
Assessing the Risk of Fraud in the Internal Audit Mission

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Abstract

The purpose of an internal audit is to provide advice and provide objective assurance on the effectiveness of the managerial internal control system by providing recommendations that ensure and contribute to improving the work of the public entity. By assessing systems, processes, high-risk activities in the presence of errors, fraud, irregularities or significant non-conformities. The reality shows that, depending on the determinants, synthesized in pressures, opportunities and attitudes, there are significant differences in the risk of fraud. Differences can be identified at different levels of the internal control system, areas of activity and in different times, between financial years. The risk of fraud and corruption must be managed by the entity's management but also regularly evaluated by the internal auditor in conducting audit engagements. The establishment, assessment of the control environment and the management of major risks with a high degree of fraud implies a concise mechanism of effective activities in the prevention of fraud and corruption at entity and process level. This article will outline the basics of fraud in the public entity, the assessment of fraud risk by internal auditors using non-statistical models and indicators.

Keywords: internal audit, fraud risk, internal control, fraud, audit mission, entity.

JEL classification: H83, G32, M42, C33.

1. Introduction

The achievement of the managerial internal control process within the public entity ensures the optimal management of the resources according to the objectives of the public entity, based on the principles of good governance that are ensured through policies, procedures and the approach of associated risks. Effectively implemented rigorous control systems can significantly reduce the risk of fraud but cannot completely eliminate the risk of fraud occurring or remaining undetected. From the perspective of the concept of "fraud" we can define: data from several sources, such as:

- an illegal act characterized by the deceit, deception or betrayal of trust committed by a person or a public entity for the purpose of obtaining funds, goods / values or services, or evading payment, in order to secure a personal advantage in business, and "error" is defined as the irregularity of violation of the regulatory environment and relevant internal regulations of the public entity,

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consisting of an unintentional activity or omission which adversely affects or may adversely affect the activity of the public entity (The Law on Prevention and Combating Corruption)

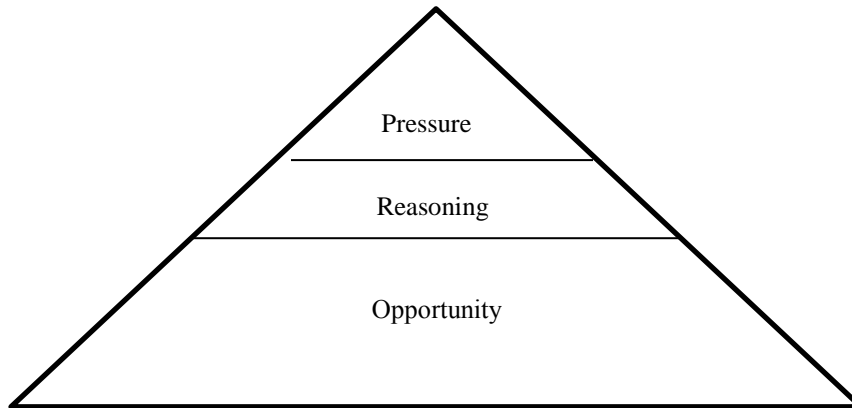
- intentional and hidden actions committed both by parties / individuals inside and outside the entity. Actions are illegal and denote illegalities. The shares result in loss of funds of its entity, its value and reputation, any other illegal advantage obtained personally or by other parties. (Law on Prevention and Combating Corruption, 2008)

- distortions of financial statements that may result from fraud. The factor that distinguishes "fraud" is the extent to which the action behind the distortion of financial statements is intentional. (Wikipedia, 2019)

There are two types of intentional misstatements that are relevant to the auditor - misstatements resulting from fraudulent financial reporting and misstatements resulting from the misappropriation of assets. Although the auditor may suspect or, more rarely, identify fraud, the auditor does not make any legal determination as to whether the fraud really took place. (International Regulations on Quality Control, Auditing, Review, 2015, p. 168)

Persons who commit fraud take advantage of weak internal controls or the possibility of neglecting controls and are motivated by the desire to obtain money or other unfair advantages.

Figure 1. The basic characteristics of fraud identified on the basis of the "triangle of fraud"



Source: Vona L.W. Fraud risk Assessment: Building a fraud audit program Hoboken: NJ, John Wiley & Sons 2008, p. 7

1. **Opportunity** - person who has access to the activity or manages a control procedure that allows for system fraud. The position of a person, as well as his responsibilities and authorization, also contribute to the possibility of committing fraud.

2. **Reasoning** - a conscious decision of the perpetrator to place his needs above the needs of others. Ethical decision-making varies depending on person, culture, and experience.

3. **Pressure** - are events taking place within the entity or in the individual's life. Pressures vary according to the global risk factor.

Six premises must be understood by applying the triangle of fraud concepts:

1. The three elements of fraud - rationalization, pressure and opportunity - coexist at different levels on the entity's staff.
2. Fraud elements will vary according to your personal circumstances.
3. The power of an element can cause a person to commit a fraudulent act.
4. Resistance of an element can eliminate the concern.
5. Identifying the three elements is easier than measuring the three elements.
6. Fraud risk factors may come from internal or external sources.

The three elements of fraud co-exist at different levels within the organization and influence each individual differently.

The power of one can cause a fraudulent or a combination of elements.

Perhaps the power of an element can eliminate fear of the perpetrator's detection. Therefore, the fraud assessment process must take account of fraud

From the above, one can conclude that there are various processes of fraud in an entity's internal control system. The most important is the decision-making culture in establishing internal procedures for assessing the vulnerability of the internal control environment through effective tools to identify, manage and report fraud risks.

2. Internal audit responsibility for fraud risk assessment in audit engagements

In fact, identifying the condition of fraud is easier than measuring the items. The audit process should be aware of the condition of fraud, but the classification of the three factors is extremely subjective. The auditor's response to the assessed risks of a process or whole system is based on evidence that it does not contain material misstatement due to fraud or error. Due to the inherent limitations of an audit, there is an inevitable risk that some significant misstatements in the process or system will not be detected even if the audit is planned and performed in accordance with ISAs.

In the internal audit engagement, the purpose of the auditor is to establish the objectives that take into account the probability of significant errors, fraud, nonconformities and other risks (SNAI 2210), and in order to support his opinion, the auditor needs to obtain a number of sufficient evidence appropriate and to assess the influence of the risk of fraud on the distortion of the information presented in the documents analyzed. Expressing an opinion of the evidence obtained on the distortions is objective, independent and professional in accordance with the regulatory framework, which ensures the suspicions obtained under the most significant aspects.

Therefore, internal auditors have sufficient knowledge to assess the risk of fraud and how it is managed by the public entity by assessing the possibility of committing fraud acts and how the public entity manages the risk of fraud. (Law, Public internal financial control, 2010)

Through reasonable assurance engagements, reasonable assurance is given that the internal control system, as a whole, does not contain material misstatement as a result of fraud or error. By

objectives set at:

- the planning stage, the internal auditor identifies and assesses the risks of material misstatement of the internal control system and financial statements as a result of fraud;
- the execution stage, the internal auditors obtain sufficient and appropriate audit evidence about the assessed risks.

The auditor should apply a series of procedures to test the existence or absence of fraud risk at the level of the audited entity or process, depending on a range of financial and non-financial factors. According to the International Standard of Auditing (ISA) 240, the auditor should maintain professional skepticism throughout the audit, recognizing the possibility that material misstatement as a result of fraud may exist by disregarding the auditor's experience of honesty and integrity of management and responsible persons with the governance of the entity. (International Audit Standard, 2015, p. 168)

The skepticism and professionalism of the auditor to identify possible fraud opportunities depends on the techniques and tools used in the audit engagement. The auditor's risk is more difficult to detect significant misstatement as a result of management fraud than employee fraud, given that management is frequently in a position to manipulate directly or indirectly. Thus, the auditor will have to show professional skepticism throughout the audit, to obtain reasonable assurance, to take into account the possibility for management to avoid controls and to recognize that audit procedures that are effective for detecting errors may not or effective for detecting fraud. The internal auditor should use procedures to detect such misstatements in identifying and assessing the risks of fraud.

An auditor conducting an audit in accordance with ISA will obtain reasonable assurance about misstatements by applying ISA 315, Identifying and Assessing Risks of Material Misstatement by Understanding Entity and its Environment and ISA 330.

The internal auditor must have sufficient knowledge to assess the risk of fraud and how it is managed by the public entity by assessing the possibility of fraudulent acts and how the public entity manages the risk of fraud. (Law, Public internal financial control, 2010) The role of fraud detection audit, which is not the most important, is to analyze and test control tools.

Through reasonable assurance engagements, reasonable assurance will be given that the internal control system as a whole does not contain material misstatement as a result of fraud or error, thus contributing to the prevention or detection of subsequent fraud. (Table 1).

As outlined in ISA 240, the potential effects of inherent limitations are particularly important in the case of fraud resulting from fraud. The risk of not detecting significant misstatement as a result of fraud is greater than the risk of not detecting a misstatement resulting from the error. This is because fraud may involve sophisticated and carefully organized schemes designed to conceal, such as forgery, deliberate failure to record transactions, or intentional misrepresentation auditor addressed. (International Regulations on Quality Control, Auditing, Review, 2015, p. 70)

Table 1. Potential contributions by the internal auditor to prevent or detect fraud.

Mission type	Prevention of fraud	Detection of fraud	Auditors role
Assurance mission	1. Identify and evaluate all internal and external risks that could lead to fraud; 2. testing existing anti-fraud measures; 3. Creating a list of fraudulent practices detected in audits they have carried out to raise awareness of fraud.	1. Establishment of fraud indicators. 2. Methods and models for assessing fraud risks; 3. Analysis of internal documents and sensitive posts.	1. formulating recommendations for improving the internal regulatory framework in place to prevent fraud; 2. Reporting weaknesses or deficiencies; 3. formulating appropriate recommendations or corrective measures for management to avoid future fraud; 4. Reporting the weaknesses of the deficiencies and the vulnerability of the internal control environment.
Counseling mission	1. Participating in the establishment of a national anti-fraud strategy within the entity by sharing their experience; 2. formulating recommendations for improving the internal normative acts in force; 3. advising on planned activities to identify corruption / fraud based on prior knowledge and experience.	1. Establishment of fraud indicators. 2. Analysis of internal documents and sensitive posts.	1. Reporting weaknesses or shortcomings to the competent authority, without delay or at least as soon as possible; 2. where appropriate, formulating recommendations to avoid future fraud; 3. formulating appropriate recommendations or corrective measures for management

Source: *elaborated by the author*

Discrimination can be more difficult to detect when accompanied by complicity and a well-thought-out scheme in the application of the corrupt scheme.

Thus, the risk assessment of fraud will be done through the analysis of the vulnerability of the internal control environment to the management and reporting of financial resources as follows.

- in the case of expenditure - a deliberate act or omission involving:

(i) the use or submission of false or incorrect or incomplete statements or documents that has the effect of misappropriating or illegally holding funds from the public budget,

(ii) failure to disclose information that violates a specific obligation having the same effect

(iii) misappropriation of such funds for purposes other than those for which they were originally granted.

- Income - A deliberate act or omission involving:

(i) the use or disclosure of false or incorrect or incomplete statements or documents which has

the effect of illicitly diminishing public resources,

(ii) failure to disclose information that violates a specific obligation having the same effect

(iii) misappropriation of a legally obtained benefit having the same effect.

An analysis of the risks of distortion and fraud will be made at:

- planning stage - identifying and assessing the risks of material misstatement of the internal control system and management of financial resources;

- the execution stage, the auditors are to obtain sufficient and appropriate audit evidence about the assessed risks.

The procedures applicable by auditors at different stages of the audit engagement to identify / determine the risk of fraud / corruption are:

- stage of knowledge process / activity, auditors will examine the process of identifying and managing the risks of fraud / corruption and if the existing internal control system, prevent and / or detect such risks.

- Identifying the factors leading to the risk of fraud is to accumulate information on the internal control system and analysis of performance measures of the public entity in the last few years to identify the presence of models inconsistent; this will identify weaknesses in the internal control that creates premises for fraud

- fraud / corruption risk assessment for auditors is an instrument for determining the probability of committing fraud / corruption and the consequences for the public entity when it / they will occur. Therefore, the fraud triangle is a component that also provides for risk assessment within the internal audit engagement, and when assessing the fraud risk factor, auditors should consider:

- the correlation between the opportunity to commit fraud and the ability to hide,

- ability and issues that affect employees,

- culture and ethics of the organization in decision-making and internal control.

During their internal audit described the evidence that can be considered as suspected fraud and the possibility of fraudulent financial reporting, based on indicators that may indicate possible risks of fraud / corruption that can be called "red flags" or "strong warning" and requiring immediate attention to detect possible fraud / corruption cases.

Indicators that may indicate possible fraud / corruption risks at the public entity level, such as: (Decision of CC RM, 2016)

- fraud indicators in financial reports;

- indicators of forged documents;

- Indicators in the field of contracting and procurement;

- assets ratios;

- indicators for corrupt payments;

- Indicators of conflicts of interest, etc.

Another classification of the indicators is in the Methodological Standards of Public Internal Audit establishes indicators such as:

A. Opportunity / circumstances:

- the type of public entity or subdivision
- complex organizational structures or permanent change
- inefficient driving control
- insufficient internal control
- Differences in financial transaction management
- lack of evidence or contradictory evidence

B. Rationale / justification

- neglecting the risks
- strange or deviant behavior

C. Performance and pressure incentives

- personal financial pressure on management and employees
- unfavorable relationships.

The internal audit activity must always comply with the relevant legislation, standards and instructions accepted at national and international level. By setting the limits of its competencies and its obligations towards the manager of the public entity and the foreign bodies. An auditor should be objective in clear and relevant evidence in identifying potential indications of suspicion of fraud and corruption.

The role of the auditor in detecting a potential fraud case is limited to detecting and recording suspicious circumstances, based on the facts established by the audit, including on-the-spot checks. Auditors should report / inform the hierarchically superior manager, the manager of the public entity or, as appropriate, the competent law enforcement authorities in writing of suspicious circumstances. This stage offers the possibility to carry out in-depth verifications or on-the-spot checks or involve other authorities, as the case may be. At the end of the process, the internal auditor will have to be able to reasonably decide whether or not there was an irregularity and, if so, to determine the financial remedies to be applied. They should also be able to decide whether a case should be referred to the judicial authorities and whether it is necessary to inform the manager of the public entity.

3. Models for risk assessment of fraud through statistical procedures.

When sufficient evidence is obtained, the internal audit will use models based on the estimation of the survival function, such as the *Kaplan-Meier* estimator (Vona, 2008), also known as the product and / or service limit estimator and the *Cox model*.

Kaplan-Meier's estimator will estimate the survival function of the entity subject to financial fraud, processes, field of activity, and levels of financial leverage, and the *Cox model* will estimate the gambling function of processes that are subject to financial fraud (fraud risk assessment).

The combination of estimation and testing of the hazard function coefficients is achieved by

predictive factors (entity's scope of activity and leverage levels).

It is a nonparametric statistic used to assess the risk of fraud. By the survival function $S(t)$ it is probable that a process or transaction will survive the moment t , i_e the probability that the fraud did not occur until the time t : (Statistical Fraud Risk Assessment, 2014, p. 22)

$$S(t) = P(T > t) = 1 - F(t) = \int_t^{\infty} f(x) dx \quad (1.1)$$

By the Kaplan-Meier estimator, $S_{(ii)}$ at different time points, t_i can be defined as:

$$\hat{S}(t_i) = \prod_{t_{i-1} \leq t_i} (1 - \hat{m}_i) \quad (1.2)$$

where is the likelihood of knowing the fraud at the time of you t , and $(1 - m_i)$ is the probability of not knowing the fraud. Graph by survival survival *curve graphically*.

In order to compare the probability of not subjecting the processes to fraud according to the object of activity and the level of the leverage, the functions / survival elements of the selected samples will be compared. Differences between them will be tested using the Log-Rank test statistic.

The Log-Rank test is:

$$U = \sum_i (O_i - E_i) \quad (1.3)$$

where: O_i – the number of processes / transactions (fraud) observed

E_i – the number of processes / transactions (fraud) estimated.

For the acceptance / rejection of the survival function matching assumption for the studied groups the calculated value of the Log-Rank test is compared with the theoretical value of the **Hi square** with $(k-1)$ degrees of freedom, where k is the number of samples.

The COX model estimates and tests the influence of the field of activity and the level of leverage on the risk of fraud. [10]

The Cox model allows the analysis of long-term data, similar to regression models. The Cox model estimates the hazard rate, $h(t)$, knowing the event studied by a linear combination of p explanatory factors (X_1, X_2, \dots, X_p) .

The hazard rate can be defined in the form of:

$$h(t) = [h_0(t)] e^{b_0 + b_1 X_1 + \dots + b_p X_p} \quad (1.4)$$

or in logarithmic form

$$\ln h(t) = \ln h_0(t) + b_0 + b_1 X_1 + \dots + b_p X_p \quad (1.5)$$

where $h_0(t)$ represents the reference hazard rate, and b_i is the regression coefficient.

The rate of risk that the sample population contains fraudulent items during the observed

period, under the influence of preachers (field of activity and financial leverage) can be estimated using a SPSS program. (Statistical Fraud Risk Assessment, 2014, p. 24)

The final elements that conclude certain processes concern the hazard rate values at different time points, the regression coefficients associated with the preachers, and the degree of their statistical significance.

The coefficients of regression are also calculated as exponential (eb , where " e " is the basis of the natural logarithm).

The percentage change in the hazard rate, with a change of 1 unit of the predictor variable, is equal to $100(eb - 1)\%$.

Testing the significance of regression coefficients is based on the Wald test statistic and is calculated as follows:

$$Wald = \frac{b_j^2}{\sigma_{\beta_j}^2} \quad (1.6)$$

Where: b_j represents the value of the regression coefficient, and the standard deviation of the parameter estimator β_j .

Based on the Kaplan-Meier estimator and Cox model function, the time elapsed between the start of the first reporting and the occurrence of the fraud, the status of the entity at the end of the analyzed period (fraudulent / unframed), the scope of activity and the financial leverage.

4. Conclusion

The primary responsibility for preventing and detecting fraud lies with the Managing Authorities. However, the success of the fight against fraud depends on the joint efforts of managing authorities, the internal auditor and other stakeholders. Each participant in the chain must fulfill its role in protecting the financial interests of the public entity.

Internal auditors can play an important role in preventing and detecting fraud at different levels. In most cases, the recommendations made by internal auditors to strengthen management and control systems will also have a positive impact on the prevention of fraud.

The main contributions to preventing and detecting fraud, those internal auditors can make by conducting audit missions in the field of financial resource management and internal control environment.

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