Chapter 9

Benford’s Law for Fraud Detection: A Case Study of Portuguese Companies

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ABSTRACT

In order to detect evidence of fraud effectively, it is essential for the auditor to be aware of new and differentiated methods. Thus, the auditor can identify and assess the risks of material misstatement so that auditing is as reliable as possible. In this sense, the relevance of the application of the Benford’s Law arises in order to demonstrate that the identification of situations of greater risk of fraud is appropriate in auditing. The objective of this study is to analyze the behavior of 27,058 Portuguese companies.

INTRODUCTION

Corporate governance introduces management and supervisory measures for organizations improving their management. The number of public scandals has put the theme fraud on the agenda, discussing the effectiveness of corporate governance and auditing. As referred by Birol (2019) the basic corporate governance principles are applied for establishing more reliable financial reporting of firms even if in his study he did not prove that the corporate governance measures had reduce de fraud risk in Turkey. It is known that corporate governance and auditing contribute to the prevention and detection of fraud,

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being that corporate governance is more focused on fraud committed by top management which is usually reflected in the manipulation of financial statements. But it is precisely this type of fraud that worries external auditors because it is the one that affects the reliability of financial statements.

According to Rigaud (1980) the success of an organization depends on timely decisions made right. This requires companies to invest in preventing and detecting evidence of fraud, as it can be committed by anyone and can have serious economic repercussions.

The auditor has a very important role in this field, because although the audit is not specifically aimed at finding fraud, errors or irregularities it is important to detect them in a timely manner. Thus, specific work methodologies should be adopted so that the existing resources are directed to the areas that present more risks in order to detect possible fraud.

The occurrence of fraud in addition to financial losses also entails large losses that cannot be measured, for example, the negative image that the company must face later and the consequent loss of confidence of employees, suppliers, customers and other stakeholders. In addition, the information contained in the financial statements should be as correct and real as possible since failure to detect material misstatements could influence the decision-making of several stakeholders.

Fraud can result from corruption, misappropriation of assets or fraudulent financial reporting. According to the Association of Certified Fraud Examiners (ACFE, 2018) in 2018, similarly to what happened in previous years, fraudulent financial reporting is the type of fraud, compared to misappropriation of assets and corruption, which has a higher percentage decrease of occurrence (10%) but is the one that causes higher losses (800,000 USD).

For Franceschetti and Koschtial (2013), fraud in financial statements is defined as the intentional misrepresentation of a company’s financial conditions, through intentional distortion or omission of values or disclosures to deceive its users. On the one hand, there are companies that intend to present a better financial situation than the real, in order to deceive a potential investor, show results to partners, reassure creditors or influence stock prices. On the other hand, some companies intend to show inferior results to the real ones for fiscal reasons (de Almeida, 2015).

Detection of fraud in the financial statements requires more advanced procedures than just standard audit procedures (Asllani & Naco, 2014). It is in this sense that the Benford’s Law can be an advantage, since it allows the analysis of large amounts of data in a simple, fast and efficient manner determining the expected proportion for the distribution of the data. The comparison between the observed and expected probability can indicate the occurrence of fraud and errors when significant deviations are detected.

The main purpose of using this law is to improve the effectiveness of identifying fraudulent data. Thus, the main objective of this study is to verify the conformity of the records of the turnover item (which includes sales and services) with this law and consequently to evaluate the quality of the financial information of the Portuguese companies under analysis.

In addition to this introduction, this study contemplates a theoretical framework on the Benford’s Law and its importance and use for audit. This is followed by the case study, where the research methodology is presented, as well as the analysis and interpretation of the results. The study ends with the conclusion and respective solutions and recommendations, as well as future research directions.