Are auditors attenuate earnings management in private companies?

The effect of economic adjustment programmes

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***Abstract* — This study analyses the relationship between the level of earnings management and the audit of unlisted companies in two countries liable to economic adjustment programmes – Portugal and Ireland – between 2008 and 2016. The choice of these two countries lies in the fact that they both experienced strong financial assistance programmes, and it is pertinent to assess the indebtedness and earnings management phenomenon in this particular economic harsh context. In a sample of 970 unlisted companies, we find evidence of a negative relationship between the audit and the level of earnings management. We also demonstrate that during the period of time in which the financial support occurred, there was mitigation in the relationship between the level of earnings management and audit.**

Keywords – audit; earnings management; Ireland; Portugal.

I. Introduction

The quality of financial information publically issued by companies is relevant to world economy, because external users make decisions relying on and depending on that accuracy. An important part of studies on the quality of financial information has defended that the higher level of earnings management is associated to a greater financial leverage [14]; [46]; [6]; [13]; [19]; [12]; [3]; [26]. Other studies have been defending quite the opposite [4]; [29]; [5]; [39]; [9].

Though the quality of financial information and firms auditor choice has been studied in listed companies, less attention has been given to small and medium-sizes enterprises from other European countries. This way, the present study intends to approach the issue in other countries (that is to say to Portugal and Ireland) where, such as the majority of EU countries, the corporate fabric is majorly built by smaller companies. There is also the fact that the world economy has faced a deep economic and financial crisis. The private companies suffered significant impact which struck both their performance and their auditor options, forcing adjustments in the latter, imposed by the rise of financing conditions and lack of it.

The goal of this study is to analyse the relationship between the level of earnings management and the auditor choice of unlisted companies in Portugal and Ireland, two countries liable to economic adjustment programmes between 2008 and 2016. The programmes of macroeconomic adjustment constitute processes which seek not only the change of politics but also of behaviours which should be adopted by the countries, acting over variables such as consumption, investment and imports, to increase competition after periods of great shock [1] . Thus, from November 2010, Ireland would be the first country to seek the adjustment programme, leaving it successfully in December 2013. Portugal would follow a similar programme in the first semester of 2011, marking its exit, also successfully, in May 2014 [20].

In a sample of 970 unlisted companies from both countries, and according to the method of accruals, whose discretionary component was obtained by four models originated in Jones (1991), we found evidence that there is a positive relationship between the audit and the level of earnings management, also concluding that this relationship was different in both countries. We also demonstrate that in the period when the financial help programmes occurred, there was a decrease on the relationship between the level of earnings management and audit.

Prior literature has produced divergent conclusions as far as the relationship between the level of earnings management and audit is concerned. The present investigation contributes to previously published literature so as to understand if more recent data clearly distinguish one of those options, never neglecting that it is totally impossible to exclude the impact of many of the context variables that have suffered changes in the meantime (between this period of time), namely the central banks monetary policy decisions, accounting standards which stop the struggle of the strength of the economy, the experience accumulated by the financial markets / financing entities and the consequent evolution of financing contracts. This work also contributes to regulatory institutions, because it gives some more data on the behaviour of companies in what earnings management action is concerned, information they might add to their hazard analysis and to regulatory bodies which seek a more robust and rigorous frame of regulation.

This study is structured as follows: after the introduction, the second chapter presents the literature review and the development of the hypothesis. The third chapter presents the research design and the fourth chapter, the obtained results. This study ends with the presentation of the conclusions.

II. Literature review and hipothesys

A. *Earnings management and the audit*

The issue of information asymmetry related to the interaction of companies with their external partners, namely with investors, has recurrently been discussed. Previous studies let us understand that this asymmetry will tend to grow once the quality of financial information decreases [18]. The financial and accounting information thus leads a crucial role in decisions of capital allocation (Bhattacharya et al., 2013). [41] add that that same allocation will be inefficient if it is done based on information of low level of quality.

The interest shared by auditors, partners, investors and the academic community, among others, illustrates well the relevance of this topic. The research based on it has also been fertile, with a long list of contributions, of which we highlight the overview done by [41] and [11].

There has also been a similar effort carried by the regulatory bodies, through the creation of legal frameworks which promote a strengthening on the quality of the accounting procedure and of the financial report. Both the International Accounting Standards Board (IASB) and the Financial Accountig Standards Board, internationally speaking (FASB)1, and the Accounting Standardisation Commission (CNC)2 and the Irish Auditing & Accounting Supervisory Authority (IAASA), in the specific case of the countries focussed on this study, which demonstrate well the pursuit of this goal.

Several studies have been analyzing the effect of auditing on earnings management in general and on the level of accruals in particular. [16] conclude that the companies whose accounts are audited show greater differences between the accounting result and the tax result, particularly those that are audited by one of the four largest professional services networks in the world (EY, PwC, Deloitte and KPMG).

[37] affirm that auditors avoid certain accounting manipulations and restrict the earnings management. [8] prove that audited companies have lower accruals when compared to unaudited companies, concluding that the audit increases the quality of the information and that companies are less prone to earnings management.

Also [35] conclude that the adjustments proposed by the audit teams lead to the reduction of accruals, that is, they present more appropriate balances and the financial statements present a more suitable position of the company, free of manipulations.

H1: There is a negative relationship between the level of debt and earnings management.

Earnings management and the backgroung of the crisis

In a contextual insight, bearing in mind that the analysis period in the present study includes years of strong economic distress, it is important to analyse the evolution of earnings management in this scenario.

[27] summarize that in more difficult economic times, there is more caution on the part of investors, who, attentive to possible maneuvers of distortion of information, end up taking some emphasis from the financial statements. Therefore, the incentives for practice of results management are, of course, lower. [33] provide evidence that, for a variety of reasons, investor confidence in the quality of financial information declined during the crisis, although previous studies point to a reduction in the practice of results management with positive effects on the quality of financial reporting period.

The strengthening of laws as far as accounting and financial procedures are concerned, along with risk analysis empowerment by investors/financiers and research contributions have also had a crucial role in the decrease of the levels of earnings management [25].

Another pertinent issue is about the use of periods of crisis to report poorer performances, allowing the presentation of surprisingly positive results in the following years. Big bath is a technique which is led by discretionary accruals; its goal is to presume that possible poor results are connected to poor economic moments. In [33], the crisis may build an opportunity for the spread of acts of manipulation of results.

Yet, the opposite also seems plausible, according to the argumentation of [33]: the companies might be lured to introduce practice of Big Bath Behaviour, taking advantage of least favourable economic periods, leading to a greater proliferation of EM in this context.

Hence, once our study looks upon a period of particularly hard years from an economic point of view, as a result of the appliance of economic adjustment programmes, we formulate the following research hypothesis:

H2: The positive relationship between indebtedness and earnings management is softened in periods of economic adjustment programmes.

Part of Ireland's strategy to attract investment in the recent decades is based on an attractive law policy from a business perspective. Ireland has been able to attract many companies to set up in its market, many of those of a relevant size and with global operations. This reality has produced several changes in the business fabric, and one of them is without a doubt the increase of the average size of companies which contribute for its economy, differing a little from the Portuguese reality, as far as this is concerned.

Larger companies regularly use EM to control political costs which come from their dimension, as [45], [48] and [47] focus. Evidence given by [40] say that larger companies have distinct behaviour as far as financing is concerned, as it is also defended by [22]. On the other hand, the increased size is mentioned by many (e.g., [24] e [17c]) as a disincentive to EM, due to the greater level of exposure and scrutiny that those kind of companies are subjected to.

The contingency theory offers an alternative model of organisational performance, which defends the idea that appropriate management decisions and actions depend on specific characteristics of each situation. This theory is particularly relevant to studies on accounting which follow several countries, because it overcomes the companies' features and considers the impact of those cultural and institutional

[1] Check, for instance, Statement of Financial Accounting Concepts Nr.1 (SFAC 1) in FASB.

[2] Check, for instance, Conceptual Structure of SNC – Warning nr. 15652/2009, September 7- Série II – nr. 173.

contexts on accounting practices. Previous literature offers empirical evidence that an institutional context of the country influences the quality of financial statement, being the greatest quality interpreted as the poorer earnings management (for instance, [2]; [36]; [21]; [23]). These assertions lead us to the formulation of our last research hypothesis:

H3: The relationship between the level of indebtedness and of earnings management is different among Portugal and Ireland.

III. Research Design

Before you begin to format your paper, first write and save the content as a separate text file. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads-the template will do that for you.

Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar:

A. Sample

The data was taken from Amadeus database, which belongs to Bureau Van Dijk group (BvD), between 2008 and 2016. This research has determined a total of 35 547 companies. Afterwards, we have eliminated the companies which didn't provide enough information for the calculation of the pertinent variables, which reduced the sample to 1031 companies.

B. Dependent variable

In order to measure earnings management we use accruals-based metrics. Accruals are likely to capture evidence of earnings management because they reflect managers' accounting estimates and accounting choices (e.g., [10]; [12]; [36]; Larcker and Richardson, 2004; [32]; [30]).

The magnitude of cross-sectional absolute discretionary accruals is calculated based on estimated abnormal accruals, where estimated abnormal accruals are defined as total accruals minus estimated normal accruals. Estimated normal accruals are determined from the Jones model [30]. We use the absolute value of discretionary accruals, ABS_DA, as the dependent variable to proxy for earnings management in the regression model

A higher magnitude of cross-sectional absolute abnormal accruals indicates a greater level of earnings management, or lower accounting quality. In the present study, three additional models apart from the original model were estimated: Modified Jones Model suggested by [10], Cash-Flow Jones Model developed by [31], and Performance Matched Model developed by [32].

Independent variables

The main independent variable of this study is the audit (AUD). Audit is defines as dummy variable that take value 1 if auditor is hired and 0 otherwise for firm.

A dummy variable was created, named ADJPR (Adjustment Programme), which allows controlling the effects of the readjustment period earlier referred to, whose value equals to one for the years of adjustment and a value equal to zero for the rest of the years.

To analyse whether the relationship between the use of earnings management and audit is softened during the economic adjustment programmes applied to Portugal and Ireland, a interaction variable was created, named ADJPR*AUD.

To reflect differences of earnings management in two countries, we create dummy variables COUNTRY that defines as 1 for Irland and 0 for Portugal.

We have selected, as variables of control, some aspects of corporate reality which simultaneously influence the level of EM, and that have earlier been followed by many researchers, such as [44] and [26], just to mention a few. They have found relationships in different ways between financial leverage (LEV), size (SIZE), profitability (PROF), growth (GROW) and earnings management. There is also those who add the level of tangible fixed actives as a preferable variable to measure EM (e.g., [28]), an option that we too have chosen to follow.

According to previous studies, the financial leverage variable (LEV) has differed, as there are those who prefer considering only the long term debt over the total active as a ratio (e.g., [5]). Other studies, for instance, [44], divide the total of the financial debt (which consists of long and short term debt) by equity. In the present study we defined the debt variable according to [26], by dividing the total passive for the total active.

The variable firm size (SIZE) goes beyond reflecting political sensitivity and its consequences (namely a more regular tool to EM by larger companies in order to control the inherent political costs which come from its size), mentioned by [45], because larger companies tend to show specific behaviour in what indebtedness is concerned, according to their ability to access different sources of investment and growing to remain in higher financial leverage standards ([40]). Size is focussed on many studies (e.g., [17] and [24]) as a discouragement of EM, because of the higher level of exposure and scrutiny that companies in this condition are subjected to. The calculation of the variable SIZE is done through the natural logarithm of the total active.

The ability to generate positive earnings, catalist for self-financing, allows greater Independence in what external financing is concerned, and at the same time puts companies in more comfortable situations in accessing it, in terms of negotiating. [40] also prove that more profitable companies are most likely less leveraged. The same authors determine profitability (PROF) through the quotient EBITDA / Total Actives, option that we have also chosen for our research.

The level of tangible actives (TANG) is also essential, equally important, in the path of securing financing. One of the main reasons lays on the fact that these actives may easily be changed [40]. The works of [43], [22] and [40] confirm these inferences. The ratio Tangible Fixed Actives / Total Actives was a factor to take into account the calculation of TANG, as [7] had noticed, among other authors.

We also add another variable of control, growth (GROW), which corresponds to the growth rate of the companies in the sample, calculated through the percentage variation of the total active, copying [34]. Besides being a motivation for earnings management itself, this also allows to help the control of the effects of different performances between companies. Finally, we consider variable INDUSTRY for industry dummies.

C. The Model

As the main goal of this study is to analyse the relationship between the audit and the EM practice, we have developed the following model:

$$EM_{i,t} = \alpha_0 + \beta_1 AUD_{i,t} + \beta_2 ADJPR{*}AUD_{i,t} + \beta_3 LEV_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 PROF_{i,t} + \beta_6 TANG_{i,t} + \beta_7 GROW_{i,t} + \beta_8 COUNTRY_{i,t} + +\beta_9 INDUSTRY_{i,t} \quad (1)$$

Where:

$EM_{i,t}$ = Level of Earnings Management of company i during t
$AUD_{i,t}$ = Is the dummy variable that take value 1 if auditor is hired and 0 otherwise for company i during t.
$ADJPR{*}AUD_{i,t}$ = Is the interaction variable that result for multiplication of ADJPR * AUD.
$LEV_{i,t}$ = Level of financial leverage of company i during t.
$SIZE_{i,t}$ = Logarithm natural of total of assets of company i during t.
$ROA_{i,t}$ = Net income deflated by total assets of company i during t.
$TANG^{i,t}$ = Is the tangible assets deflated by total assets of company i during t
$GROW_{i,t}$ = Is the change of sales from t to t- of company i during t.
$COUNTRY_{i,t}$ = Is the dummy variable that take value 1 for Ireland and 0 for Portugal.
$INDUSTRY_{i,t}$ = Is the dummy variable for each industries.

IV. RESULTS

A. Descriptive statistics

The average values for each of the variables presents in the model, as well as other descriptive measures of statistic relevance, are presented in Table 1.

TABLE I. DESCRIPTIVE STATISTICS FOR CONTINUOUS VARIABLES

Variable	**Medium**	**Median**	**Standard deviation**	**Minimum**	**Maximum**
EM-OJ	0.099	0.061	0.134	0.000	4.808
EM-MJ	0.098	0.060	0.142	0.000	4.733
EM-CFJ	0.099	0.063	0.138	0.000	4.593
EM-PMJ	0.096	0.060	0.139	0.000	4.864
LEV	0.764	0.691	0.875	-0.053	29.137
PROF	0.002	0.013	0.170	-5.9742	1.452
SIZE	6.561	6.364	1.739	1.799	12.166
TANG	0.347	0.287	0.277	0.000	0.999
GROW	-0.003	-0.001	0.237	-6.714	0.942
Number of observation is 8730.					

a. Self elaboration

The level of EM measured by the four models presents averages around 9.9% similar to the values presented by [36] for Portuguese companies, with averages around approximately 7.5% and 12%, as foreseen by the study of [15]. Such as in [26], the main independent variable, which finds the financial leverage level, presents a relatively high average value, in our case even higher, with a value around 76%. The average profitability below 1% and the negative growth rate partially justify the economic hard period of the years studied. The average level of tangible actives rested at 34.7%, in rough terms.

B. Regression results

Table 2 demonstrates the results obtained on the estimation of the model (1) for the total of the sample. The results show, with significant statistic (a level of 0.01), a positive relationship between the level of EM and the firm audit. We infer that this relationship show the same level of significance in all the other estimation models, that is to say, for the four variants of the EM variable (EM-OJ, EM-MJ, EM-CFJ, EM-PMJ). Our results indicates that audit of firms will be positively related to higher levels of earnings management, that not confirm our first hypothesis developed in this study.

TABLE II. RELATIONSHIP BETWEEN AUDIT AND EARNINGS MANAGEMENT

	EM-OJ	EM-MJ	EM-CFJ	EM-PMJ
AUD	0.015**	0.015**	0.015**	0.016**
	(2.171)	(2.456)	(2.765)	(2.567)
ADJPR*AUD	-0.016***	-0.016***	-0.017***	-0.016***
	(-5.786)	(-5.687)	(-5.697)	(-5.687)
LEV	0.024***	0.025***	0.0220***	0.0223***
	(13.134)	(13.073)	(11.938)	(12.116)
SIZE	-0.009***	-0.009***	-0.009***	-0.008***
	(-10.364)	(-9.996)	(-10.480)	(-9.742)
TANG	-0.067***	-0.067***	-0.072***	-0.067***
	(-12.920)	(-12.625)	(-13.912)	(-12.971)
GROW	0.057***	0.060***	0.050***	0.064***
	(8.903)	(9.078)	(7.878)	(9.957)
PROF	-0.067***	-0.069***	-0.0449***	-0.038***
	(-6.342)	(-6.400)	(-4.665)	(-2.643)
COUNTRY	-0.019**	-0.018**	-0.015**	-0.011**
	(-2.554)	(-2.313)	(-2.067)	(-2.770)
INDUSTRY	Yes	Yes	Yes	Yes
Adj R^2	0.095	0.095	0.094	0.093
N	8730	8730	8730	8730

*, **, e *** statistically significant for a level of significance of 0.1, 0.05 e 0.01 respectively.

a. Self elaboration

The second hypothesis of the study intends to analyse whether the relationship between the use of earnings management and firms audit is softened during the economic adjustment programmes applied to Portugal and Ireland. As indicates in Table 2, in all estimations, the coefficient is negative, which allows the conclusion that the relationship between the level of EM and the audit is attenuate in the adjustment period. The second research hypothesis was validated, and indicates that external enforcement (i.e. adjustment programs) is more effective controlling for earnings management, than firms audit.

The third hypothesis of the study intends to testing the level of earnings management between Ireland and Portugal. The results show that in Ireland the level of EM is lower than the one in Portugal, with approximate coefficients of 0.019 at the 0.05 level of significance. Consequently, we confirm our hypothesis

3, validating that the relationship between the level of EM is not the same in Portugal as in Ireland, for the companies which we include in our sample.

Finally, our results indicates that the variable leverage (LEV) is significantly and positive associated to earnings management, which indicates that more debt companies related poorer earnings quality. The variable size (SIZE) is negatively associated to earnings management, which indicates that smaller companies tend to use EM more than larger companies. The same is proven in what the profitability variable (PROF) is concerned, indicating that less profitable companies use EM more than those which are more profitable. These conclusions corroborate previous ones, namely by [17]. Furthermore, we have the growth rate variable (GROW) which presents a positive relationship with EM, meaning that companies with higher growth rates are more likely to manipulate their earnings, such as [38], [42] and again [17] had said. Finally, the negative association between the level of fixed tangible actives (TANG) and EM found, is in accordance with [22], [40], [28] and [43], and allows us to conclude that to a lower level of tangible fixed actives (AFT) corresponds a higher level of EM.

V. Conclusions

The present study analyses the relationship between the auditors of firms and the level of earnings management, practised by Portuguese and Irish private companies between 2008 and 2016. The choice of these two countries lies on the fact that they both experienced strong financial assistance programmes, and it is pertinent to assess the indebtedness and earnings management phenomenon in this particularly economic harsh context.

The main results of the study demonstrate that the fact of having an auditor in private companies is associated with stronger the level of earnings management. Additionally, the results show that earnings management is softened in the economic adjustment period, which is similar to what was found by [27] and [33], for periods of economic retraction. Finally, this study concluded that there is a difference of levels of earnings management amongst Portugal and Ireland.

For future studies it should be interesting to include other countries subjected to adjustment programmes in the sample. Greece and Spain would utterly be good candidates for that. In addition, the few years after the adjustment programmes are obviously insufficient to allow a post-adjustment analysis, which would be relevant to understand whether the conclusions expounded would maintain. Future studies may research those effects.

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