

Practices and mechanisms to mitigate the negative effects of accounting-based earnings management: An empirical study from the professionals' perspective



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ABSTRACT

Accounting conservatism and Accounting-based Earnings Management Practices (AEMP) introduce bias in financial information (FI), thereby influencing stakeholder behavior in the decision-making process. This study aims to analyze, from the certified accountants' perspective, the AEMP in Portugal. Specifically, it analyses (1) the development of the AEMP and its impact on FI reporting, (2) the main hampered on its implementation, and (3) the need for the instruments and corporate governance mechanisms to mitigate the AEMP. Besides this research analyses (4) the relationship between the certified accountant's characteristics (gender, age, professional experience, educational qualifications, and training area). To achieve the proposed objectives, we have used a quantitative methodological approach with a survey questionnaire, conducting an empirical study based on a sample of certified accountants. Based on a sample of 159 certified accountants, the results found that the majority of respondents indicate that Portuguese companies develop AEMP and that these practices have a negative and significant impact on the quality of financial statements (FS). Moreover, most certified accountants point out that is important to adopt measures that will prevent the abuse of AEMP and the main instruments for this are the establishments of more precise and concrete accounting standards and the application of the sanctions. The results also indicate that the audit committee and efficient internal control are corporate governance mechanisms AEMP able of mitigating the effects of the AEMP. Finally, the individual characteristics of certified accountants, such as professional experience, educational qualifications, and training area, significantly influence their perception of the need to mitigate the AEMP. This study presents relevant contributions to theory and practice. First, it develops the literature that evaluates AEMP, particularly in Portugal, where studies are scarce. Second, this study is original because it considers the relationship characteristics of accounting and AEMP professionals. Third, it allows entities that operate in accounting standardization and for accountants and FI users to have a more in-depth knowledge of the AEMP's instruments and mechanisms.

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1. Introduction

The information has immeasurable value. Uncertainty, which characterizes the business

environment, leads to greater information asymmetry resulting in a greater demand for accounting conservatism (Dai and Ngo, 2021). According to Li and Chao (2020), accounting conservatism "is a crucial accounting principle and refers to the prudent attitude that accountants must adopt when facing the risks of an operating environment and the uncertainties of a firm." For Watts (2003), the conservatism in accounting "is defined as the differential verifiability required for recognition of profits versus losses." Ge et al. (2019)

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noted that companies report earnings more conservatively, in response to greater investor sentiment, to mitigate possible litigation costs.

Conservatism consists of the selection of accounting methods that allow an overestimation of profits and assets (Li and Chao, 2020). The impacts of conservatism are comparable to those of earnings management since both introduce bias in the financial report, while conservatism stems from following accounting standards, whereas earnings management is an individual choice (Ewert and Wagenhofer, 2012). In fact, in the literature, there are numerous terms to describe changes in accounting facts, such as cooking the books, window dressing, accounting manipulation, aggressive accounting, income smoothing (Mulford and Comiskey, 2005; Jones, 2011; Yadav, 2014).

Gutiérrez and Rodríguez (2019) in the literature reviewed about earnings quality, verify that accounting researchers differentiate the accounting-based earnings management (AEM) of the real-earnings management (REM). For Gutiérrez and Rodríguez (2019), the AEM analyzes how managers manipulate the accounting numbers to their benefit, while “real earnings management consists of manipulating the earnings figure through real investment decisions made by managers, irrespective of accounting (e.g., reducing capital expenditures or discretionary expenses).”

Accounting-based Earnings Management Practices (AEMP) can impact earnings quality (Duréndez and Madrid-Guijarro, 2018). Gutiérrez and Rodríguez (2019) stated that the “earnings quality depends on a series of characteristics that enhance the usefulness of the earnings figure for decision making.” These scholars also refer that earnings management negatively influences the quality of earnings, and worsens the decision-making process.

According to Xie et al. (2003), when manager incentives are based on companies’ financial performance leads to a potential agency problem, since earnings management obscures real performance and lessens the capability of shareholders to make informed decisions. Agency problems arise when the interests of managers and shareholders are not aligned (Paterson, 2016).

In literature, AEMP is directly linked to predictive ability, which influences the quality of financial reporting and determines the quality of the accounting system (Gutiérrez and Rodríguez, 2019). On the other hand, international financial and accounting scandals emphasized that regulations may not be sufficient and that corporate governance needs to be driven by individual ethics and moral values (Jackson, 2010), and Portugal is not excluded from these scandals, essentially with regarding banking sector (Montenegro and Rodrigues, 2020).

AEM is rooted in anti-ethical practices. According to Shahid (2016), the ethical values of a business play an important role in the adoption or rejection of AEMP. Given the unfavorable environment for ethics in Portugal, the problem of this study is identified:

AEMP has a magnitude that should be mitigated? How can it be mitigated? What is the opinion of certified accountants about this matter?

Surprisingly, little is known about the answer to that hypothetical question. Empirical research on the need and mechanisms to mitigate AEMP, from a certified accounting perspective, is not found in Portugal. Many dimensions of earnings management have been analyzed in previous research (Xie et al., 2003; Reeb and Zhao, 2013; Muttakin et al., 2018), however, the studies applied in Portugal are scarce and those that exist are focused on topics other than those in this study (Montenegro and Rodrigues, 2020; Li et al., 2019; Saona et al., 2019; Pinto and Picoto, 2018; Lourenço et al., 2018; Kousenidis et al., 2013).

Consistent with the purpose of analyzing AEM and frame the agency theory, this research aims to analyze whether AEMP is implemented in Portugal and its negative effects on financial statements (FS), as well as identifying the need, main instrument, and corporate governance mechanisms to mitigate AEMP. Additionally, this research analyzes the impact of the certified accountant’s characteristics in their perception of the mitigation of AEMP. To achieve the proposed objectives, a quantitative methodology is used. A survey is applied to certified accountants.

The results of this investigation will help to account for standardization entities to introduce improvements in accounting standards in order to promote the preparation of reliable and useful information for decision making, as well as to fight not only tax evasion but also tax avoidance.

The paper is structured as follows. The first section of the paper reviews the empirical literature related to the issue concerning AEMP, mitigation of this phenomenon. In the second section, the authors present a description of the methods and data used. The third section consists of the presentation and discussion of the results. The paper ends with concluding remarks.

2. Literature review and research questions

Accounting, according to Paseková et al. (2019), guarantees information about the financial situation of a certain company, as well as reports this information to individuals or organizations, designated as stakeholders. The certified accountant should follow the rules and principles of accounting standards, to provide relevant information to stakeholders. The FS aims to provide useful financial information for decision making (Gowthorpe and Amat, 2005).

Most studies that analyze business failures assume that FS gives a fair and realistic assessment of the financial situation of a company (Serrano-Cinca et al., 2019). These scholars, state that the quality of the FI is an important aspect that can be affected by aspects such as earnings management, creative accounting, income smoothing, and accounting fraud. According to Mulford and

Comiskey (2005), the game of financial numbers has different terms, takes on different forms, and depends on strategies to create the desired impression.

Literature also suggests two categories related to earnings management: Accruals-based Earnings Management or AEM and REM (Al-Haddad and Whittington, 2019; Gutiérrez and Rodríguez, 2019). While the former relates to accounting practices, the latter to the company's operating practices (Gutiérrez and Rodríguez, 2019; Halabi et al., 2019). Malikov et al. (2018) found three earnings management tools in literature, Accruals-based Earnings Management, REM, and classification shifting. The latter appears in more recent articles and consists, for example, of incorrectly classifying non-operating revenues/expenses as operating revenues/expenses, increasing/decreasing operating results, without altering the company's results (McVay, 2006).

Jawad and Xia (2015) stated that innovation is an essential part of AEMP in accounting practices and Mulford and Comiskey (2005) stated that term earnings management consists of results manipulation towards a predetermined objective. For Bhasin (2016); AEM "refers to the accounting practice that may (or may not) follow the accounting principles or standards, but deviate from what these principles or standards intend to achieve, in order to show a desired image of the company to the stakeholders." According to Remenarić et al. (2018), AEM, which consists essentially in the use of practices of manipulation de FI, occur where accounting standards require accounting estimates, namely in the manipulation of off-balance-sheet financing items, changes in depreciation methods and accounting policies, manipulation of income and expense items, changes in the fair value, overestimation of revenues by recording fictitious sales revenues and manipulation of accruals. Malikov et al. (2018) stated that "one recently established form of earnings management is classification shifting" which is "is based on the misclassification of items within the income statement but does not alter net income." Classification shifting consists, for example, of misclassifying core expenses as non-recurring expenses. Haw et al. (2011) verified this practice in East Asian firms.

AEMP, that are accounting practices that fall within the legal limits of accounting regulation (Stolowy and Breton, 2004), otherwise fraud can have a positive effect on a company's business in the short run, but in the long term, it may result in reduced stock prices, insolvency, and even bankruptcy (Remenarić et al., 2018). In fact, according to Remenarić et al. (2018), companies nowadays are increasingly resorting to "cooking" financial statements in order to present a more attractive business image and attract as many investors as possible.

In this sense, it is relevant to understand whether companies develop AEMP, so this study raises the first research question:

RQ1. Do companies develop AEMP?

The International Accounting Standards Board (IASB) has acknowledged that the objective of FS is to provide useful information to stakeholders about the financial position and performance of the company. FS are records of financial operations of a company business (Paseková et al., 2019), the mirror of each company's business, and very important for decision-makers (Bhasin, 2016; Remenarić et al., 2018; Ababneh and Aga, 2019). IASB established the qualitative characteristics that determine the usefulness of FS in decision-making. Thus, the quality of FS can influence the firms' transparency and the effectiveness of decisions (Ababneh and Aga, 2019). However, according to Remenarić et al. (2018), AEM is considered "unethical since it doesn't meet the main objective of financial reporting—to present a fair and objective picture of the business." These authors state that the AEMP is associated with a distortion of FI and the assumptions of accuracy and reliability are questioned. In general, AEM "is seen as a deceitful and undesirable practice" (Akpanuko and Umoren, 2018).

However, the AEMP is a problem that can be considered, in some cases, extremely serious, since it can distort the FI (Remenarić et al., 2018) and compromise the decision-making process. In this context, it is formulated the second research question.

RQ2. AEMP has a negative impact on the quality of FS.

AEM is an accounting phenomenon that aims to produce differentiated information, simultaneously benefiting and harming certain users, through the ambiguities of accounting standards, showing a favorable or unfavorable result according to the interests of those who are using this financial engineering. However, reality has shown that this AEMP can cause irreversible losses (Desai et al., 2006), presenting consequences for the companies and stakeholders (Silva and Santos, 2016). For Stolowy and Breton (2004) and Tassadaq and Malik (2015); the main hampered are companies (loss of reputation and credibility in the market), shareholders and potential shareholders (inappropriate allocation of resources and unfeasible investments), the State (decrease tax revenue), society (increase in the number of unemployed people and wasted resources) and customers (interrupted services). That said, this investigation is formulated the third research question.

RQ3. Who is the main hampered of the AEMP?

There is a vast literature on earnings management in which accounting information can be manipulated in various ways to mask companies' true economic performance (Malikov et al., 2018). According to Al Momani and Obeidat (2013), in the past two decades, stakeholders, such as investors,

creditors, and shareholders, have made decisions based on inaccurate information, subject to different AEMP, resulting in large losses of money. This is because it is difficult or even impossible for stakeholders to discern the facts and effects of AEMP, because of insufficient skills and the indifference or reluctance to engage in the detailed analysis (Breton and Taffler, 1995). As a consequence, there was a strong need to restrict these practices and find solutions to this problem. Thus, the fourth research question is formulated.

RQ4. There is a need to mitigate the AEMP?

In the literature, many authors emphasize the impossibility of extinguishing AEMP (Tassadaq and Malik, 2015). However, adds that it is possible to establish some measures that limit its field of action and restrict its proliferation, as (among others): Adaptation of accounting standards in order to limit the use of estimates and to ensure consistency in the application of accounting methods; recognizing and claiming on the role of internal and external audit in identifying and reporting biased estimates, and preventing accounting manipulations; hiring independent directors, as well as independent members of the audit committee; creating effective corporate governance controls; employees aware of the code of ethics (Remenarić et al., 2018).

International financial and accounting scandals stressed that regulations have not prevented the development of unethical accounting practices (Jackson, 2010). However, normative requirements can constitute an impediment to the development of AEMP. Thus, regulatory and standardization entities can play an important role in preventing AEMP. Indeed, accountants must be involved in this process, to find ways to effectively combat AEM. Several changes have been incorporated into the accounting standards to restrict the AEM, but, when there is an intention to implement AEMP, new creative means are identified that are AEMP able of coming under the regulatory framework (Salome et al., 2012). The accounting standards have not been able to reach its main objective, that is, to prevent or reduce the AEMP (Santos and Grateron, 2003). However, changing legislation is not the only method of restricting this phenomenon, governance corporate governance, and ethical standards represent other methods of limiting AEMP.

The concept of corporate governance represents the way an institution is monitored and controlled and is closely related to AEMP (Kontesa et al., 2020; Xie et al., 2003). Corporate governance plays a key role in AEM by reducing investor risks and encouraging a true and appropriate view of IF (Yadav, 2014). In this sense, Jiang et al. (2008) analyzed the relationship between corporate governance and quality of results and conclude that companies with weak corporate governance are more likely to manipulate the results. The occurrence of AEM is related to poor corporate governance performance, given that good corporate

governance performance will minimize the opportunities for AEM and accounting fraud (Jones, 2011).

Accounting standards flexibility is expressed as being the legal part of AEM, but the intention and moral value are important. Ethics is considered a rational theory of good and evil, a reflection carried out upstream on the values ordered by morals. The existence of codes of ethics in companies can guide individuals towards ethical problems. Ethical principles represent evidence for dealing with AEMP (Omurgonulsen and Omurgonulsen, 2009).

Several authors indicate that some different instruments or measures contribute to the prevention of AEMP, namely the establishment of more precise and concrete accounting standards, the corporate governance mechanisms, the code of ethics, and sanctions (Bhasin, 2016; Tassadaq and Malik, 2015; Salome et al., 2012). In this assumption, the fifth is presented.

RQ5. What instruments can mitigate the AEMP?

In a company, the control environment underlies risk management and assessment and activities monitoring and control. The presence of controls inhibits the possibility of implementing improper accounting practices. For Popescu and Ashrafzadeh (2013), restrictions against the distortion of FI should be introduced by business organizations, since these practices affect the company's performance and credibility, influence perception, and cause distrust in users. Therefore, companies must use three criteria to reduce such practices (Popescu and Ashrafzadeh, 2013): (1) administrative systems, to implement a notification system for employees, regarding the risks to which they are exposed and develop protection mechanisms for vigilant employees, (2) anti-fraud programs, that must include the implementation of complaints, preferably anonymously, of illegal acts, errors, and disobedience of the company's code of conduct; control system, to assess existing and future vulnerabilities resulting from AEMP, develop a system that prohibits the accumulation of functions among employees and, finally, (3) implement systems for monitoring economic transactions for certain periods; information system, to create a secure information system, developed through the transparency of business information, where changes are controlled, allowing the identification of some transitions whose limits are not observed.

The audit committee is responsible for supervising the auditors and to be effective, it must be independent, regular, and composed of competent individuals. Thus, a committee with strictly control functions will probably be able to minimize earnings management (Santos and Grateron, 2003; Xie et al., 2003). Santos and Grateron (2003) emphasized that the position of the independent auditor in the face of the existence of AEM companies is not a simple task, because, in certain cases, there is no clear regulation on the options of accounting policies. Auditors must

help companies, through the interpretation of regulations, to provide a true and appropriate image of it (Shah, 1998). In this sense, Davidson et al. (2005) analyzed whether the systematic AEMP is related to the internal mechanisms of AEM, and conclude that the independent audit committee composed of non-executive members is associated with the lower possibility of AEM. Jaggi and Leung (2007) concluded that independent audit committees in general play a central role in restricting AEM. Audit committees are effectively more effective in carrying out their functions if a large part (or all) of the board directors is composed of external members and executives and non-executives (Beasley, 1996).

The Board of directors must ensure the company's prosperity and respond to shareholders' and stakeholders' interests. Thus, it is important to determine the duties, remunerations, and responsibilities of the directors, to avoid financial scandals. For the board of directors to be effective, it must include non-executive directors and independent members, that is, the board of directors must not be composed of acquaintances, friends, or family members of the current executive director. Administrators play a fundamental role, especially in monitoring the activities of managers (Weisbach, 1988).

According to Xie et al. (2003), there is considerable evidence "that independent outside directors protect shareholders in specific instances when there is an agency problem." Agency problems between shareholders and managers essentially occur from the separation of ownership and control of the company, that is, when the objectives of managers are distinct from that of shareholders (Jensen and Meckling, 1976). Lafond and Roychowdhury (2008), "the agency literature has posited that excess compensation to managers for overstated current earnings that subsequently reverse is difficult to recover, especially when managers leave the firm."

To examine the impact of independent members on the board of directors on AEM, the study by Lai and Tam (2007) showed that companies with a greater number of independent directors on the board have lower levels of AEM. Beasley (1996) analyzed the relationship between the composition of the board of directors and the occurrence of fraud and concludes that in companies with a higher proportion of independent directors, the occurrence of fraud is relatively lower. In this line of reasoning, Xie et al. (2003) investigated the relationship between AEM and Corporate Governance and conclude that AEM is more prone in companies with boards of directors composed of internal members.

Another aspect related to AEM is the dual leadership or dominant personality. Stewart (1991) and Dahya et al. (1996) indicated that dual leadership since it helps improve decision making allows a sharper focus on the company's objectives and promotes the faster implementation of its strategies/decisions. On the other hand, powerful

CEOs may be more concerned with their interests (Muttakin et al., 2018). The individual who takes two top positions is more likely to look for strategies that promote his interests to the detriment of the company (Jensen and Meckling, 1976; Jensen, 1986), the assumption of the agency theory. Also, an individual being both the Chief Executive Officer (CEO) and chairman of a particular company is particularly problematic, since these positions occupy an essential division of authority on the board of directors, thus preventing the absolute exercise of power in an individual. Rhoades et al. (2001) found that companies, where these functions are separated, have better financial ratios than companies that have combined functions. Sufficient controls over managers (by the board of directors, competing markets, and within the organization by other individuals), leads them to make accounting choices to maximize the company's value (Christie and Zimmerman, 1994). According to the authors, these measures are expensive, so they are limited in their ability to control the performance of managers.

Dechow et al. (1996) documented the existence of a strong association between the occurrence of AEM and the lack of characteristics of strong corporate governance, such as the absence of an audit committee, the combination of functions between the CEO and the chairman, the board of directors dominated by inexperienced individuals, the absence of a monitoring system and the lack of non-executive members on the board of directors. Because of the above, this study raises the sixth research question:

RQ6. What corporate governance mechanisms can mitigate AEMP?

People are different from each other, however, some behaviors are identical in different people. People According to Triki et al. (2017), understanding the individual traits of accountants is important when these characteristics can influence professional behavior or the ability to work with members of the business community. Nogueira and Fari (2007) found that personality traits (related to the way of being, thinking, acting, among others) influence the choices/perceptions of professionals in any area of activity. Cepêda and Monteiro (2020) concluded that a certified accountant's characteristics influence FI usefulness perceptions. In the study of Montenegro and Rodrigues (2020), applied in Portugal, the gender, age, education (and accounting ethics education), and experience influence of accountants' judgments. Thus, the seventh and last research question is posed.

RQ7. Do certified accountant's characteristics influence the perception of the need to mitigate AEMP?

3. Methodology

We have adopted the quantitative methodology, as it provides a rigorous measurement of the studied

phenomena, which is particularly relevant and pertinent to characterize a given reality (Simsek et al., 2015). This methodology aims at converting the information collected into numerical information so that it can be processed statistically and subsequently present the results in tables, measures, or tables (Marconi and Lakatos, 2011). Thus, we propose to collect, analyze and discuss quantitative data, to obtain specific information on the topic under analysis (Hill and Hill, 2008).

In this research, the online questionnaire survey is applied. In this context, a quantitative methodology approach is chosen. The questionnaire is in two groups. The first includes questions about the respondent's demographics (gender, age, experience professional, educational qualifications, and training area). The second group includes questions that allow us to answer the research hypotheses formulated in this research (Appendix A). This group is composed of closed questions and measured on a 5-point Likert scale. This is a simple method of assigning scores to a set of response hypotheses, not involving value judgments. The questionnaire was prepared online using Google forms a digital platform. The measuring instrument was submitted to a pre-test, which allowed to solve problems, identify omissions, verify ambiguities and subjectivities and evaluate the quality of the obtained results.

The target population of this study is certified accountants, as they are responsible for recognizing and measuring accounting transactions, as well as preparing and disclosing FS. In the application of the survey, we had the collaboration of the Portuguese Order of Certified Accountants (OCC), who made it available on its official website.

The sample consists of all accountants' certificates duly completing and submitting the questionnaire survey from 2 to 23 October 2017. 171 responses were obtained, but 12 were eliminated because respondents did not practice certified accountants (10) and 2 were incomplete. Thus, in the data analysis 159 valid answers were considered. As such, it is a convenience sample and not a probabilistic sample, but considered valid in previous studies (Cepêda and Monteiro, 2020; Montenegro and Rodrigues, 2020; Tassadaq and Malik, 2015).

For data analysis, we used the Statistical Package for the Social Sciences (SPSS), version 24 for Windows.

We have applied descriptive and univariate and multivariate analysis. Concerning descriptive statistics, percentages and frequencies of respondents were used. Statistical analysis of the data includes the use of inference tests and association tests (Martins, 2011). Regarding the univariate analysis, given the absence of data normality, we use: The Mann Whitney U test (non-parametric test), which verifies whether the average orders of two independent groups at the level of a dependent variable differ, applies when the independent variable consists of two groups, like

gender, and the dependent variable is ordinal (need to mitigate the AEMP); the Kruskal-Wallis Test, which checks if there are differences between the three or more independent groups (training area) at the level of the ordinal dependent variable (need to mitigate the AEMP); Spearman's correlation test is used to analyze the correlation between two ordinal variables. It is also used the non-parametric test to assess the mean position of the corporate governance mechanisms and, finally, the linear multivariate regression model for individual characteristics of the certified accountant and perception of the ease of identifying AEMP.

We estimate the following regression to answer RQ7:

$$MitAEMP = \beta_0 + \beta_1 Gen + \beta_2 Age + \beta_3 PExp + \beta_4 EdQal + \beta_5 Train + \varepsilon$$

where the explanatory variables are as follows: Gen (gender); Age; Pexp (professional experience); EdQal (educational qualifications) and Train (training area).

4. Results and discussion

4.1. Sample's characterization

Regarding professional experience, most certified accountants are male (53%), have worked for over 5 years (85%), are over 30 years old (84%), the predominant range being 30 to 40 years old (60%), holds a degree or higher education (100%) in accounting (81%), management (9%), audit (7%), finance (7%), and economics (3%). Most certified accountants (84%) exercise the profession for more than 5 years.

4.2. Data analysis and discussion

The development of AEMP is analyzed in Portuguese companies. 96.2% of certified accountants agree and strongly agree that companies develop AEMP and 3.8% are undecided (Fig. 1).

Thus, it is possible to answer the first question of research, that is, Portuguese companies develop AEMP similarly to London (Smith, 1992), Spanish (Amat et al., 1996), American (Healy, 1985), among others.

Regarding the fact that taking advantage of the various options, subjectivity, and gaps in the accounting standards constitute practices that distort the information contained in the FS, 62% of the respondents agree or totally agree. In turn, 31% of respondents totally disagree or disagree with the above (Fig. 2). Fig. 3 shows AEMP has a negative impact on the quality of FS.

In the Portuguese context, the majority of certified accountants (85%) indicate that it is possible to take advantage of the accounting standards' flexibility, subjectivity, and gap. So, it is concluded that the majority of certified accountants

indicate the companies use AEMP even though these practices distort the underlying values in the FS. Accordingly, in Nigeria (Salome et al., 2012) and

India (Bhasin, 2016) the AEMP, according to accountants, financial analysts, and shareholders, distorts the FI contained in the FS.

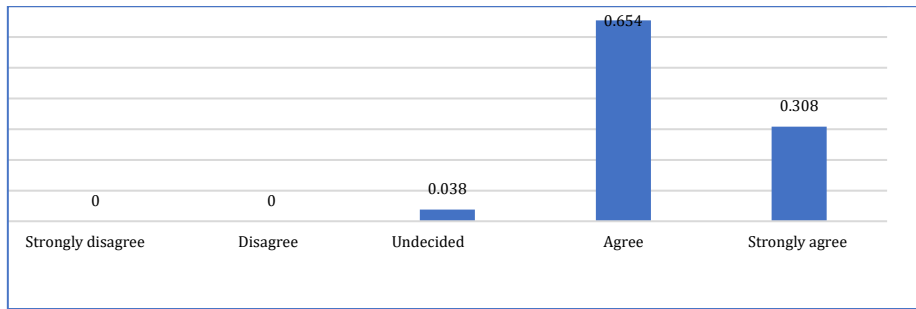


Fig. 1: AEMP's development

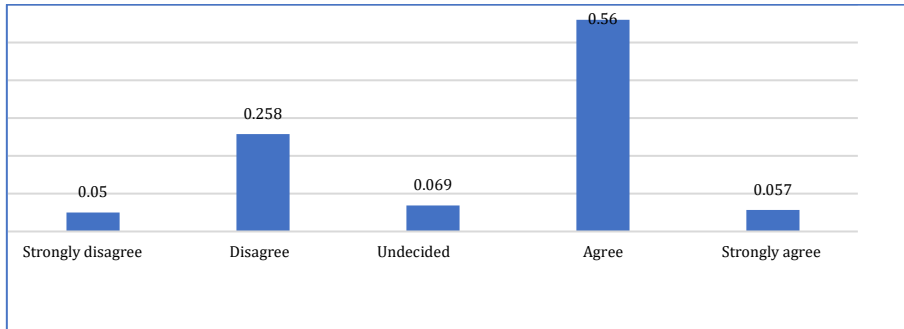


Fig. 2: Taking advantage of the various options, subjectivity, and gaps in accounting standards distort the FS

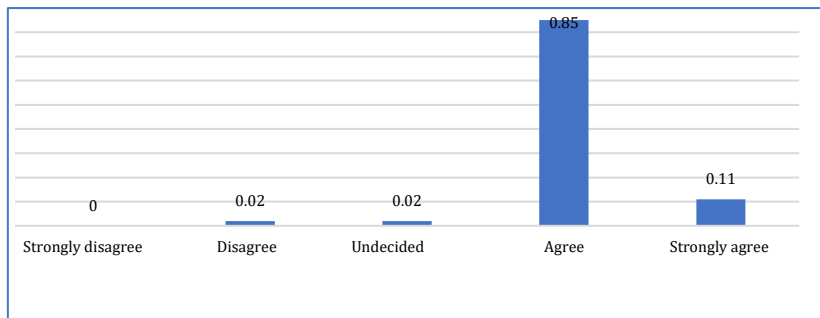


Fig. 3: AEMP has a negative impact on the quality of FS

Analyzing the effect of AEM on the FS, most respondents (96%) agree or fully agree that AEM has a negative and significant impact on FS (Fig. 3).

Therefore, it is concluded that the use of flexibility, subjectivity, and gaps in the accounting standards distort the information contained in the FS and, in turn, have a significant impact on the FI, results that allow us to answer the second research question. Also in Nigeria, Pakistan, and India, respondents consider that AEMP has a significant

impact on FS (Salome et al., 2012; Tassadaq and Malik, 2015; Bhasin, 2016).

The literature shows that the AEMP provides benefits to certain individuals and harms others, simultaneously. The main hampered of the consequences of the AEMP is the State (142), the company (131), and society (117). Only 39 certified accountants claim that the main affected are shareholders and potential shareholders (Fig. 4).

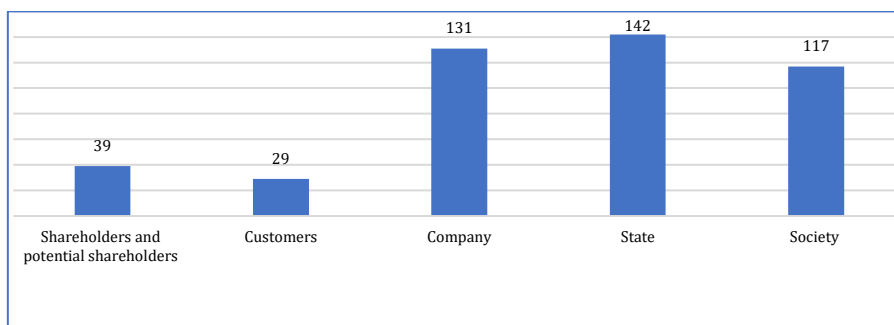


Fig.4: AEMP's main hampered

In view of the above, it is possible to answer the third research question by stating that, based on the opinion of certified accountants, that the main losers, in Portugal, are the State and the company. Conversely, the main hampered in Pakistan are investors (Tassadaq and Malik, 2015). Bearing in mind the consequences arising from the

implementation of the AEMP, certified accountants are asked whether the AEM should be mitigated. Most certified accountants show that AEMP should be mitigated (82%). However, only 12% of certified accountants totally disagree or disagree with this statement (Fig. 5). Fig. 6 shows AEMP's main instruments to mitigate.

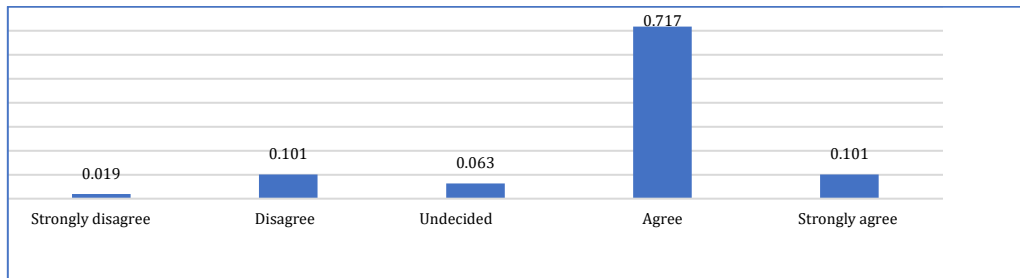


Fig. 5: AEMP's need to mitigate

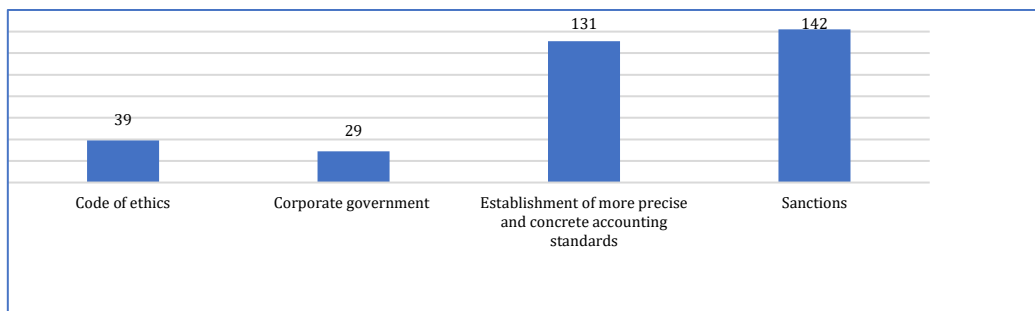


Fig. 6: AEMP's main instruments to mitigate

The literature indicates that the elimination of AEM is extremely difficult, however, it is possible to mitigate the AEMP. The results of this study provided an answer to the fourth research question since most respondents reveal that there is a need to mitigate the AEMP. Thus, this study explores the instruments able of mitigating AEM. In the opinion of certified accountants, the reduction in the AEMP involves the establishment of more precise and concrete accounting standards (144), the incorporation of corporate government mechanisms (125), and of ethical principles (110). However, the results lead to the conclusion that sanctions are not a relevant measure in the mitigation of AEMP (Fig. 6).

In order to answer the fifth research question, this study concludes that the main ways to mitigate the AEMP are through the establishment of more precise and concrete accounting standards, through the mechanisms of corporate governance, and the ethical principles (code of ethics) and answer the fifth research question. The results are in line with the results obtained in the study by Bhasin (2016). In Nigeria, the main way to reduce AEM is to

establish more precise and concrete accounting rules, from the point of view of accountants, financial analysts, and shareholders (Salome et al., 2012). In Pakistan, on the other hand, the most effective method of reducing AEM is through sanctions (Tassadaq and Malik, 2015). Sen and Inanga (2005) concluded that in Bangladesh, codes of ethics are an essential instrument against AEM, so it is important to instill moral virtues, such as honesty, integrity, and incorruptibility in professionals. The regulation may be added without the application of rigorous techniques is likely to be ineffective against individuals who use AEMP.

Corporate governance mechanisms are an essential means of mitigating AEM in different economic contexts. Thus, certified accountants are questioned regarding the effectiveness of these mechanisms in Portuguese reality. Certified accountants understand that all corporate governance mechanisms are effective and very effective, that is, an audit committee (95%), efficient internal control (92.4%) (Table 1).

Table 1: Corporate governance mechanisms capable of mitigating the AEMP

Corporate governance's mechanisms	1	2	3	4	5	Total of observations
Efficient internal control	1 0.6%	3 1.9%	8 5.0%	125 78.6%	22 13.8%	159 100%
Audit committee	1 0.6%	3 1.9%	4 2.5%	134 84.3%	17 10.7%	159 100%
Independent members on the board of directors.	1 0.6%	3 1.9%	8 5.0%	121 76.1%	26 16.4%	159 100%
Division of responsibilities between the CEO and the director	3 1.9%	10 6.3%	9 5.7%	124 78.0%	13 8.2%	159 100%

Key: 1-Ineffective; 2-Less effective; 3-Neutral; 4-Effective; 5-Very effective

However, the parametric test through the mean position indicates that the existence of independent members on the board of directors, efficient internal control, and audit committee are the mechanisms with greater influence in the mitigation of the AEMP (Table 2).

Table 2: Mean position of the corporate governance mechanisms capable of AEMP's mitigation

Corporate governance's mechanisms	Mean
Efficient internal control	2.57
Audit committee	2.52
Independent members on the board of directors.	2.58
Division of responsibilities between the CEO and the	2.33
Test statistics ^a	
N	159
Chi-square	22,985
Df	5
Significance	.000

a. Friedman test

Thus, answering the sixth research question, the results show that certified accountants understand that corporate governance mechanisms represent an effective way to reduce AEM in Portugal. In India, independent directors and the audit committee are the essential instruments in reducing AEMP,

according to certified accountants (Bhasin, 2016). In Serbia and Pakistan, audits represent the main instrument AEMP able to suppressing AEM (Knežević et al., 2012; Tassadaq and Malik, 2015).

This study also aims to analyze whether the certified accountants' individual characteristics influence the perception of the need to mitigated AEMP. Table 3 shows that, through the correlation coefficient of the Spearman test, there is a statistically significant relationship between the certified accountant's professional experience variables and the need to mitigate the AEM ($r_s=275$; $p<.01$). The correlation is positive but considered weak. Accountants with more professional experience state that AEM should be mitigated.

The spearman test shows that there is a statistically significant relationship between the mitigation of the AEM and certified accountant's educational qualifications variables ($r_s=-.229$; $p<.01$). The correlation is negative and considered weak (Table 4). In other words, certified accountants with less academic qualifications indicate that AEM should be mitigated.

Table 3: Correlation between the professional experience of the certified accountant and AEMP's mitigation

		Professional experience	AEMP's mitigation
Spearman's rho	Professional experience	Correlation coefficient	1.000
		Sig.	.000
		N. observations	159
	AEMP's mitigation	Correlation coefficient	.275*
		Sig.	.000
		N. observations	159

Note: *Significant correlation at 5%

Table 4: Correlation between the need to AEMP's mitigation and the certified accountant's academic qualifications

		Educational qualifications	AEMP's mitigation
Spearman's rho	Educational qualifications	Correlation coefficient	1.000
		Sig.	.001
		N. observations	159
	AEMP's mitigation	Correlation coefficient	-.257*
		Sig.	.001
		N. observations	159

Note: *Significant correlation at 5%

The Mann Whitney test, for the certified accountant's gender and mitigation of AEM variables, indicates that there is no statistically significant variation in the need to mitigate the AEM taking into certified accountants' gender ($U=3.054$, $p=0.395$), for a level of significance at 5% (Table 5).

Table 5: Variation in the need to AEMP's mitigation according to the certified accountant's gender

Gender	N.	Average	Sum of
AEMP's mitigation	Female	74	5,829.00
	Male	85	6,891.50
	Total	159	
	Test statistics ^a		
AEMP's mitigation			
Mann-Whitney U		3,054.000	
Wilcoxon W		5,829.000	
Z		-.396	
Sig.		.692	

a. Grouping variable: gender of the certified accountant

In the relationship between the mitigation of the AEM and certified accountant's age variables,

Spearman's teste shows that there is no correlation ($r_s=.106$; $p=.183$), for a significance level of 5% (Table 6).

Table 6: Correlation between the need to AEMP's mitigation and the certified accountant's age

		Age	AEMP's mitigation
Spearman's rho	Age	Correlation coefficient	1.000
		Sig.	.185
		N. observations	159
	AEMP's mitigation	Correlation coefficient	.106
		Sig.	.185
		N. observations	159

Kruskal-Wallis test is used to analyze whether there are differences in the training area on the need to mitigate the AEMP perception. There are significant differences in terms of the need to

mitigate the AEMP perception regarding the certified accountants' training area ($p < .05$) (Table 7). Notably, certified accountants with training in the areas of accounting, management, and auditing are those who most agree with the need to mitigate the AEMP.

Table 7: Variation in the need to mitigate the AEMP's perception according to the certified accountants' training area

Kruskal-Wallis test			
Training area	N	Mean Position	
AEMP's mitigation	Accounting	118	85.27
	Management	14	75.50
	Finance	11	41.41
	Auditing	11	72.27
	Economics	5	70.20
	Total	159	
Test statistics ^{a,b}			
Training area – AEMP's mitigation			
Chi-square	15.801		
df	4		
Sig.	.03		

a. Kruskal Wallis' test; b. Grouping Variable: Training area

To reinforce the results presented, we proceeded to the analysis of linear regression. The results show that the adjusted R^2 value suggests that part of the dependent variable variance may be explained by two independent variables (professional experience and educational qualifications) in the regression model (Adjusted $R^2 = .218$) (Table 8). The certified accountant's professional experience has an impact on your perception about to need mitigating AEMP ($\beta = .291$; $p < .01$). Thus, it is concluded that certified accountants with more experience in the profession understand that AEMP should be mitigated. Results also indicate a statistically significant correlation between certified accountants' educational qualifications and mitigation of the AEMP's variables ($\beta = -.256$; $p < .01$). This means that certified accountants with less academic qualifications think that it is necessary to eliminate the negative effects of AEMP. On the other hand, the results show that the gender, age, and training area variables have not an impact on the mitigation of the AEMP's variables.

Table 8: Result of the multivariate linear regression model individual characteristics of the certified accountant and perception of the need mitigating EAMP

Dependent Variable	Independent Variables	Non-Standard Coefficients		Standard Coefficients		t-value	Sig.
		β	Standard Error	Beta (β)			
AEMP's mitigation (MitAEMP)	Constant	4.090	.483			8.463	.000
	Professional experience	.291	.098	.294		2.953	.004
	Gender ^b	.015	.120	.009		.126	.900
	Age	-.016	.011	-.134		-1.447	.150
	Educational qualifications	-.256	.073	-.288		-3.529	.001
	Training area	-.043	.064	-.056		-.669	.504
ANOVA ^a							
Model		Sum of squares	Df	Mean squares	F		Sig.
1	Regression	23.776	5	4.755	8.507		.000 ^a
	Residues	85.520	153	.559			
	Total	109.296	158				
Model	R	R square	R square adjusted	Standard Error of the Forecast			
1	.466 ^a	.218	.192	.748			

a. Predictors: (Constant), training area, gender, age, educational qualifications, professional experience; b. 1. Female; 2. Male

Lastly, and answering the last research question in this study, the individual characteristics of the accountants influence their perception of the need to mitigate or reduce the AEMP with the exception of the age and gender of the certified accountant. Previous studies, although in different contexts, also conclude that professional experience and educational qualifications influence certified accountants' perceptions, namely about the usefulness of financial information in decision making (Cepêda and Monteiro, 2020) and the legality of AEMP (Figueira et al., 2021). These scholars find no empirical evidence of the impact of the age and gender variables on accountants' perceptions about the topics investigated. However, the results of Figueira et al. (2021) showed that the area of training influences the perception of the legality of earnings management practice.

5. Conclusion

The change in accounting practices to report the company's real performance is not considered

earnings management unless this change is substantiated to distort FI (Vladu and Matis, 2010). Regarding the acceptability of AEM, it varies from author to author, however, it is often perceived as reprehensible (Gowthorpe and Amat, 2005), because they have a fallacious effect (Knežević et al., 2012).

This research aims to analyze the AEMP in Portugal, from the certified accountants' perspective, and the influence of their characteristics on the need to mitigate AEMP. Specifically, we analyze the development of the AEMP's practices and its impact on FI, the main hampered of this phenomenon, and the need for instruments and corporate governance mechanisms to mitigate the AEMP. Besides, the relationship between the certified accountant's characteristics is analyzed, such as gender, age, professional experience, educational qualifications, and training area with the need to mitigate the AEMP. A quantitative methodology was used, based on a questionnaire survey, reserved exclusively for certified accountants. In the statistical analysis of the data, SPSS software, version 24 is used.

Based on a sample of 159 certified accountants, the results show that the majority of respondents understand that (1) Portuguese companies develop AEMP, (2) AEMP has a significant impact on the FS, (3) the main hampered the AEMP are state, companies, and society, (4) there is a need to mitigate the AEMP and the main instruments for this are the establishment of more precise and concrete accounting standards and sanctions, in line with the results obtained in the study by Bhasin (2016), (5) and that audit committee and efficient internal control are corporate governance mechanisms AEMP's able to mitigating of AEM development, corroborating the results of Bhasin (2016), Tassadaq and Malik (2015) and Knežević et al. (2012). In addition, this research proves that certified accountants' characteristics, as professional experience and educational qualifications significantly influence their perception of the need to mitigate the AEMP. These results are in line with the Cepêda and Monteiro (2020) and Figueira et al. (2021) results.

AEM "(...) as a matter of approach, is not objectionable per se" (Sen and Inanga, 2005). Part of AEM is fundamentally based on the ingenious application of accounting standards and not on other forms of manipulation (Parada and Sanhueza, 2009). However, the introduction of unethical elements implies that the resulting FI becomes anything but true and fair (Sen and Inang, 2005). The certified accountant must exercise the profession with competence and ethics, where competence refers to doing the right thing, and ethics that is done correctly (Nogueira and Fari, 2007). Moreover, according to Waymire (2014) accounting is embedded in moral conduct.

This study will contribute to the development of the literature, given the small number of studies in this area in Portugal. On the other hand, although several studies have investigated how some accountants' personality traits interact with other variables (Triki et al., 2017), we have not identified studies at the international level that assess the effect of the individual characteristics of certified accountants on the need to mitigate AEMP.

Research is also crucial for entities that operate in accounting standardization since based on the results they can develop improvements in the accounting standards. Also, it is essential to instill knowledge in the FI users on the development of AEMP. Finally, the study proves to be essential insofar as it can alert the preparers/managers of the FS, using AEM, for the impact of a creative act that does not represent a true and fair view of the economic activity and financial position of a company so that an external user can make economic decisions based on the FS.

Throughout this research, some limitations arose. Initially, in the literature, it was found the existence of a reduced number of scientific articles referring to the scope of accounting in Portugal, which extended to the empirical study. Concerning the questionnaire survey, the reluctance of certified accountants to

complete the questionnaire stands out due to the number of responses obtained. In this sense, another limitation that should be mentioned refers to the impossibility of generalizing the conclusions of this study, since it opted for a convenience sample. Finally, another important limitation is the fact of this study only captures the certified accountants' perceptions.

Thus, about future lines of investigation, it is suggested that the present survey be applied by questionnaire to managers and auditors, and further comparison with the results obtained in this investigation. In this way, the study of the magnitude of critical accounting in Portugal is complemented through different perspectives.

Appendix A. Research instrument (questionnaire)

• Part I–Social, Demographic, and Professional Characterization:

1. Do you practice as a certified accountant?
 - 1.1. Yes
 - 1.2. No
2. How many years have you been a certified accountant? (Insert number)
3. Gender:
 - 3.1. Female
 - 3.2. Male
4. Age (Insert number)
5. Academic qualifications:
 - 5.1. Secondary education
 - 5.2. Bachelor degree
 - 5.3. Master degree
 - 5.4. PhD
 - 5.5. Other
6. Area of training:
 - 6.1. Auditing
 - 6.2. Accounting
 - 6.3. Economics
 - 6.4. Finance
 - 6.5. Management
 - 6.6. Other

• Part II–EAMP:

7. Indicate the degree of agreement with the following statements (5-point Likert scale: 1–strongly disagree; 2- disagree; 3- undecided; 4- agree; 5-strongly agree)
 - 7.1. Portuguese companies develop AEMP
 - 7.2. Taking advantage of the various options, subjectivity, and gaps in accounting standards distort the FS
 - 7.3. AEMP has a negative impact on the quality of FS
 - 7.4. AEMP must be mitigated
8. Indicate which are the main hampered by the implementation of AEM
 - 8.1. Shareholders and potential shareholders
 - 8.2. Customers
 - 8.3. Company
 - 8.4. State
 - 8.5. Society
 - 8.6. Other
9. In the Portuguese business context, indicate which are the main instruments capable of mitigating the AEMP.
 - 9.1. Code of ethics

- 9.2. Corporate governance
 9.3. Establishment of more precise and concrete accounting standards
 9.4. Sanctions
 9.5 Others
 10. Indicate the corporate governance mechanisms capable of mitigating AEM
 (5-point Likert scale: 1-ineffective; 2- less effective; 3- neutral; 4- effective; 5-very effective)
 10.1. Efficient internal control
 10.2. Audit committee
 10.3. Independent members on the board of directors
 10.4. Division of responsibilities between the CEO and the director

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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