position for securing additional EU funds.
- **Action:** The investment firm reported the findings to EU authorities, leading to a re-evaluation of the project funding and stricter oversight on the company's financial activities.

Application: Use of Financial Ratios in Fraud Detection

Overview:

Scenario: Financial ratios are used as a tool to detect potential fraud in a company receiving EU funds.

Indicators:

- **Liquidity Ratios:** Current ratio, quick ratio.
- **Profitability Ratios:** Return on assets (ROA), return on equity (ROE).
- **Leverage Ratios:** Debt-to-equity ratio, interest coverage ratio.

Analysis:

- **Ratio Calculation:** Calculating key financial ratios over multiple periods.
- **Benchmarking:** Comparing ratios against industry standards and historical data.
- **Trend Analysis:** Identifying trends and significant changes in ratios that may indicate fraudulent activity.

Outcome:

- **Findings:** Anomalies in financial ratios pointed to areas requiring further investigation, such as inflated revenues or understated liabilities.
- **Action:** Initiating detailed audits and forensic accounting investigations based on ratio analysis findings, leading to the detection and prevention of fraud.

Next Steps:

Validating Indicators: Ensuring the reliability and accuracy of identified indicators through rigorous testing and validation.

Applying to Samples: Using validated indicators to analyze samples of financial data from various projects and organizations receiving EU funds.

Predicting Future Frauds: Developing predictive models based on these indicators to identify potential frauds early and take preventive measures

Importance of Continuous Monitoring:

- Regularly updating and refining fraud indicators.
- Enhancing monitoring mechanisms to detect and respond to emerging fraud schemes.
- Fostering a culture of transparency and accountability.

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