INSTITUTO POLITÉCNICO DE LISBOA
INSTITUTO SUPERIOR DE CONTABILIDADE
E ADMINISTRAÇÃO DE LISBOA

INCOME TAX OF PORTUGUESE LISTED COMPANIES IN FINANCIAL AND CORPORATE SOCIAL RESPONSIBILITY REPORTS

Julija Petkevica Cassiano Neves

Lisbon, October 2016

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Master thesis presented to the Lisbon Superior Institute of Accounting and Administration for the purpose of meeting the necessary criteria inherent to the qualification for the degree of Master in Accounting, conducted under the scientific instruction of Professor Fábio Henrique Ferreira de Albuquerque, associate professor of the scientific field of Accounting and Auditing.

Jury members:
President: Profª. Doutora Paula Gomes dos Santos
Opponent: Prof. Doutor Carlos Pedro dos Santos Pinho
Member: Prof. Doutor Fábio Ferreira de Albuquerque

Lisbon, October 2016

I declare I am the author of this thesis, which is thereby an original and unpublished work never submitted (wholly or partially) to any other institution of higher education for the purposes of obtaining an academic degree or qualification. I also declare that all the citations are duly identified and referred. I add that I am conscious of plagiarism, i.e. the use of the work of someone else without due reference to the author, is a serious ethics violation, which may lead to the present thesis being considered null.

EPIGRAFH

“I like to pay taxes. With them, I buy civilization”

Oliver Wendell Holmes, Jr.

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ABSTRACT

The present master thesis analyses disclosure of information related to income taxes and effective tax rate in Portugal specifically from the social corporate responsibility perspective, in terms of their evolution and explanatory factors. The population of this research comprises the entities admitted to negotiation in the Portuguese Stock Index (PSI) 20 of *Lisbon Euronext*, in relation to which two publicly available sources are used: the annual consolidated financial reports and the social responsibility reports. The period from 2010 to 2014 was covered by this research, which constructs two disclosure indices and the effective tax rate as dependent variables. The size, profitability, leverage and sector are chosen as independent variables, as well as the effective tax rate, in this last case only in what concerns the disclosure indices as dependent variables of this study. Based on descriptive analysis and non-parametrical bivariate techniques, the data generally show a slow evolution as regards the disclosure indices as well as a relative stability as regards the effective tax rate. Next, the application of multivariate logistical analysis techniques demonstrates the existence of the correlation between disclosure indices and size (positive), leverage (negative) and sector (negative). For the effective tax rate, only the sector revealed significant positive correlation.

Keywords: Income taxes; Disclosure; Corporate social responsibility; Effective tax rate.

RESUMO

A presente dissertação analisa a divulgação de informação relativa aos impostos sobre o rendimento e a taxa efetiva desse mesmo imposto em Portugal, em termos de evolução e fatores explicativos, particularmente sob o ponto de vista da ligação dessa matéria com a responsabilidade social empresarial. O universo deste estudo é constituído pelas entidades com ações admitidas à negociação no índice *Portuguese Stock Index* (PSI) 20 da *Lisbon Euronext*, tendo sido utilizadas duas fontes de informação publicamente disponíveis: o relatório e contas anuais consolidadas e o relato sobre a responsabilidade social. O período do estudo compreende os anos de 2010 a 2014, tendo-se selecionado como variáveis dependentes dois índices de divulgação e a taxa efetiva de imposto sobre o rendimento. Como variáveis independentes, foram selecionados a dimensão, a rendibilidade, o endividamento, o setor de atividade, bem como a taxa efetiva de imposto sobre o rendimento, nesse último caso apenas no que concerne aos índices de divulgação como variáveis dependentes deste estudo. A partir de técnicas não paramétricas bivariadas constatou-se, em geral, uma evolução pouco expressiva dos índices de divulgação, assim como uma relativa estabilidade da taxa efetiva de imposto sobre o rendimento. Tendo em conta a utilização de técnicas de regressão logística multivariada, constatou-se a existência de um relacionamento significativo entre o índice de divulgação total e os fatores explicativos dimensão (positivo), endividamento (negativo) e o setor de atividade (negativo). Relativamente à taxa efetiva de imposto, apenas o setor de atividade apresentou-se significativa e positivamente associado com a referida variável dependente.

Palavras-chave: Impostos sobre rendimento; Divulgação; Responsabilidade social; Taxa efetiva de imposto.

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ABBREVIATIONS

ASC – Accounting Standards Codification

CNC – Comissão de Normalização Contabilística

CSR – Corporate Social Responsibility

BEPS – Base Erosion and Profit Shifting

Draft IFRIC Interpretation – International Financial Reporting Interpretations Committee's Interpretation DI/2015/1 *Uncertainty over Income Tax Treatments*

EFRAG – European Financial Reporting Advisory Group

ETR – effective tax rate

EU – European Union

FAS – Financial Accounting Standard

FASB – Financial Accounting Standards Board

FIN – Financial Accounting Standards Board Interpretation

G20 – the Group of Twenty

GAAP – generally accepted accounting principles

GRI – Global Reporting Initiative

GRI G4 Guidelines – Global Reporting Initiative G4 Guidelines

IAS – International Accounting Standard

IASB - International Accounting Standards Board

IASC – International Accounting Standards Committee

IFRIC – International Financial Reporting Interpretations Committee

IFRS – International Financial Reporting Standards

ITD – Income Tax Disclosure

NCRF - Norma Contabilística e de Relato Financeiro

NGO - Non-Governmental Organisation

OECD - Organisation for Economic Cooperation and Development

OECD Guidelines – OECD Guidelines for Multinational Enterprises

PSI – Portuguese Stock Index

SFAS – Statement of Financial Accounting Standard

UN - United Nations

US - United States of America

1. INTRODUCTION

If one looks at the whole known history of humankind, corporate social responsibility (CSR) is a relatively new phenomenon (Wells, 2002). There are many views on what is exactly constitutes CSR and whether one should apply any limits to this phenomenon (see, for example, Garriga & Melé, 2004). We are living in a world where technology is rapidly developing, taking all other aspects of human life with it, including the phenomena which emerged with the industrial revolution and subsequent globalisation.

As CSR is a part of our life subject to constant change, we hardly can set any limits to it and the concept will take different shape each time there is a significant change in the corporate world. In this way, CSR has been developing and is changing over the time of its existence. From environmental concerns, human rights, health and safety we see the development to respecting the legal order and, lately, we see that paying taxes is already being looked at as an element of CSR.

On one hand, income taxes are an element of financial reporting, virtually always present, since public finances and tax is a constitutive element of the most of modern societies and states. Contributing to the public finances is clearly part of how business contributes to society, its sustainability, its development and well-being. The other perspective, which is also embedded in the financial reporting, is that tax appears to be and may feel like a cost. In line with the basic laws of commerce and business, there is an effort to reduce the costs in search of more efficient profit-making.

These two approaches are being discussed in media and at the academic level. The debate has been even more prominent after the global financial crisis of 2008, conditioned by the slow economic recovery and the budgetary needs of many countries. As Avi-Jonah puts it, the question is “whether publicly traded U.S. corporations owe a duty to their shareholders to minimize their corporate tax burden through any legal means, or if instead, strategic behaviours like aggressive tax-motivated transactions are inconsistent with CSR” (2014:2). According to Scheiwiller and Symons (2014), who are discussing tax and CSR in an article published the OECD Observer online, “the groups campaigning on tax would like to see a change in reporting standards to require companies to report their tax affairs in much more detail in their accounts, essentially a profit and loss account, assets and tax charge for every country where they operate, known as country-by-country reporting".

These two leading forces give an impetus to the debate, scientific research and development in the field. As will be clear from further discussion, it looks that nowadays there seems to be already an agreement that paying tax has already started to develop as a CSR issue. Some companies have started to include tax payments as one of the issues discussed in their CSR reports. Scheiwiller and Symons (ibid.) give the example of the mining giant Anglo American: the total tax contribution by country is reported in CSR reports as part of their economic dimension, including all the different taxes paid and collected and explaining how all these taxes are generated across the life-cycle of a mining project, showing that two thirds of their tax payments are made in developing countries.

The inclusion of tax as an aspect for CSR reporting is indeed presenting tax information in a way that is easy to understand. Notwithstanding, taking into account that no international and/or mandatory standards effectively exist in this regard, the information highlighted in CSR reports might be selective information cherry-picked by the reporting entity. The financial reporting standards, on the other hand, provide for certain minimum mandatory reporting and disclosure on income tax matters.

Hence, assuming that tax is certainly developing into the CSR issue nowadays, it appears interesting to investigate the current financial and CSR reporting rules as well as the disclosure of the CSR-useful tax information in annual accounts and CSR reports in Portugal.

1.1. Object and purpose of the research

Under an empirical perspective, this master thesis aims to investigate the disclosure matters and effective income tax rate related to tax on income or corporate tax[1], particularly from the perspective of CSR. To this end, the practices based on accounting

[1] The terms "corporate tax" or "income tax" will be used interchangeably throughout this master thesis.

standards as well as social responsibility guidelines will be examined and, in this sense, the CSR reports will be used as another source, in addition to the usual analysis exclusively based on the annual consolidated reports.

However, in a broader perspective, the objectives of the research shall be twofold, as follows:

- First, the research will evaluate the existing accounting standards and social responsibility reporting rules in terms of whether these rules provide for sufficient disclosure in order to enable the users of the information to evaluate (i) the financial position of a company from the tax exposure perspective and (ii) assess the corporate responsibility of a company from the perspective of paying its "fair share" of tax bill, both items capable of eventually influencing the decisions of the users of financial information and decisions and opinions of the widest range of stakeholders;
- Second, the research will attempt, on a limited basis, to obtain a practical insight into the disclosure related to tax matters, including reporting of the effective tax burden, from the "fair share contribution" and CSR perspectives in Portugal, focusing on the companies included in the Portuguese Stock Index (PSI) 20 of Lisbon Euronext.

Due to the limitations inherent in the requirements applicable to a master thesis, the object of the research is not to provide an exhaustive research of all perspectives that are related to the issue of accounting and reporting of corporate and deferred taxes, corporate taxation itself, or corporate disclosures. On the one hand, the present research will be limited to the identification and analysis of the income tax reporting disclosure requirements relevant from the CSR standpoint. On the other hand, and from the CSR reporting perspective, the thesis will only focus on the disclosure requirements related to taxation (if any). Consequently, the research of any social aspects of the reporting for income taxes that touch upon business ethics, concurrent international scandals on profit shifting, tax planning or tax avoidance concepts, national tax and accounting rules in different countries other than Portugal, falls outside of the scope of the present work.

In this way, the research of accounting rules will be limited to the research of international standards and interpretations issued by International Accounting Standards Board (IASB), Financial Accounting Standards Board (FASB) and the standards and interpretations issued by the Portuguese Accounting Standards Board (*Comissão de Normalização Contabilística* or CNC, in the Portuguese acronym). Here, the objective will be to provide an overview of disclosure requirements and to identify those requirements that are most relevant from the CSR perspective. The identified requirements will be selected for the construction of the specific reporting indices used in the practical part of the research of the CSR-related income tax disclosure by the PSI 20 entities.

Next, the research of CSR reporting rules will focus on the main standards used by enterprises worldwide, namely United Nations (UN) Global Compact, Global Reporting Initiative (GRI) G4 Sustainability Guidelines (GRI G4 Guidelines) and the Organisation's for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises (OECD Guidelines). The objective of this part of the research will be to ascertain whether any of these organisations considers income tax as a matter of CSR and if, as a consequence, there are any standards related to reporting on income tax as one of the sustainability factors.

Further, the subsidiary aim of the present thesis is to explore the national and international academic literature on the subject of reporting for income taxes and the disclosure of such information from the CSR standpoint.

Finally, the practical part of the research aims to illustrate the CSR-related income tax information disclosure in Portugal within the range of companies restricted to Portuguese companies included in PSI 20 in 5-year time span from 2010 to 2014. To this end, specific information disclosure indices will be elaborated and applied to the financial as well as sustainability (CSR) reports of the companies, with the purpose to identify the level of the disclosure related to income tax matters from the CSR perspective. Based on those indices, this thesis also aims at the identification of variables that may have an impact on the level of disclosure related to income taxes from the CSR perspective.

Based on the foregoing, the overall purpose of the present work is to contribute to and develop, on the one hand, the existing national research on the disclosure of income tax matters and CSR reporting in Portugal. As will be demonstrated further by the review of the academic literature, the current research is more specific in comparison to the previous more general national research available both on the income tax disclosure and reporting and CSR reporting. Namely, taking into consideration the CSR angle of the present research, this work presents a novelty at the level of national academic research by putting income tax reporting and disclosure as a subject of CSR, and exploring the level of income tax disclosure as a CSR matter at the level of the most influential Portuguese companies. Also, no identical international research has been available to the author at the time of the submission of the present master thesis. In this way, this thesis will represent a novel contribution to the existing national academic research and available international research.

1.2. Reasons for the choice of the topic

Tax, fair share, transparency and tax avoidance issues have been increasingly debated during the recent years. Tax and Base Erosion and Profit Shifting (BEPS) are constantly on the agenda of the Group of Twenty (G20), OECD, the European Commission, non-governmental organisations (NGOs) and of the national governments, to name a few. The international and national effort against income tax avoidance and tax minimisation strategies employed by multinational corporations in the increasingly global world has grown into the important political issue and news topic nationally and globally.

The fruit of the joint effort is emerging: the European Commission has opened in-depth investigations to examine the corporate income tax payments of several multinationals and has recently declared illegal the arrangements in place for Starbucks (in the Netherlands) and Fiat (in Luxembourg) (European Comission, 2015); Apple case still to be decided (European Commission, 2014); Belgian excess profit regime has been also condemned with millions of euros to be paid back in tax by multinationals (European Commission, 2016). In the United States of America (US) the discussion of the international tax policy reform is on-going. The US authorities have been recently reported to be more harsh in the tax audits of the multinationals, including the recent 2015 Coca-Cola assessment (Bloomberg, 2015).

Tax paid by companies operating globally and their tax planning has been also a topic in Portugal (Pedro, 2013; Venâncio, 2012a; Venâncio, 2012b) on several occasions. In 2015, the Portuguese government adopted a plan to combat tax evasion, in which the international tax evasion is specifically noted (Governo de Portugal, 2015).

In this context, the need for transparency and social responsibility are the cornerstone topics within this global debate. The OECD through its Global Forum on Transparency and Exchange of Information created in the early 2000ties, the various national examples of mandatory disclosure of tax schemes and arrangements (the Portuguese Decree-Law no.º 29/2008 on mandatory disclosure of schemes targeted on obtaining tax advantages is an example of this global trend), the OECD BEPS project and the effort at the European Union (EU) level are all directed to improve the ability of governments and, in some cases, the society, to access information on taxpayers transactions and potential tax planning. However, it seems that currently the international effort directed to transparency has missed the financial and social aspect of transparency, which could to a certain extent be covered in the financial statements or CSR reports.

Transparency is directly related to disclosure. As far as transparency in financial statements is concerned, the existing most influential financial standards, such as International Financial Reporting Standards (IFRSs: here and elsewhere in this work, the term IFRS is used to cover International Accounting Standards (IASs) issued previously by International Accounting Standards Committee) and the US Statements of Financial Accounting Standards (SFASs), require certain disclosures while reporting for income taxes, which should provide the users of the financial statements with the most relevant and significant information regarding income tax obligations of an entity. It must be noted that the FASB Statement no. 109 (SFAS 109) and its interpretation FIN 48 "Accounting Uncertainty in Income Taxes" adopted in 2006, discussed in the Chapter 2 below, is viewed as a first step undertaken in the US to further increase transparency and information given to the users of financial statements on more sensitive information regarding income tax obligations, which could indicate on the degree of the corporate income tax aggressiveness of a given corporation. Tax aggressiveness, in its turn, is generally negatively viewed from the CSR standpoint.

Following the example of the US, the IFRS Interpretations Committee is currently discussing a Draft Interpretation "The Impact of uncertainty when an entity recognises and measures a current tax liability or asset" (IFRS Foundation, 2015). As of the date of submission of the present master thesis, the IASB Draft Interpretation has been already released (in October 2015) with numerous comments received and already available of the organisation's website. The Draft Interpretation is discussed in due detail in the section devoted to the IFRSs below, but it does not impose any additional disclosure obligations and the potential effects of the adoption of the interpretation are discussed further.

There have been several other suggestions for improvements in disclosure on relevant corporate tax matters (namely, regarding tax strategies, facilitating understanding of the effective tax rate, statutory and effective rate reconciliation) by European Financial Reporting Advisory Group (EFRAG) and the United Kingdom Accounting Standards Board in their joint discussion paper "Improving the Financial Reporting of Income Tax" (EFRAG, 2011). The purpose of the discussion paper was to stimulate debate on the issues presented and to assist the IASB in making progress with its income tax project, which, however, has been put on hold by the IASB in 2009.

In Portugal, although the financial statements of the Portuguese companies have come under the scrutiny of the NGOs (see Fernandez, Mcgauran & Frederik, 2013) and the press (Pereira, 2012; Venâncio, 2012a) from the perspective of potential tax avoidance, no national academic discussion has arisen yet as regards their transparency in financial or CSR reporting.

In this context, it appears novel to undertake a comparative research of the existing and draft FASB, IASB and the Portuguese national mandatory standards and interpretations on information disclosure as regards income tax, focusing on the disclosure requirements that would be most important from the CSR and transparency perspective, or in other words, which could give the users of the financial information the necessary data to make a judgement on the CSR behaviour of a given company in terms of income tax responsibility. Such information could include, for example, effective income tax due or paid, prior year adjustments of income tax charge, reconciliation of the statutory and effective tax rates, reporting income tax geographically, disclosure of income tax contingencies, uncertainty in income tax and other aspects, which will be examined in the analysis of the referred financial standards.

Next, as far as CSR reporting is concerned, the academic research on whether corporate income tax is a subject for CSR reporting, on the payment of fair share of tax and tax avoidance as an irresponsible CSR activity is yet emerging (see, for example, Dowling, 2013; Hoi, Wu, & Zhang, 2013; Preuss, 2012; Ylönen & Laine, 2014). As will be shown in the theoretical background, throughout the review of the financial standards referred to above and academic literature, the studies undertaken until now have indeed discussed the aspects of existence of the potential tax avoidance and empirical CSR reporting for income tax (see, e.g., Avi-Yonah, 2008; Dowling, 2013; Jenkins, J. G., & Sawyers, 2002; Preuss, 2012). However, possibly for the reason of income tax at this stage being still labelled as an "emerging" CSR matter, no general and comprehensive overview has been so far undertaken to ascertain whether any of the most influential CSR reporting standards published by the UN, GRI and OECD recognise and/or mention income tax as a social responsibility item in their recommendations for CSR reporting.

In this sense and considering the issues mentioned before, it would not be justified to require income tax to be a matter of CSR reporting if income tax is not an item noted in the recommendations of the most influential bodies issuing guidelines for CSR reporting worldwide. Therefore, first theoretical analysis of the existing CSR reporting guidelines (UN Global Compact, the GRI G4 Guidelines and the OECD Guidelines) is indispensable for the purposes of the topic chosen for the thesis.

Based on the topics previously mentioned, the main reasons for the choice of the topic may be summarised as follows:

- First, corporate income tax payments, tax planning and tax avoidance is an issue that has been taken from national to international level. There are a lot of changes going on regarding increasing transparency and combatting BEPS at the G20, OECD, EU and generally international level;
- Second, income tax is increasingly becoming to be viewed as a CSR matter;
- Third, perhaps taking into account that these developments are recent, the academic research has lagged behind in terms of linking income tax or CSR reporting and income tax payment as a CSR factor on a comprehensive basis.

These reasons provide compelling and sufficient background for conducting theoretical and practical research in this field.

1.3. Structure of the thesis

The present master thesis is divided into five chapters.

The first chapter, the Introduction, has just provided the introductory background, outlining the objectives of the research, its underlying reasons and will continue with an insight into the structure of the thesis, devoting a section to each of these matters.

The second chapter, Theoretical Background and Literature Review, consists of three sections. The first section is designed to deal with the mandatory financial reporting standards regarding the disclosure requirements related to income taxation. It also discusses the income tax disclosures required in the standards issued by IASB, FASB and by the Portuguese accounting standards and elaborates as to which of them would be the most relevant disclosures from the CSR perspective. The second section of the same Chapter gives an overview of the most influential CSR reporting standards, namely of the UN Global Compact, of the GRI G4 Guidelines and of the OECD Guidelines, seeking to answer the question whether these standards adequately address the issue of income tax payment as a factor of CSR. Finally, the third section provides the review of the international and Portuguese theoretical and empirical academic research available on the subjects of income taxes and related subjects, such as disclosures, corporate tax as a CSR matter and tax aggressiveness of corporations.

The third chapter, Hypotheses and Methodology, starts the empirical part of the present research. The first section of this chapter puts forward the suggested hypothesis, and the second covers the methodology, describing the data, the variables and the statistical methods used.

The fourth chapter, Findings and Discussion, deals with findings and their discussion, outlining the results of the statistical tests performed in relation to the hypotheses.

The last fifth chapter contains conclusions as regards the research performed, addresses its limitations and provides suggestions as to further possible research lines.

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW

The focus of this chapter is the regulatory and academic background on the issue of income taxes, including the perspective of this topic as a CSR matter.

In this context, this chapter first explores corporate tax disclosure requirements under the mandatory financial reporting standards of most relevance internationally and in Portugal: *(i)* disclosure of income tax related items under the IFRSs; *(ii)* SFASs issued by FASB; *(iii)* the Portuguese accounting standards *Normas Contabilísticas e de Relato Financeiro* (NCRFs).

After highlighting and comparing the relevant income tax disclosure requirements in the abovementioned standards, the non-mandatory CSR reporting guidelines will be scrutinised to find relevant guidance for reporting on income taxes as on an aspect of CSR. Also here, the scope will be limited to the CSR reporting standards recognised and most used or referred to at the international and national level: *(i)* the UN Global Compact; *(ii)* the GRI G4 Guidelines; *(iii)* the OECD Guidelines.

Finally, the subject-matter of the third section of this chapter will be the national and international academic research relevant to the disclosure of income taxes and of the income tax rate as a factor of CSR.

2.1. Corporate tax disclosures under the financial reporting standards

As stated above, this section will describe and will provide a brief comment on the requirements set for disclosure of corporate tax, tax strategy and some aspects related to uncertainties in tax matters. Considering their scope, IFRSs published by IASB represent one of the most influential financial reporting guidance on an international scale, including Portugal. Naturally, NCRFs, i.e. the Portuguese national standards, which are partially based on the IFRSs, are also discussed. Additionally, and taking into account its influence and the more recent work for convergence between the two standards bodies the IASB and the FASB, the standards and interpretations issued by the US FASB (SFASs) on these topics will be also analysed.

2.1.1. Income tax disclosures under IFRSs

2.1.1.1. Disclosures under IAS 12

It is generally accepted that tax effects, however they are calculated, should be presented separately from the items or transactions to which they relate (PriceWaterhouseCoopers LLP, 2008). For this reason, most of disclosure requirements related to income tax under IFRSs are primarily found in IAS 12 *Accounting for Income Taxes*. Some general nature disclosures applicable to accounting and reporting, which may also impact income tax reporting and disclosure, are found in IAS 1 *Presentation of Financial Statements*. Furthermore, in June 2015, IFRS Foundation published the draft proposal for its interpretation *Impact of Uncertainty When an Entity Recognises and Measures a Current tax Liability or Asset* (IFRS Foundation, 2015). These rules are discussed in more detail below.

As regards IAS 12, it requires the disclosure of the main components of tax expense (or tax income) [IAS 12.79]. The purpose of the disclosures is to provide the information on the relationship between the entity's pre-tax accounting profits and related tax effects (MacKenzie, Coe Tsee, Njikizana, Chamboko, & Colyvas, 2011). It should be noted that this aspect is directly relevant for CSR, as it allows measuring the relationship between the profits reported (earned), if any, and the income tax contribution of a reporting entity.

IAS 12 [IAS 12.79 and 12.80] requires the following disclosures:

(a) current tax expense or income, together with recognised adjustments of prior periods;

(b) amount of deferred tax expense (income) relating to: (i) the origination and reversal of temporary differences (ii) changes in tax rates or the imposition of new taxes;

(c) amount of the benefit arising from a previously unrecognised tax loss, tax credit or temporary difference of a prior period;

(d) write down and reversals of a deferred tax asset;

(e) amount of tax expense (income) relating to changes in accounting policies and corrections of errors.

It is clear from the applicable standard that the tax expense related to profit or loss from ordinary business activities is presented on the face of the statement of profit and loss and other comprehensive income. It is required to be presented separately and in this way, it is the first information available on income tax liability of the reporting entity. It will give information on the amount of the estimated income tax expense of the reporting entity, which would be used, by the users of the financial statements, as one of the references for further analysis from the CSR perspective.

Furthermore, disclosure of tax expense related to changes in accounting policies may directly or indirectly indicate the existence of tax planning, including aggressive tax planning, which is viewed negatively from the CSR standpoint (see under 2.2. *Corporate tax disclosures under social responsibility guidelines* below). For instance, the implementation of tax strategies for the use of deferred tax assets (such as loss refreshment), as demonstrated by the example of the impact of qualifying tax strategy on deferred asset realization by MacKenzie [et al] (2011:639), may be evidenced by unusual recognition of such assets from year to year and analysis of other items of financial statements.

Next, IAS 12.81 and IAS 12.82 deal with disclosure (and explanation) of items related to income taxes of more technical nature, namely:

(a) aggregate current and deferred tax relating to items recognised directly in equity [IAS 12.81];

(b) tax relating to each component of other comprehensive income [IAS 12.81];

(c) explanation of the relationship between tax expense (income) and the tax that would be expected by applying the current tax rate to accounting profit or loss (presented either as a reconciliation of amounts of tax or a reconciliation of the rate of tax) [IAS 12.81];

(d) changes in tax rates [IAS 12.81];

(e) amounts and other details of deductible temporary differences, unused tax losses, and unused tax credits [IAS 12.81];

(f) temporary differences associated with investments in subsidiaries, branches and associates, and interests in joint arrangements [IAS 12.81];

(g) for each type of temporary difference and unused tax loss and credit, the amount of deferred tax assets or liabilities recognised in the statement of financial position and the amount of deferred tax income or expense recognised in profit or loss [IAS 12.81];

(h) tax relating to discontinued operations [IAS 12.81];

(i) tax consequences of dividends declared after the end of the reporting period [IAS 12.81];

(j) information about the impacts of business combinations on an acquirer's deferred tax assets and recognition of deferred tax assets of an acquirer after the acquisition date [IAS 12.81];

(k) details of deferred tax assets [IAS 12.82];

(l) tax consequences of future dividend payments [IAS 12.82A].

From the CSR perspective, another important disclosure requirement is the reconciliation between the statutory tax rate and the actual tax expense as listed under (c) above. The difference between tax expense and accounting profit or loss depends on a variety of factors, such as the existence of tax-exempt income (e.g. dividends or capital gains), of recognized expense not deductible for tax purposes, of tax use of previous losses, different rates of taxation if entity operates in more than one jurisdiction, etc.

Notwithstanding, the reconciliation would help the user of the financial statements "to understand whether the relationship between tax expense and accounting profit is unusual and to understand the significant factors that could affect that relationship in the future" (PriceWaterhouseCoopers, 2008:13179). Consequently, it may allow for a certain explanation of why the income tax contribution is actually higher or lower compared to the accounting profit or loss, which may be useful for the assessment of CSR of the reporting entity.

The remaining disclosure items are of rather technical nature and requires a closer look in order to relate them to CSR. For example, the amount of deferred tax liabilities due to items recognized in equity (item (a) above) and details of the deferred tax assets (item (k) above) may indicate whether the reporting entity performs transactions and uses certain techniques that allow for a deferral of tax liabilities.

Although a variety of different views exist on this subject, IAS 12 has been criticized. Specifically, it has been argued that despite requiring a range of disclosures “these tend to focus on accounting technicalities […] rather than on aspects that are of real concern to users such as tax cash flows and implications for future tax cash flows” (EFRAG, 2011:7). EFRAG (ibid.:12) has identified “the following categories of tax information that could be relevant to investors and creditors:

a. Tax strategies and objectives;

b. Clarity on tax risk position;

c. Cash tax and future tax cash flows;

d. A clear explanation of the difference between the taxes paid and the charge made in the income statement;

e. A clear explanation as to why the current tax charge is not equivalent to the accounting profit at the statutory rate of tax (tax rate reconciliation);

f. Improved understanding of the effective tax rate;

g. A reasonable value of losses carried forward (or other deferred tax assets).”

It may be referred that currently reporting entities may cover all or some of the items listed by EFRAG. However, the users have pointed out to “struggle to use the information available” (ibid.:11). IASB Exposure Draft ED/2009/2 Income Tax (paragraphs 40-49) (IASB, 2009) contained improved disclosure requirements, which could partially reflect the above items, but further discussion and adoption of the Draft was set aside for an indefinite period of time.

2.1.1.2. Disclosures under other IFRSs

In addition to the disclosures required by IAS 12, some important general disclosures relating to income taxes are required by other standards.

For example, IAS 12 does not specifically require any disclosure of accounting policies in relation to current and deferred tax. However, IAS 1 *Presentation of Financial Statements* does oblige reporting entities to disclose significant accounting policies relevant to understanding of the entity's financial statements [IAS 1.117]. IAS 1 gives certain freedom to choose which accounting policies should be disclosed and which should not, the basis for the decision (to disclose or not) being utility for the users of financial statements. The management of a reporting entity will exercise its judgement as regards the disclosures and the extent of the disclosures, except for mandatory disclosure items under the IFRSs (see the above analysis of IAS 12 requirements). Notwithstanding, the IFRSs mention that an entity subject to income taxation would be expected to disclose "its accounting policies for income taxes, including those applicable to deferred tax liabilities and assets" [IAS 1.120].

Furthermore, IAS 1 obliges an entity to disclose the judgements made by the management in the process of applying the entity's accounting policies and that have the most significant impact on the financial statements [IAS 1.121]. This rule equally relates also to judgements exercised in accounting for income taxes.

This leads us to another area relevant for income taxes, which is tax contingencies, governed by IAS 37 *Provisions, contingent liabilities and contingent assets*. Any tax contingency should be properly reported in the financial statements and may be relevant for judgements regarding the CSR of an entity.

In this regard, the IAS 37 requires including reporting the provisions and contingent liabilities by classes [IAS 37.84 and IAS 37.86], and requires to report the brief description of the nature of the liability, the economic outflow and the uncertainties. Tax matters are not specifically set by IAS 37 as a class of provisions or contingent liabilities. Instead, IAS 37 gives certain freedom for division of such liabilities into classes, the criterion being the sufficient similarity in the nature of the items [IAS 37.86]. As an example, the standard explains that "it would not be appropriate to treat as a single class amounts relating to normal warranties and amounts that are subject to legal proceedings" [IAS 37.86].

As regards contingent tax assets, these are merely to be disclosed in the notes to the financial statements if an inflow of economic benefits is probable, avoiding misleading indications of a likelihood of the income arising [IAS 37.89-37.90].

Consequently, tax contingencies may or may not be classified as a class of provisions or contingent liabilities, and it is possible that the financial statements therefore do not provide this information, useful for the assessment of CSR of a firm. However, according to the author's view, if an income tax contingency met the materiality threshold, it would be appropriate to disclose it as a separate class of contingent liabilities, for instance. This information would be useful for the users of the financial statements and would be relevant for those who would like to know more about the CSR standards of the reporting entity, giving relevant information as regards to the reporting entity's tax compliance, tax aggressiveness and social responsibility as regards tax payments.

Finally, it should be noted that the draft International Financial Reporting Interpretations Committee's (IFRIC) Interpretation DI/2015/1 *Uncertainty over Income Tax Treatments* (the Draft IFRIC Interpretation) is being discussed by IASB and will provide guidance on the recognition and measurement of income taxes payable (recoverable) when there are uncertainties for income taxes (IFRS Foundation, 2015). The Draft IFRIC Interpretation was released in October, with the call for comments by 19 January 2016.

It appears that, despite for the time being IASB and FASB have abandoned plans for a joint convergence project for the topic of income taxes, this initiative seems to support the aims of bilateral convergence program between the two standard bodies as it covers the issues already dealt with by FASB interpretation FIN 48 under the US SFASs. As discussed further (see under 2.1.2.1. *Disclosures under ASC 740* below), the FIN 48 adopted in 2006 has been criticized for its complexity and excessive reporting burden, together with the prevailing research showing that the new reporting and disclosure requirements introduced by the said interpretation had an effect of diminishing the aggressiveness as regards tax planning, and improving general tax compliance. These are naturally the factors directly relevant to CSR and income tax; disclosures that would be produced as a result of the adoption of the Draft IFRIC Interpretation might contribute to the information useful as regards assessing the level of the social responsibility of the reporting entity.

However, it should be noted that the Draft IFRIC Interpretation is rather different from FIN 48. In contrast to FIN 48, it does not require any additional disclosures to those that are required under the general rules for disclosure of significant judgements of management in the preparation of the financial statements under IAS 1.

More specifically, in the situation of uncertainty over tax treatment, the Draft IFRIC Interpretation, similarly to FIN 48, requires an entity to assume that the tax authorities would have the knowledge of all relevant information (§13 of the Draft IFRC Interpretation). Next, the entity weights the probability of that the tax treatment being accepted by the tax authorities in such circumstances (§14 of the Draft IFRIC Interpretation). Depending on the probability test, the taxable profit or loss, the tax bases, unused tax losses and tax credits are determined and accounted for accordingly (§15-§16 of the Draft IFRIC Interpretation). Furthermore, if is not probable that certain tax treatment is accepted, the entity may use the most likely amount method or the expected value method to reflect the uncertainty. Finally, as regards disclosure, the Draft IFRIC Interpretation refers to the general rule of IAS 1.122, which requires an entity to disclose the judgements of the management that have the most significant effect on the statements.

Thus, in contrast to FIN 48, the Draft IFRIC Interpretation merely provides clearer guidance on the issue of uncertainty in income taxes, without imposing new disclosure and compliance requirements. It appears also that, in many cases, and unlike under FIN 48, the uncertainty is reflected immediately and directly in the accounts related to current and deferred tax assets and liabilities, with no recourse to additional provisions.

Overall, it appears that the Draft IFRIC Interpretation may contribute to more clarity on the issue of reporting uncertain tax position but would not mean an overhaul in reporting for income taxes, as it was in the case when FIN 48 was introduced in the US and which might have led to the change in the tax policies of the US entities (see discussion in the following section below).

2.1.2. Income tax disclosures under SFASs

2.1.2.1. Disclosures under ASC 740

The SFAS 109 *Accounting for Income Taxes* was replaced by the FASB-released Accounting Standards Codification (ASC), the rules relevant to accounting for income taxes being codified under ASC 740 (FASB, 2011). General disclosure matters related to income taxes are dealt with by the standard ASC 740-10-50. For Income Statement related disclosures, the standard lists the following items as examples of the significant components [ASC 740-10-50-9]:

a. **Current tax expense (or benefit)** [**bold** in the original];
b. **Deferred tax expense (or benefit)** (exclusive of the effects of other components listed below);
c. Investment tax credits;
d. Government grants (to the extent recognized as a reduction of income tax expense);
e. The benefits of operating loss carryforwards;
f. Tax expense that results from allocating certain tax benefits directly to contributed capital;
g. Adjustments of a deferred tax liability or asset for enacted changes in tax laws or rates or a change in the tax status of the entity;
h. Adjustments of the beginning-of-the-year balance of a valuation allowance because of a change in circumstances that causes a change in judgment about the readability of the related **deferred tax asset** in future years. For example, any acquisition-date income tax benefits or expenses recognized from changes in the acquirer's valuation allowance for its previously existing deferred tax assets as a result of a business combination |…|.

Further, numerical reconciliation of the reported income tax expense and an expected amount based on statutory rates is required only for public entities (i.e. quoted or otherwise regulated, as defined), whereas IFRSs (specifically, IAS 12) always require numerical reconciliation, with no distinction. It is also important to notice that, under the SFASs, the effective tax rate reconciliation is presented using the statutory tax rate of the parent company, whereas the IFRSs additionally allow using the weighted average tax rate applicable to profits of the consolidated entities. The disclosure of significant reconciling items, however, is required under ASC 740-50-10 for both public and non-public entities.

There are additional total deferred tax asset and liability disclosure requirements in the balance sheet, alongside with the total valuation allowance recognized for deferred tax assets [ASC 740-10-50-2]. Finally, SFASs explicitly require a disclosure of policies on classification of interest and penalties and investment tax credit recognition [ASC 740-10-50-18/19].

Comparing the SFASs and IFRSs in terms of disclosure requirements, the first main components of disclosure (income tax expense, reconciliation, deferred tax entries on the balance-sheet) are rather similar. However, SFASs seem to require less technical disclosure and appear to be focused more on information useful to investors, such as disclosing the valuation allowance.

An important aspect presenting a major difference between SFASs and IFRS reporting remains the accounting and disclosures related to tax uncertainties, which became mandatory in the US with the adoption of FIN 48 in 2006, now codified in ASC 740-10-50. As mentioned above, IASB is currently working on the Draft IFRIC Interpretation to similar effect, the first draft of which has been already released and is discussed in the subsection devoted to IFRSs, under 2.1.1.2. *Disclosures under other IFRSs* above.

In the US, the FIN 48 has been referred as an interpretation “universally reviled by client management, financial statement preparers and auditors” (Epstein, Nach, & Bragg 2009:897). It requires to identify and measure the uncertain tax positions. In brief, the reporting entity must examine if a certain tax position can be sustained. A tax benefit cannot be recorded and an adjustment must be made, including applicable penalties, if, assuming all the relevant information and facts are known to the tax authorities, it is “more-likely-than-not” (i.e., more 50% threshold [ASC 740-10-50-5]) that the position is not sustained in the tax examination.

In this regard, a FAS reporting entity is required to disclose [ASC 740-10-50-15]:

(1) the accounting policy classification of interest and penalties;

(2) a roll-forward of all unrecognized tax benefits presented as a reconciliation of the beginning and ending balances of the unrecognized tax benefits on a worldwide basis;

(3) the amount of unrecognized tax benefits that, if recognized, would affect the effective tax rate;

(4) the amount of interest and penalties that have arisen during the year and are cumulatively accrued on the balance sheet;

(5) a discussion of reasonably possible changes to the balance of unrecognized tax benefits that could occur within 12 months after the reporting date.

These disclosures would certainly give the users additional information on the tax aggressiveness of the reporting entity as far as income tax positions are concerned, including easier access to information from the tax authorities side. The disclosures could provide information useful to evaluate a firm's CSR behaviour, which would be demonstrated by the size of the reserves created for unrecognized tax benefits and the amount of penalties related to tax. IFRSs in its current version do not require disclosure of such information and it is doubtful that information on penalties, being sensitive information that may impact firm's reputation, would be voluntarily disclosed by firms following IFRSs for financial reporting.

There is a research (discussed in more detail further in section 2.3. *Literature review*) finding that FIN 48 likely increased larger companies' tax burdens, reducing the appeal of more aggressive tax minimization strategies (Tomohara, Lee, & Lee, 2012). It is confirmed by a later research finding that the state income tax burden reported increased, linked to the adoption of FIN 48 (Gupta, Mills, & Towery, 2014). Another research on FIN 48 and tax compliance finds that, first, some taxpayers are more likely to be audited or, second, deterred from transactions generating uncertain tax benefits just because of implementing FIN 48 (Mills, Robinson, & Sansing, 2010). The research available demonstrates that the disclosure requirements increase the responsibility regarding income tax compliance, reporting and payment, and change the tax compliance behaviour of the reporting entities in the US.

2.1.2.3. Disclosures under other SFASs

As with IFRSs, SFASs include the standard FAS 5 *Accounting for Contingencies*, now codified in ASC 450 *Contingencies*, equivalent to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*, which is relevant for accounting for income tax contingencies as well. Not going into the study of differences between the two standards, as it is not the purpose of the current thesis, the US standard also requires the disclosure of the nature of the accrual for contingency and disclosure of an estimate of a possible loss.

As regards accounted income tax liability, the risks and uncertainties related to income taxes, these are governed in the US by the SFAS rules on uncertain tax positions discussed in detail in the previous section. In addition, ASC 275 *Risks and Uncertainties* requires to disclose risks and uncertainties that could significantly affect the amounts reported in the financial statements in the near term [ASC 275-10-05-02]. Thus, ASC 275 *Risks and Uncertainties* and ASC 450 *Contingencies* require to disclose, provided there could reasonably be a change in the estimate of tax liability for unrecognized income tax benefits within one year from the reporting date, the nature of uncertainty and potential events triggering the change, as well as the estimates of the change (Epstein et al. 2009:939).

Other contingencies are to be reported under the general framework. Whether an accrual is recorded or not, the US standards require to disclose the nature of the accrual, and, in some circumstances the amount accrued, or an estimate of possible loss for non-recordable accruals (PriceWaterhouseCoopers LLP, 2014:23-5).

2.1.3. Portuguese NCRFs

Before examination of the contents of the Portuguese NCRFs, it should be noted that the Portuguese standards adopted in 2008 have been recently amended, with effect from 1 January 2016 (Secretário do Estado dos Assuntos Fiscais, n.d.). The amendments were adopted to implement the new European rules further harmonising accounting regulations in EU Member States, whose primary aim was simplification and reduction of the administrative burden related to financial reporting by small and medium-sized enterprises. For simplification purposes, virtually most of the more detailed disclosure requirements that are currently incorporated into each separate NCRF were deleted from the texts of the standards and transferred into the new Annex 6 to the Models of Financial Statements (Ministério das Finanças, 2015). At the same time, in some cases, the volume of mandatory disclosures appears to be slightly reduced by the amendments in comparison to the disclosures required by the previous version of NCRFs. Below, the current NCRFs will be discussed together with the impact of the amendments applicable from 1 January 2016.

2.1.3.1. Disclosures under NCRF 25

The Portuguese standards applicable as from 1 January 2016 deal with income tax matters related to income taxes in NCRF 25 *Income Taxes* in paragraphs 72-84, which, similarly to most NCRF standards, are largely based on the IAS 12 (Rodrigues, 2012) before the last amendments of the latter standard in 2008 (effective 2009). In contrast to IAS 12 *Income Taxes*, it has been stated that NCRF 25, as in force before 1 January 2016, required mandatory disclosure of all elements of the tax expense recognised as major components of such expense in IAS 12.80 [NCRF 25.72] (Morais & Lourenço, 2013:87).

The amended Portuguese disclosure requirements regarding income taxes effective 1 January 2016 are set out in point 27 *Income Taxes* of the Annex to the models of financial statements (i.e. Annex 6). The wording of the rules has not changed so it may be suggested that the disclosure items listed continue to remain mandatory.

It should be further noted that the new disclosure requirements are virtually the same, except for the following differences:

- the current Portuguese standard, similarly to its previous version in force before 1 January 2016, omits the disclosure of the effects of business combinations on tax expense, required under IAS 12.81(j)-(k);
- the amendments in effect from 1 January 2016 eliminated the disclosure of tax expense related to discontinued operations, corresponding to IAS 12.81(h) and the previous NCRF 25.74(g);
- the reference to the [numerically expressed] amounts of the potential income tax consequences of payment of dividends to shareholders, corresponding to the second sentences of IAS 12.82A and previous NCRF 25.76 was equally eliminated.

Henceforth, it may be concluded that IAS 12 and NCRF 25 disclosure elements are almost identical, except for the differences noted above. These differences might not be important for accessing CSR related to income tax payments in all cases. However, the recognition of deferred income tax assets as a result of business combinations, which does not have to be disclosed under the Portuguese NCRFs, may indicate on potential existence of tax planning, including aggressive tax planning. Overall, however, the comment regarding the importance of the reporting of the major tax expense elements under IAS 12 as well as the critiques expressed regarding the IAS 12 standard (see under 2.1.1.1. *Disclosures under IAS 12* above) apply equally here.

2.1.3.2. Disclosures under other Portuguese standards

The relevant disclosure requirements of NCRF 1 *Structure and Contents of Financial Statements* and of NCRF 21 *Provisions, Contingent Assets and Contingent Liabilities* are almost identical to the corresponding rules of the IFRSs, with several minor differences.

Similarly to IAS 1, NCRF 1 also obliges an entity to disclose the judgments made by the management in the process of applying the entity's accounting policies that have the most significant impact on the financial statements [NCRF 1.47 and 1.48 current and amended versions].

Additionally, NCRF 21 likewise requires the division of provisions into classes and presenting respective amounts accounted for each class of provisions [NCRF 21.81 in current version corresponding to point 23.1 of the Annex 6 to the Models of the Financial Statements]. In contrast to IFRSs, however, NCRFs (after 1 January 2016, the new Annex 6) do not require any further information revealing the nature of the obligation and other details about each class of provision, as required by IAS 37.85. The disclosure requirements in the IFRSs and NCRFs (Annex 6) are coincident regarding the contingent assets and liabilities.

Logically, as NCRF 21 does not require details on the classes of provisions, apart from numerical information, it allows not disclosing contingencies in the circumstances in which it is not appropriate [NCRF 21.86]. The Portuguese standard does not explain in which cases the disclosure is deemed inappropriate, leaving this to the full consideration of the reporting entity. In this way, unlike IAS 37 in this regard [IAS 37.92], NCRFs give much more opportunities for non-disclosure: IAS 37 allows not disclosing the details of the provisions or contingencies only in extremely rare cases, in which a disclosure would be to the prejudice of the reporting entity.

Overall, it would be appropriate to note that as far as provisions and contingencies for tax matters are concerned, the Portuguese standard requires less disclosure as compared to the

IFRSs, allowing the information relating to provisions and contingencies related to tax not to be disclosed clearly in the financial statements. This leads to a conclusion that the users of financial statements looking for information on tax contingencies may not find the essential information sought.

2.2. Corporate tax disclosures under social responsibility guidelines

Although it may still be debated whether corporate tax is or is not a social responsibility item, it appears useful to research whether the existing CSR guidelines touch upon corporate taxation matters, and if so, then to which extent. Hence, the description and analysis will highlight the existing relevant guidelines, if any, in the UN, GRI and OECD issued guidelines for CRS reporting.

2.2.1. UN Global Compact

The Ten Principles of the UN Global Compact do not deal with tax issues directly (UN Global Compact, 2014). Furthermore, the "Business for the Rule of Law Framework" developed to assist businesses to "support the rule of law and build lives of dignity for all" (UN Global Compact, 2015:4) does not address any specific legal areas apart of the areas covered by the Ten Principles, which do not include any tax matters. Finally, the search in the on-line library of the UN Global Compact by "tax" keyword produced no hits.

Consequently, tax is not on the agenda of the UN Global Compact directly, the primary role being given to human rights and basic respect for environment, state and legal order. This can be explained by the focus of the UN Global Compact on the matters of primary concern, such as basic human rights, tax being the secondary issue fitting secondarily into the general sphere of action of the UN Global Compact. Thus, the UN Global Compact standards will not be referred to or discussed further.

2.2.2. GRI

In 2013, GRI launched the fourth generation of its sustainability reporting guidelines "GRI G4 Sustainability Guidelines" (GRI G4 Guidelines), to apply to sustainability reports published after 31 December 2015 (GRI, 2013a). The GRI G4 Guidelines organize sustainability reporting in three main categories of economic, environmental and social aspects. These categories are divided into material topics, or "Aspects" (ibid.:44).

Similarly to the UN Global Compact, taxation specifically and directly is reflected in none of the GRI G4 Guidelines' material aspects. However, the GRI G4 Guidelines link to the other international standards, such as the mentioned UN Global Compact's Ten Principles and the OECD Guidelines. Taking into account that Chapter XI of the OECD Guidelines is explicitly dedicated to taxation (see the discussion below), in explaining the link between both standards, the GRI G4 Guidelines state that taxation is dealt with by the Economic Performance Aspect and by the Anti-Competitive Behaviour and Compliance Aspects under the Society sub-category.

For the Economic Performance Aspect, the relevant GRI G4 Guidelines standard is G4-EC1 standard on "Direct Economic Value Generated and Distributed". It requires to report the basic components of the organization's global operations and lists payments to government, by country, as one of the reportable components (ibid.:48). The GRI G4 Guidelines Implementation Manual further explains that the report should state that "all organization taxes (such as corporate, income, property) and related penalties paid at the international, national, and local levels", stressing that "for organizations operating in more than one country, report taxes paid by country" (GRI, 2013b:70).

For the Compliance Aspect, the focus of GRI G4 Guidelines in the relevant G4-EN29 standard are monetary and non-monetary sanctions for non-compliance. Not addressing taxation separately, this standard requires to report the total amount of significant fines and a number of non-monetary sanctions. As this normally presents a sensitive area that organisations would be reluctant to disclose in any further details, the G4-EN29 standard does not present any value for sustainability reporting as regards tax compliance.

Thus, in respect of taxation as a CSR matter, the GRI G4 Guidelines not only recognise it as such, but also link to the financial reporting disclosure requirements reviewed previously (namely, those issued by IASB, FASB and CNC), in what concerns reporting of tax expense geographically, as the possibility of such reporting provided in all the financial reporting standards, but is mandatory under neither of those. Sanctions may also be reported in financial reports, however, it is the mandatory reporting item only in the US under FIN 48 (ASC 740).

2.2.3. OECD Guidelines for Multinational Enterprises

The OECD Guidelines for Multinational Enterprises (OECD Guidelines) were first published in 1976 for promoting appropriate business conduct by companies, which operate in different jurisdictions and face a variety of cultural, legal and regulatory environments. The very first original version of the OECD Guidelines already contained a two-paragraph section on taxation, stating that the enterprises should provide the required information to the tax authorities and refrain from abusive transfer pricing practices (OECD, 1976).

The latest version of the OECD Guidelines and its commentary include a slightly more extensive chapter XI on taxation (OECD, 2011). It requests the multinational enterprises to:

- contribute to the public finances by making timely tax payments;
- comply with both the letter and spirit of the tax laws;
- ensure tax compliance by providing information required for tax determination and by complying with the arm's length principle;
- place tax governance and tax compliance as a part of general risk management and as a board item.

The Commentary calls on co-operation with the tax authorities, transparency in tax matters and recognizes the existence of major financial, regulatory and reputation risk for an enterprise in the area of tax matters. The Commentary elaborates extensively (in four paragraphs out of seven paragraphs of the commentary in total) on the necessity to comply with the OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations.

The OECD Guidelines is the only instrument on CSR focusing extensively on tax matters and recognizing tax as being important aspect of CSR. This may be explained by the fact that tax is one of the main areas of the OECD's work. OECD has launched and has been promoting various projects aiming on making sure that the “fair share” of tax revenues are received by the governments, and is working on raising awareness of the necessity of fair contributions by the multinational corporations at the highest levels. The main streams of work in this area is the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes operating since 2000, the work on Base Erosion and Profit Shifting project endorsed by G20 member countries in July 2013 and in progress from then on, as well as work on the developing of legal basis for international co-operation and exchange of information in tax matters.

2.3. Literature review

The academic and accounting literature linking the financial reporting disclosures of corporate tax and CSR has been emerging in the past years. Within the recent years, the scandals about the widespread use of tax planning schemes resulting in payment of disproportionately low corporate taxes by multinational corporations like Amazon, Google and Starbucks, have gained worldwide dimension and are raising awareness of the issue, resulting in academic studies and research on the issue. According to Jenkins and Newell (2013), “the issue of corporate responsibility towards taxation has moved to centre stage” and “it is likely to become an increasingly important item on the CSR agenda in the foreseeable future”.

It should be noted that tax avoidance has been always a topic for academic discussion mostly among tax law specialists, even though without establishing a relationship between this matter and the CSR or the financial reporting. This literature is not the focus of the present research and thus will not be reviewed here, except for the Portuguese academic literature on this subject.

The existing academic literature may be divided into two blocks and will be organized in the following way:

- firstly, the review will start with international academic literature, which aims to explore the link between taxation and CSR, backed by empirical studies and specially focused on studies covering US firms and FIN 48;

- finally, the second part will focus on Portuguese literature relevant for the subject-matter of this work.

2.3.1. An international perspective

The views on taxation as a CSR matter put forward in the academic literature may diverge, but there is a predominant trend of considering taxation as being an item for CSR rather than excluding it from responsibility framework.

As far as purely theoretical studies are concerned, Avi-Yonah (2008) discusses the three main theoretical views of the corporation and concludes that tax minimization strategies are unacceptable under any of these theories discussed. Dowling (2013) equally examines the “fair share of tax” issue as a matter of CSR from business ethics standpoint and scrutinises it under stakeholder group theories, concluding that taxation is a boundary condition for CSR. He notes that businesses have resisted the discussion of taxation as a moral issue and that the complexity of tax regulations and modern accounting rules, together with global scale of operations make it almost impossible for a member of general public to understand whether a company pays its fair share of tax (ibid.:176).

Christensen and Murphy argue that “taxes are the lifeblood of the social contract, vital to the development and maintenance of physical infrastructure and to the sustenance of the infrastructure of justice that underpins liberty and the market economy (Christensen & Murphy, 2004:37). Besides that, these authors advocate reaching an intergovernmental agreement at a global level to define minimum standards of transparency and disclosure by companies, in which IASB is given one of the leading roles (ibid.:43).

Preuss (2012) discusses the issue of CSR of companies domiciled in tax havens, namely Bermuda and Cayman Islands. The author rejects the utilitarian perspective of considering tax haven companies as wealth generators for their shareholders or tax haven governments, undoubtedly placing taxation as the CSR category. The study argues that, although offshore-headquartered companies cannot isolate themselves completely from the global CSR awareness, incorporation off-shore supresses one important aspect of its responsibilities to society (i.e., taxation) and shows that the CSR of such companies is mostly mere window-dressing (ibid.:12).

Finally, Zhang (2010) approaches tax and CSR from the tax policy and Marxist ideology standpoints, advocating for introduction of tax incentives in China to stimulate socially responsible corporate activities, such as public welfare donations, environmental protection and employment.

US was the first country which formally linked financial reporting and uncertainties in tax position, by means of adoption of FIN 48 by FASB and introducing mandatory disclosure requirements, as discussed in the section describing SFASs under 2.1.2.1. *Disclosures under ASC 740 above*. Since then, research has been emerging in the US as regards the impact of FIN 48 and tax behaviour and disclosures of multinational corporations. The research in the US has relevance and will be briefly reviewed here.

Thus, before adoption of FIN 48, Jenkins and Sawyers concluded that tax shelters are unlikely to be disclosed unless they result in a material contingent liability (Jenkins, J. G., Sawyers, 2002:52). Hope, Ma and Thomas (2013) tested the relation between corporate tax avoidance and disclosure of geographical earnings by US firms. These authors find that firms opting not to disclose geographical earnings in their financial reports have lower effective tax rates, in line with the perception that non-disclosure of geographical earnings helps masking tax avoidance.

The empirical research made by Mills, Robinson and Sansing investigates how FIN 48 changed the strategic interaction between the corporations and the government (Mills et al., 2010). Their research shows that taxpayers with stronger positions obtain higher expected payoffs post-FIN 48 (ibid.:1738). Also, the research finds that liability disclosed under FIN-48 can be overstated or understated relative to the expected cash payment (ibid.). Those authors additionally conclude that some taxpayers are more likely to be audited because of the disclosures or they are deterred from taking more aggressive tax positions because of FIN 48 (ibid.:1721).

Another research finds that implementation of FIN 48 possibly increased larger companies' tax burdens, due to the prohibition of recording any tax benefit which does not pass "more-likely-than-not" test (Tomohara et al., 2012). In line with Mills et al., this research concludes that FIN 48 appears to have reduced the appeal of more aggressive tax minimization strategies (ibid.:4239). McKinley and Owsley (2013) assert that inter-group transfer pricing often falls into the category of uncertain tax positions and is likely to increase the tax charge as well as lower the valuation allowance under FIN 48. Finally, the study of Lisowsky, Robinson and Schmidt (2013) link public disclosures of tax reserves with mandatory private disclosures of tax shelter participation as made to the Internal Revenue Service. The authors find strong evidence that the tax reserve is positively associated with tax shelters, accounting 48% of its value to the benefits of tax shelters, while other commonly used measures of tax avoidance are not (ibid.).

The reviewed research on FIN 48 implementation effects does not directly link the findings to the CSR. Indeed, as noted by a number of authors (Dowling, 2013; Fisher, 2014; Jenkins & Newell, 2013), taxation is hardly mentioned in CSR reports and tax avoidance is rarely discussed in the context of CSR. Notwithstanding, the academic research on this subject is emerging at a considerable pace, which may be caused, for instance, by the tax avoidance scandals of the recent years, discussed globally, the increasing public awareness and the work of G20 and OECD on tax transparency, tax competition and combating BEPS.

The existing research combining theoretical and empirical discussion examines various aspects of taxation and CSR. Lanis and Richardson (2012), by adopting a wider view of corporation and considering a larger range of stakeholders beyond management and shareholders, put taxes into the CSR framework, arguing that tax aggressiveness is socially irresponsible. In the empirical part of their research, the authors examine the relationship between CSR and tax aggressiveness in Australia. The authors demonstrate that the higher the level of CSR disclosure, the lower the tax aggressiveness, and their further analysis additionally shows that existence of social investment commitment and corporate and social responsibility strategy reduce tax aggressiveness. Laguir, Staglianò and Elbaz (2015) examine how the CSR dimension influences corporate tax aggressiveness of the French quoted firms. In line with previous research, the authors conclude that the higher level of the social dimension of the CSR, the lower the tax aggressiveness. Hoi, Wu and Zhang adopt a broader perspective to evaluate CSR activities and examine association between CSR and tax avoidance, additionally using FIN 48 as a natural quasi-experiment to further explore this link (Hoi et al., 2013). More specifically, partially relating to empirical research methods used by Lanis and Richardson (2012), the research conducted by these authors collectively suggests that firms with excessive irresponsible CSR activities are more aggressive in avoiding taxes.

Laine and Ylönen (2014) also argue that corporate tax payment is an issue of CSR and explore transfer pricing strategy of a Finnish corporation as the case for implementing aggressive tax minimization strategies but not disclosing tax matters in its numerous corporate responsibility publications. Huseynov and Klamm (2012) explore the relationship between auditor-provided tax services and the impact of CSR. They conclude that tax fees are always associated with lower effective tax rate (i.e., percentage of income tax charge in relation to pre-tax earnings). However, the relationship between fees paid for auditor-provided tax services and tax avoidance is affected by levels of CSR, tax fees associated with higher effective tax rate for firms with stronger CSR.

Finally, there are qualitative studies that may be used for the discussion of links between CSR as risk management tool: Hardeck and Hertl (2013)investigate the effects of media reports on aggressive and responsible tax strategies on corporate consumer success, Desai and Dharmapala (2004; 2008) investigate the links between corporate tax avoidance and corporate governance, Kenyon surveys tax avoidance practices in Brasil (2008) and Lenter, Slemrod and Shackelford (2003) discuss the pros and cons of public disclosure of corporate tax return information, as a means to increase transparency and accountability.

2.3.2. A national perspective

Portuguese academic literature on the subject of taxation and CSR is virtually inexistent. It appears that more attention has been paid to the subject of tax avoidance and evasion, which has been discussed mainly by the Portuguese tax law academia and economists, and to the CSR reporting in general terms, but not to the link between income taxation and CSR. There are also studies on reporting for income taxes in Portugal. These studies, similarly to the literature available on CSR, do not link the conclusions to CSR.

As regards the duty to pay taxes and tax avoidance problem, Sanches in his monograph (2006) discusses the legal aspects of tax planning. Several conferences resulted in publication of collection of the conference reports and articles, such as the Conference on the Enterprise Restructuring and the Boundaries of Tax Planning held in Lisbon in 2008

(Sanches, Câmara, & Gama, 2009) and Accounting and Taxation Conference organised by ISCAP in Oporto, in the Special Topic of Tax Planning and Avoidance in 2009 (Amorim, 2010). Borrego and Lopes (2013) make a review of literature on tax non-compliance in an international perspective.

As regards discussion of taxation in a more sociological perspective, Nabais in the publication of his doctoral thesis (1998) discusses the fundamental duty to pay tax, rejecting the existence of the right not to pay taxes and asserting that the modern state is a fiscal state (*estado fiscal*). Carvalho (2010) elaborates on social solidarity in taxation, discussing the balance between excessive and just amount taxation and their effects. Pires (2011) reflects upon the issues of ethics and taxation, stating that in the contemporary society, taxation rests on the idea of solidarity, which appeals to equality in what is contributed to and received from the community. Poço, Lopes and Silva (2015) investigate the sociological aspects of tax evasion in Portugal.

Finally, Catarino and Monteiro (2013) study the tax treatment of environmental provisions, focusing on technical aspects and surveying the PSI 20 practice, with no discussion of CSR issues.

Next, as far as the academic research on CSR is concerned, most of the studies on the topic of CSR have been conducted within the institutions of higher education and research, even though not necessarily related to accounting for income taxes and associated matters.

Fernandes, Monte and Afonso (2013) analyse the CSR of the Euronext PSI 20 entities between 2005 and 2009 and construct the CSR index, based on the total of 239 CSR items. These authors find that most of the Portuguese PSI 20 entities show medium performance with regard to CSR, with EDP – Energias de Portugal, S.A. leading the high-performance cluster. Also the human rights dimension was found to be the most important for the Portuguese companies in terms of CSR (ibid.).

Next, Domingos (2010) examines the general evolution of sustainability reporting by companies quoted on Euronext Lisbon between 2006 and 2008, Carvalho (2008) studies the influence of GRI standards on CSR reporting by quoted Euronext Lisbon companies in 2006, whereas Silva concludes that CSR reporting has reduced dimensions in Portugal, and is restricted mainly to environmental and social indicators (A. R. M. Silva, 2014). Lopes notes general significant progress of voluntary disclosures related to CSR in Portugal (I. C. R. Lopes, 2015), in line with Pinto (2014) who proves that Portuguese companies have been increasing investment into ethics and social responsibility, the largest enterprises being the largest investors. Roque (2012) conducts a research into environmental accounting and its impact and practices in in Portugal.

As regards reporting for income taxes in Portugal, a number of authors study accounting and disclosure related to deferred taxes in Portugal by listed and unlisted companies, the interrelations between the size of companies and styles of reporting, and draw various conclusions about the existing practices in reporting for deferred taxes in Portugal (Aracchande, 2010; Ferreira, 2014; Fonseca, 2011; M. dos A. Lopes, 2014; E. J. dos R. Pereira, 2013). Lopes constructs an information compliance index for IAS 12 and studies the relation of the index to performance and control indicators, whereas Silva repeats and further develops the study by studying each type of disclosure requirement and its disclosure, as well as links compliance to other factors (I. T. Lopes, 2014; M. D. C. da Silva, 2013).

3. HYPOTHESES AND METHODOLOGY

This part aims to establish a link between the previous theoretical background and the empirical analysis to be developed in this master thesis. Consequently, the following sections of the present master thesis outline in detail the hypothesis and the methodology used for the investigation. Using the theoretical background set out above, the main hypotheses and sub-hypotheses are developed. Then, the methodology is described, namely, the population and the period of the study, the variables used and the statistical analysis methods of the information collected.

3.1. Hypotheses

3.1.1. Empirical objectives and main variables

As previously stated, the main objective of the empirical part of the present research is to investigate whether and to what extent the ETR and disclosure related to income taxes are viewed by the largest corporations in Portugal, particularly from the perspective of this subject as a matter of CSR. The main objectives of this research may be expressed in three points:

1. To assess the level of disclosure related to income taxes as a matter of CSR and its evolution from 2010 throughout 2014; and
2. To find out whether income tax expense, which is here measured as an effective tax rate (ETR), is viewed as a constituent aspect of CSR in Portugal and determine any evolution in this respect within the years under analysis; and
3. To assess whether disclosure of items related to income taxes and ETR is influenced by entity's specific factors, namely the size, leverage, profitability and sector.

These objectives will be translated into the 5 main hypotheses, from which also operational sub-hypotheses will be developed. In order to construct them, the research will be based on the analysis of the following main factors:

(a) the level of disclosure related to basic relevant elements of income taxes from the CSR view **in the annual consolidated reports**, by assigning the income tax charge disclosure index (the “ITD Index”);

(b) the additional level of disclosure related to income taxes matters as an element of CSR **in the CSR reports**, by assigning the index which, in addition to ITD Index referred above, considers the level of disclosure in CSR reports (the “Total Index”).

(c) the ETR of an entity, used as an indicator of the “fair share” tax contribution.

The ITD Index and the Total Index are the focal elements, which will be taken as dependent variables in the empirical research presented below. Generally, the existence of information disclosure indices related to income taxes would repeat the previous national research on disclosure: specifically, the research of Lopes (2014) constructing income tax (IAS 12) disclosure index in Portugal, the research of Pereira (2013), Silva (2013) and Henriques (2011) on disclosure and its harmonisation related to deferred taxes, the research by Carvalho (2008), Fernandes [et at.] (2013) and Silva (2014) on the degree of disclosure of CSR (mostly GRI) aspects by the Portuguese companies.

However, in comparison to the cited studies, the construction of the ITD Index and the Total Index present certain novelty. The novelty of the suggested indices *vis-à-vis* the prior studies cited above is their focus on income tax disclosure items (in mandatory financial reporting and voluntary CSR reporting) that are significant from the CSR perspective.

In this sense, whereas all these prior studies covered overall income tax mandatory and CSR voluntary disclosure (F. P. M. de Carvalho, 2008; Fernandes et al., 2013; I. T. Lopes, 2014; Silva, 2014), or focussed on deferred tax disclosure elements (Henriques, 2011; Pereira, 2013; M. D. C. da Silva, 2013), the present research selects disclosure items on the basis of their relevance for CSR, in line with the objective to test the degree of disclosure of information on income taxes from the “fair share contribution” and CSR perspective. In other words, the ITD Index and Total Index do not take into account all existing disclosure requirements related to income taxes. For the construction of the ITD Index, only the disclosure items which would be interesting from the CSR perspective were selected. In its turn, the Total Index is composed of the ITD Index but takes into account whether and to which extent the information related to income tax expense, commitment to good tax governance and tax compliance were noted in the CSR report of an entity. In this way, the ITD Index and the Total Index are different from all previously designed indices developed by the referred studies related to income tax or CSR disclosure.

As the studies linking taxation and CSR are still emerging, no prior investigation of income tax disclosure from CSR perspective has been conducted in Portugal, and no academic literature constructing hypothesis involving degree of disclosure and transparency in income tax matters was available internationally at the time of conducting the present empirical investigation. Consequently, the selection of mandatory and voluntary CSR disclosure elements was made by the author and is presented in the foregoing section 3.2.2.1. *Income tax disclosure indices* below.

The second novelty of the empirical research is its focus on ETR as the measurement of the "fair share" tax contribution.

In relation to the concept of ETR, it should be first of all noted that ETR is the percentage expression of the expense of income taxes indicated in the profit and loss account of an entity in relation to profits reported immediately before income tax expense. It will be different from the statutory income tax rate in most cases, as in Portugal and many other developed and developing countries the calculation of taxable income differs from the calculation of profits before taxes under accounting rules.

In this regard, there is a general agreement that companies should pay their "fair share" of tax. This has been widely advocated and stated on a political level, namely, at G20, by the OECD and EU highest officials (Commission, 2015; OECD, 2013; Reuters, 2012), and by means of implementation of various tax transparency initiatives described in the Introduction chapter. The duty to pay "fair share" of tax has been extensively recognised in the academic literature addressing the ethical and CSR perspectives of income taxation (e.g., Avi-Yonah, 2008; Dowling, 2013) as well as explicitly stated in the literature attempting to measure tax avoidance, tax aggressiveness and tax management (Desai & Dharmapala, 2004, 2008; Laguir et al., 2015; Lanis & Richardson, 2012).

It is also notorious that no precise amount can be set as to constitute a "fair share contribution" of taxes to the society. For this reason, the purpose of the present investigation is not to make such a determination. Instead, we use ETR as an indicator of corporate income tax expense as “fair share” tax contribution by companies included in the population. In prior research, ETR has been extensively used as a measurement or indicator of tax aggressiveness (Laguir et al., 2015; Lanis & Richardson, 2012; Lin, Tong, & Tucker, 2014), tax avoidance (Annuar, Salihu, & Obid, 2014; Ylönen & Laine, 2014) and the degree of tax management (Gupta et al., 2014; Huseynov & Klamm, 2012). Being naturally the indicator of income tax expense estimated to be incurred for the financial year in question, and in line with the research indicated above, it is taken as a factor of “fair share contribution” of income tax, without any attempt to give any determination of what amount exactly would constitute such contribution.

The exact measurement of the ETR and the theoretical basis for the choices made are further elaborated in section 3.2.2.2. *ETR* below.

3.1.2. Hypotheses

3.1.2.1. Evolution hypotheses

Taking into account the objectives of the empirical research outlined in 3.1.1 above, to assess evolution as regards the level of disclosure of the CSR-related income tax information (the first objective), the following hypothesis H1. will be tested:

H1. The CSR-related income taxes disclosure has increased over the period from 2010 till 2014.

This hypothesis partially replicates the previous national research on income tax disclosure indices. For instance, Lopes (2014) constructs the general income tax disclosure compliance index (the Information Compliance Index) and tests it in relation to the non-financial listed companies of *Euronext Lisbon* regulated market, with reference to the years of 2008 and of 2012. Lopes (2014) finds that the index for the population under analysis has improved approximately 20% between 2008 and 2012, as evidenced by the variable mean. Thus, the hypothesis presented sets out the expectation that the CSR-related income tax disclosure will improve over the four years under analysis in the case of the Portuguese the PSI 20 entities.

Further, it is suggested to ascertain if, taking into account the increase in corporate tax rates in Portugal within the period from 2010 to 2014, there has been any evolution as regards ETR of the PSI 20 Index entities (the second objective). To this end, the following hypothesis H2. will be tested:

H2. The ETR has increased over the period from 2010 till 2014.

Albeit no similar research has been undertaken at the national level, it nevertheless appears useful to investigate whether, in the light of the gradual increase, for austerity reasons, of the corporate tax rates in Portugal, there have been any impact of such increase on the ETR reported by the PSI 20 Index entities. In this regard, the aggregate maximum Portuguese corporate income tax rate has been 26.5% (consisting of 25% corporate tax and municipal surcharge up to 1.5%). With effect from 2011, the 2% state surcharge on income increasing certain threshold has been introduced, making the aggregate rate increase to 28.5%. In 2012, further increase of state surcharge had an effect of raising the aggregate corporate income tax rate up to 31.5%, this aggregate rate being maintained throughout 2014. Henceforth, one would expect that the ETR of the biggest Portuguese companies would increase as well. The suggested hypothesis is designed to test if this has happened in practice.

3.1.2.2. CSR-related disclosure and ETR as dependent variables

Next, to assess the level of CSR-related income tax disclosure (the third objective) and its links to “fair share” contribution, the level of disclosure will be related to the ETR, which will help to ascertain whether the companies disclosing information on tax payment in a more complete manner tend also to pay more in taxes. To this end, the Total Index will be associated (regressed) to ETR as an indicator of “fair share contribution”.

Next, to further assess the level of CSR-related income tax disclosure (the third objective), the level of disclosure, i.e. the Total Index, will be related to financial factors of size and profitability.

It is generally expected that larger corporations (i.e. of larger size) have more resources and opportunities for tax planning and potentially tax avoidance. Also, from CSR perspective, it is expected that taxes on income should generally represent a cost item that may have a certain weight among the expenses and in the accounts, so the level of profitability could be correlated to the general stand towards income taxes and related disclosure. Further, to investigate whether financial factors, such as size and profitability, may impact the level of disclosure, it is suggested to explore the relationship of the Total Index and the referred factors.

Consequently, the following hypothesis H3. and sub-hypotheses will be tested:

Hypothesis H3. There is a positive relationship between the level of CSR-related income tax disclosure and ETR, size and profitability and a relationship between the level of CSR-related income tax disclosure and the sector.

H3.1. There is a positive relationship between the Total Index and ETR.

H3.2. There is a positive relationship between the Total Index and the size.

H3.3. There is a positive relationship between the Total Index and profitability.

H3.4. There is an unknown relationship between the level of CSR-related income tax disclosure and sectors.

This hypothesis tries to ascertain an association between CSR-related income tax disclosure and ETR. Please, refer to the previous section 3.1.1. *Empirical objectives and main variables* outlining the objectives for the discussion of the use of disclosure indices as dependent variable and ETR. The exact construction of the indices and the measurement of the ETR are further elaborated under 3.2.2.1. *Income tax disclosure indices* and 3.2.2.2. *ETR* below, respectively. It should be again noted that no available previous research at the time of conducting the present study has made the identical association between disclosure and ETR, the natural reason being perhaps different objectives of the available academic literature.

The above (sub-)hypotheses are in line with the previous research, which consistently linked the degree of disclosure to size and profitability factors, both at national and international levels (F. P. M. de Carvalho, 2008; I. T. Lopes, 2014; Pereira, 2013; M. D. C. da Silva, 2013). The independent variables of size and profitability and their calculation is further explained in the section 3.2. *Methodology* below.

The next hypothesis studies the ETR as "fair share contribution" factor and links it to the financial factors. Here, it should be noted that Lanis and Richardson (2012) have already studied, within the broader aspects of their investigation, the relationships between ETR (which was the measure of tax aggressiveness) and financial factors of the Australian listed entities. In this way, the hypotheses partially repeat a part of the empirical research of these authors and are formulated as follows:

Hypothesis H4. There is a positive relationship between ETR, size and profitability and a relationship between the ETR and the sector.

H4.1. There is a positive relationship between ETR and size.

H4.2. There is a positive relationship between ETR and profitability.

H4.3. There is an unknown relationship between ETR and the sectors.

For the exact measurements of the ETR and financial factors please refer to sections 3.2.2.2. *ETR* and 3.2.2.3. *Independent variables* below.

Finally, to study the specific impact of leverage (indebtedness) on the CSR-related income tax disclosure and ETR, the Hypothesis H5. is developed as follows:

Hypothesis H5. The level of leverage negatively influences the level of CSR-related income taxes disclosures and ETR.

H5.1. The level of leverage negatively influences the Total Index.

H5.2. The level of leverage negatively influences the ETR.

The level of leverage has been already linked to the information disclosure indices or disclosure items in national literature (I. T. Lopes, 2014; E. J. dos R. Pereira, 2013; Santos, 2013; M. de L. e Silva, 2015), albeit not exactly to an index like the Total Index. Thus, the present hypothesis applies the previous investigation methods to the specific purpose of this particular study. The method of calculation of leverage is explained in section 3.2.2.3. *Independent variables* below.

As regards leverage and ETR, in general terms, the above hypothesis and sub-hypotheses are based on the previous international research, which finds that the leverage of multinational corporations may be an evidence of thin capitalisation of separate group entities and of tax management to reduce the corporate income tax burden and hence, ETR (Buettner, Overesch, Schreiber, & Wamser, 2012; Feld, Heckemeyer, & Overesch, 2013; Lanis & Richardson, 2012; Lin et al., 2014; Overesch & Wamser, 2010, 2014; Taylor & Richardson, 2013; Taylor, Tower, & Van Der Zahn, 2011). In this regard, it should be noted that choosing debt versus equity would be more tax efficient also in Portugal, since interest, which is the cost of borrowed capital, is deductible for corporate tax purposes in Portugal (albeit with certain limitations) and has an effect of reducing corporate tax expense, whereas dividends – the cost of equity capital – do not have such an effect.

3.2. Methodology

This section addresses the methodology of the empirical study, describing the data, the variables and the statistical methods used.

3.2.1. Data

The hypotheses will be tested based on the information extracted from the consolidated financial statements (annual accounts) and CSR reports made publicly available by 17 Lisbon Euronext PSI 20 entities within the period from 2010 to 2014. The population relates as of the moment of the third quarterly PSI 20 Index review by Euronext, effective at 21 December 2015. Though after exclusion of entities related to Banco Espírito Santo at the said date PSI 20 Index integrated 18 companies. EDP Renováveis, S.A. has been excluded from the current population by virtue of being part of Energias de Portugal, S.A.. Next, the population does not take into account the later exclusion of the BANIF Mais, S.A. from the PSI 20 Index with effect from 23 December 2015.

The consolidated financial reports (annual accounts) of the 17 companies included in the population and CSR reports were reviewed irrespective of the fact of any of the included entities being excluded from the PSI 20 Index in any prior years.

The Table 3.1 identifies the list of the entities by sector and the reports examined. In total, the final sample comprised of 85 firm-year observations, which included 85 annual consolidated accounts and 64 CSR reports.

It should be noted that for the sector classification purposes a particular classification was used based on the classification adopted in several national studies, such as those developed by the Banco de Portugal and National Statistics, instead of Industry Classification Benchmark by Euronext.

Table 3.1 List of entities and the reports examined, by year and by sector

Sector (code)	Name	2010		2011		2012		2013		2014	
		AA	CS	AA	CS	AA	CS	AA	CS	AA	CS
Industry (01)	Altri SGPS	X	X	X	X	X	X	X	X	X	N/A
Financial (02)	Banco BCP	X	X	X	X	X	X	X	X	X	X
Financial (02)	Banco BPI	X	X	X	X	X	X	X	X	X	X
Financial (02)	Banco Banif	X	X	X	X	X	X	X	X	X	N/A
Commerce &other (03)	CTT	X	X	X	X	X	X	X	X	X	X
Energy&Gas (04)	EDP	X	X	X	X	X	X	X	X	X	X
Energy&Gas (04)	Galp	X	X	X	X	X	X	X	X	X	X
Commerce &other (03)	Impresa	X	N/A	X	N/A	X	X	X	X	X	N/A
Commerce &other (03)	Jerónimo Martins	X	X	X	X	X	X	X	X	X	X
Construction (05)	Mota Engil	X	X	X	X	X	X	X	X	X	N/A
Telecom (06)	NOS	X	N/A	X	N/A	X	N/A	X	N/A	X	N/A
Telecom (06)	Pharol	X	X	X	X	X	X	X	X	X	X
Industry (01)	Portucel	X	X	X	X	X	X	X	X	X	N/A
Energy&Gas (04)	REN	X	X	X	X	X	X	X	X	X	X
Industry (01)	Semapa	X	N/A	X	N/A	X	N/A	X	N/A		N/A
Retail (05)	Sonae	X	X	X	X	X	X	X	X	X	X
Construction &Materials (05)	Teixeira Duarte	X	X	X	N/A	X	N/A	X	N/A	X	N/A

Legend: AA - Annual consolidated accounts; **CS** - CSR report; **x** - Report available; **N/A** - Report non-available

The Industry Classification Benchmark appears not to always correctly reflect the main business line of companies (by classifying, for example, CTT – Correios de Portugal, S.A.

in Industry class), as well as provides for an increased range of sectors, while the classification of the Banco de Portugal reduces the current number of sectors from nine to six, which is more adequate for the purposes of the statistical analysis of a comparatively small range of companies.

3.2.2. Dependent variables

3.2.2.1. Income tax disclosure indices

According to Lopes (2014), "the construction of an Information Disclosure Index is a common technique" applied in social and economic sciences, which helps to identify the level of information compliance and reporting. Although income tax disclosure rules are complex, which by itself may inhibit disclosure, tax management techniques and/or existence of tax contingencies may further deter entities from fully disclosing information relevant to the assessment of performance in terms of CSR and income tax payment. Table 3.2 presents the 10 relevant tax disclosure elements (TDE) under the IAS 12.

Table 3.2 Relevant IAS 12 tax disclosure elements

Reference	Code	Description
IAS 12.80 (a)	**TDE_1**	Current tax expense (income)
IAS 12.80 (b)	**TDE_2**	Adjustments recognised in the period for current tax of prior periods
IAS 12.80 (c)	**TDE_3**	Amount of deferred tax expense (income) relating to the origination and reversal of temporary differences
IAS 12.80 (d)	**TDE_4**	Amount of deferred tax expense (income) relating to changes in tax rates or the imposition of new taxes
IAS 12.81(a)	**TDE_5**	Aggregate current/deferred tax relating to items credited directly to equity
IAS 12.81(c)	**TDE_6**	General reconciliation between effective tax expense and statutory tax rate
IAS 12.81(c)	**TDE_7**	Disclosure of the tax basis
IAS 12.81(d)	**TDE_8**	Explanation of changes in the applicable tax rate(s) compared to the previous accounting period
IAS 12.81(f)	**TDE_9**	Temporary differences associated with investments in subsidiaries, branches and associates, and interests in joint arrangements
IAS 12.81(g)	**TDE_{10}**	Types of temporary differences, unused tax loss and credit, and the amount of deferred tax assets/liabilities and the amount of deferred tax income/expense recognised in financial statements

Source: Adapted from IAS 12

For the purposes of the income tax charge disclosure index (ITD Index), mandatory and voluntary disclosure elements relevant from CSR perspective were selected. By virtue of EU regulation, all Lisbon Euronext PSI 20 entities have been using IAS 12 for accounting and disclosure for income taxes.

As regards TDE_4, and as already has been noted, tax rates on income of companies were subject to change in Portugal, by means of the introduction of the state surcharge in 2010, which was increased in 2011 and 2014 and by the reduction of the general income tax rate in 2014. Thus, we would expect that this item would be disclosed in the relevant years.

The items like disclosure of tax elements and deferred tax assets and liabilities related to discontinues operations or business combinations, however possibly important in terms of tax position of any group, were notwithstanding excluded from the list of elements for the purposes of ITD Index. The reasons are the limits of the current research and specific nature of business combinations and closing down business.

Next, from the CSR perspective, proportional tax expense reconciliation, geographical tax expense disclosure, disclosure of tax contingencies, if any, and detailed ETR and statutory tax reconciliation, providing additional explanation in this regard, present particular interest. Therefore, the following items listed in Table 3.3 will be additionally considered for the purposes of the ITD Index.

Table 3.3 Additional tax disclosure elements

Reference	**Code**	**Description**
IAS 1.117	**TDE_{11}**	Explicit disclosure of policies in respect of accounting for income taxes
IAS 12.81(C)	**TDE_{12}**	Reconciliation of the statutory and effective tax rates stating statutory and effective rates (as opposed to amounts)
IAS 12.81(C)	**TDE_{13}**	Tax reconciliation: details on the differences between the accounting profit and the tax base
IAS 12.80(A)	**TDE_{14}**	Disclosure of tax expense by main geographies
IAS 37.84-37.86	**TDE_{15}**	Disclosure of tax provisions and/or tax contingencies

Source: Adapted from IAS 1, IAS 12 and IAS 37

As regards CSR ITD Index, Table 3.4 shows the elements for disclosure in the CSR reports (CSRTDE) of the entities analysed.

Table 3.4 CSR disclosure elements

Code	Description
$CSRTDE_1$	Existence of CSR report
$CSRTDE_2$	Note on taxes as a matter of CSR
$CSRTDE_3$	Statement of total amount of taxes paid
$CSRTDE_4$	Disclosure of paid corporate income taxes
$CSRTDE_5$	Disclosure of ETR
$CSRTDE_6$	Disclosure of tax provisions and/or tax contingencies
CSRTDE7	Disclosure of tax policies
CSRTDE8	Disclosure of existence of tax governance model/tax being board matter
CSRTDE9	Commitment to tax transparency
CSRTDE10	Commitment to tax compliance

Source: Adapted on the basis of Sustainability Report of Fortum Oyj 2013

To assess the level of reporting, content analysis framework was developed. The data collected manually from the annual consolidated accounts and CSR reports was codified into pre-defined categories, taking into account the level of disclosure of the required disclosure of the elements. In this way, the code from "0" to "2" was assigned to each information item, as shown in the Table 3.5.

Table 3.5 Codes assigned to the data collected

Code	Description
0	Element not disclosed
0.5	Element disclosed incompletely/partially disclosed
1	Element fully disclosed
2	Not applicable

The information compliance index for each company can be achieved through the quotient between the total of items disclosed by a company and the sum of items that should be disclosed (I. T. Lopes, 2014), according to the standard set above.

The first step in this research is to compute the ITD Index, which is done using the following formula:

$$\boldsymbol{ITD\ Index_i^j} = \frac{\sum_{i=1}^{n} D_i^j}{ITD_i^j} \qquad (3.1)$$

Where:

$\boldsymbol{ITD\ Index_i^j}$ is the ITD Index for company *i*;

$\boldsymbol{D_i^j}$ is IAS 12 and additional tax disclosure observed in company *i*;

$\boldsymbol{ITD_i^j}$ is total disclosures required and applicable to company *i*.

The second step is to compute the Total Index, which is done using the following formula:

$$\boldsymbol{Total\ Index_i^j} = \frac{\sum_{i=1}^{n} D_i^j}{Total_i^j} \qquad (3.2)$$

Where:

$\boldsymbol{Total\ Index_i^j}$ is the Total Index for company *i*;

$\boldsymbol{D_i^j}$ is IAS 12, additional and CSR disclosure observed in company *i;*

$\boldsymbol{Total_i^j}$ is total relevant disclosures applicable to company *i*.

The Total Index will be included in the regression model as a dependent variable in order to illustrate the level of compliance about information disclosures in respect of income taxes from the CSR perspective.

Here, it should be noted that these are unweighted indices, which assume that all disclosure items are of the same level of importance to the users of information. The use of weighting factors would imply a previous study of the importance attributed by many users of information, which is outside of the scope of the present research.

3.2.2.2. ETR

ETR has been used by various authors as the main or one of the indicator of corporate tax aggressiveness (Laguir et al., 2015; Lanis & Richardson, 2012; Lin et al., 2014), tax avoidance (Annuar et al., 2014; Ylönen & Laine, 2014) and income tax management (Gupta et al., 2014; Huseynov & Klamm, 2012) by corporations. All these cases (tax aggressiveness, avoidance and management) mean that different measures are implemented to minimize a corporation's income tax burden, which is the matter of focus in terms of "fair share" contribution from the CSR perspective.

As regards measuring the entity's corporate income tax as a "fair share contribution" and an element of CSR, this study will use ETR as the relation between an estimated tax charge and accounting pre-tax profits. As it is not possible to define "fair share contribution" precisely, the existing available literature focused rather on measuring tax avoidance, tax aggressiveness or tax sheltering by corporations. Lanis and Richardson (2012) consider Generally Accepted Accounting Principle (GAAP) ETR as measuring "the adeptness of a corporation in reducing its current tax liability relative to its pre-tax accounting income" and hence demonstrating the "relative tax burden across corporations". To improve the robustness of their empirical analysis, these authors use two different measures of ETRs: the first defined as income tax expense currently payable divided by book income, and the second defined as income tax expense currently payable divided by operating cash flows. To measure tax aggressiveness and tax sheltering, Lisowsky [et al.] (2013) uses (i) GAAP ETR computed as total tax expense divided by pre-tax financial income, (ii) cash ETR computed as cash taxes paid divided by pre-tax financial income, (iii) total book-tax differences equalling the total difference between financial and (estimated) taxable income, (iv) permanent book-tax differences, and (v) discretionary permanent book-tax differences, i.e. differences unexplained by legitimate tax positions. A number of other authors (Annuar et al., 2014; Gupta et al., 2014; Huseynov & Klamm, 2012; Lin et al., 2014) have used cash ETR.

For the purposes of the present study, the use of GAAP ETR measured as the recorded income tax charge divided by pre-tax accounting income would satisfy the objectives of the research as it would demonstrate the relative income tax burden of an entity. Cash ETR is not appropriate as it goes beyond the limits of corporate income taxation. Also, it does not appear necessary to use book-tax differences and any other variables used in previous research as the objectives of the present study is to measure “fair share” income tax contribution and not to determine the degree of tax avoidance or aggressiveness.

3.2.2.3. Independent variables

The use of external factors such as size, amongst others, have been tested and, in certain occasions, found to influence the level and quality of disclosure for CSR or income tax purposes (Bonsón & Bednárová, 2015; Bouten, Everaert, Van Liedekerke, De Moor, & Christiaens, 2011; Henriques, 2011; I. T. Lopes, 2014; Michelon, Pilonato, & Ricceri, 2014; E. J. dos R. Pereira, 2013) and tax aggressiveness (Hoi et al., 2013; Hope et al., 2013; Huseynov & Klamm, 2012; Laguir et al., 2015; Lanis & Richardson, 2012; Lisowsky et al., 2013; Taylor & Richardson, 2013). Size variable has been also extensively used as a control variable.

For the purposes of this study, size variable is the total assets.

Profitability is another external factor used as an independent and control variable in studies related to income tax disclosure and tax aggressiveness (see, for example, Lanis & Richardson, 2012; I. T. Lopes, 2014). For the purposes of the present study, profitability is measured as return on assets.

As stated previously, the leverage of multinational corporations, including specifically intra-group leverage, may be an evidence of thin capitalisation of separate group entities and of tax management to reduce the corporate income tax burden (Buettner et al., 2012; Feld et al., 2013; Lin et al., 2014; Overesch & Wamser, 2010, 2014; Taylor & Richardson, 2013; Taylor et al., 2011).

However, the specific data on intra-group leverage is not easily available from the financial reports. Thus, the data on long-term total leverage were collected manually from the financial reports and, in the manner identical to the formula extensively applied in literature (Gupta et al., 2014; Hoi et al., 2013; Laguir et al., 2015; Lanis & Richardson, 2012; Michelon et al., 2014), was calculated as total long-term leverage divided by total assets. Long-term leverage was chosen in preference to short-term leverage because long-term leverage, in contrast to short-term debt, is usually used as tool to potentially reduce the ETR of an entity.

The ETR is also used as an independent variable as regards the Total Index as a dependent variable in the particular case of the logistic regression performed in this study (please, see 3.2.2.2. *ETR* for the discussion of this variable).

Regarding the sectors, please see the discussion under 3.2.1. *Data* above as regards the sector classification adopted.

3.2.3. Statistical methods used

The statistical analysis used for the purposes of the present investigation include different information collection and statistical analysis techniques. The statistical analysis performed for the purposes of the current study was performed using the SPSS (Statistical Package for Social Sciences) software.

Univariate analysis for the evolution of the indices (the ITD Index and the Total Index), and of the ETR (Hypotheses H1. and H2.) and the inter-relations between the Total Index and the ETR, on one hand, and the independent variables, on the other hand (Hypothesis H3. to H5.), is based on descriptive statistics, in which each variable is analysed separately. The techniques used include descriptive and exploratory analysis of the data. To that end, the analysis will encompass frequency analysis and descriptive measures, namely average, median and standard deviation. For the purposes of the analysis that underlies the Hypothesis H3. to H5., the dependent variables will be classified in 1 and 0, in accordance with the respective values representing a value superior or inferior to the median of the respective population for a given independent variable per year.

Another statistical procedure used to test the Hypotheses H1. and H2. includes the non-parametric tests of Friedman and Wilcoxon, which are designed to identify the existence of significant differences between the groups of entities included in the analysis in a bivariate perspective. Those test has been used, in similar circumstances, in the national research by Pereira (2013), Santos (2013) and Silva (2015). According to Levine, Berenson and Stephan (2000), those test are adequate for smaller populations, and has proven to be as efficient as the parametric t-test, which generally requires that the data are measured in intervals. However, t-test is not appropriate in the current study.

Finally, the multivariate logistic regression analysis is used to test the Hypotheses H3. to H5., which represents the method consistently employed to find out any relations in the previous international and national research (see, for example, Gupta et al., 2014; Lanis & Richardson, 2012; Lin et al., 2014; I. C. R. Lopes, 2015; E. J. dos R. Pereira, 2013; M. D. C. da Silva, 2013; Tomohara et al., 2012). In addition, the Hosmer-Lemeshow test and goodness-of-fit tests were conducted to ascertain how well does the model fit the data in the logistic regression or whether the model is correctly specified (Allison, 2013). Omnibus test of goodness coefficients is another means to explore significant differences between blocks of independent explanatory variables or their coefficients in a logistic regression. Both tests were conducted to test the model with regard to the regression.

As far as the analysis of the correlations between the Total Index and ETR, on one hand, and independent variables (size and profitability), on the other hand, the independent variable data were also classified in 1 and 0 in the Hypotheses H3. to H5., depending on the values being superior or inferior of the median of each year. The classification methodology was necessary to avoid that the correlation between the variables in the multivariate analysis applied in the models of logistical regression, since the size variable is equally present in the variables defining profitability and leverage.

4. FINDINGS AND DISCUSSION

This chapter is designed to present the findings of the empirical research conducted in relation to the hypothesis and methodology presented in the previous Chapter.

First, the findings related to the Hypothesis H1. and H2. are presented, regarding the evolution of the CSR-related disclosure and the evolution of the ETR respectively. Next, as an introductory background, the data collected with respect to independent variables, i.e. the size, profitability and leverage of the companies in the period concerned, will be presented and discussed very briefly, followed by the descriptive analysis for dependent variables (the Total Index and ETR) by size, profitability, leverage and sector. The chapter will subsequently continue and conclude with the discussion of the results of the analysis concerning the Hypotheses H3., H4. and H5. A very concise summary of the findings is presented in the Appendix.

4.1 Descriptive analysis of dependent variables

4.1.1 Descriptive analysis for the CSR-related income tax disclosure

With regard to the Hypothesis H1., which suggests that there is an evolution with respect to the ITD Index between 2010 and 2014, the findings are synthesized in the Table 4.1.

Table 4.1 Descriptive statistics: ITD Index

	All period	2010	2011	2012	2013	2014
Number of observations	**85**	**17**	**17**	**17**	**17**	**17**
Average	0.75	0.71	0.74	0.74	0.77	0.78
Median	0.73	0.73	0.73	0.73	0.80	0.80
Std. Deviation	0.11	0.18	0.07	0.07	0.09	0.09

In the case of ITD Index, the values are comparatively stable throughout the whole period under analysis, with median values being relatively close to average values. Notwithstanding, and in line with the previous studies into the indices of information disclosure related to income tax (I. T. Lopes, 2014), there is a certain steady but slow evolution towards the improvement and fuller disclosure. Specifically, the average ITD

Index, which reflects the disclosure of CSR-related income tax items in the financial statements required under the IFRS, has risen approximately 10% (from 0.71 in 2010 to 0.78 in 2014). The same trend is confirmed by the median values, which in relation to ITD Index have also improved about 10% throughout the five year analysed (from 0.73 ITD Index in 2010 to 0.80 ITD Index in 2014).

It should be noted that the overall degree of disclosure of CSR-related income tax matters is rather high, taking into account that certain items included in the ITD Index were of non-mandatory nature (e.g., expression of the tax charge in percentage from pre-tax profits, detailed reconciliation of the statutory and effective tax rates, geographical tax expense disclosure, etc.). Consequently, the average and the median values of the ITD Index for the total five-year period analysed are respectively 0.75 and 0.73, which means disclosure of at least two thirds of the disclosure requirements encompassed in the ITD Index. In this relation, it could be mentioned that most entities (except four) of the 17 companies analysed disclose the ETR expressed as a percentage of pre-tax profits, which is particularly significant from the CSR perspective for the assessment of the relative “fair share” income tax contribution of a company.

On the other hand, only four entities in 17 have chosen to disclose, to a certain extent, the income tax expense in main geographies they operate. Since income taxes are clearly a national matter, and as noted previously, it would be important to ascertain the tax contribution to countries that provide most resources for the operation of the entities and from which most profits are coming, which this is not consistently seen from the financial reports of the Portuguese PSI 20 entities.

The Hypothesis H1. also suggests that there is an evolution with respect to the Total Index during the same period. Thus, the findings on this are presented in the Table 4.2.

Table 4.2 Descriptive statistics: Total Index

	All period	**2010**	**2011**	**2012**	**2013**	**2014**
Number of observations	**85**	**17**	**17**	**17**	**17**	**17**
Average	0.52	0.49	0.50	0.52	0.53	0.55
Median	0.52	0.48	0.48	0.52	0.54	0.52
Std. Deviation	0.10	0.14	0.08	0.07	0.05	0.12

In relation to the Total Index, the index's values scored are significantly lower than those of the ITD Index: the average and median of 0.52 for the whole five-year period analysed. As the Total Index itself includes the ITD Index (composed of 15 items) and additionally takes into account the 10 items of disclosure of income tax matters in the CSR reports, the sharp decrease of the Total Index scores means that many PSI 20 entities generally do not consider income tax to be an item to be mentioned in their CSR reports. However, five of 17 PSI 20 entities have mentioned tax in their CSR reports at least once during the five-year period covered. None of the entities, except for EDP, commits publicly to tax compliance or transparency in its CSR reports.

Notwithstanding this general trend, there is a very slight indication on improvement in regard to the Total Index. Specifically, the 2010 average score of 0.49 has risen to 0.55 in 2014, meaning the improvement of approximately 8%. As with the average, the median score of 0.48 in 2010 has increased to 0.52 in 2014, which represents about 12% increase (despite the occasional increase in the median values to 0.54 in 2013).

The foregoing analysis is in line with the one expressed in the Hypothesis H1., because there is a certain positive evolution over the period of five years, from 2010 to 2014, as regards CSR-related income tax disclosure with the scores of both indices – the ITD Index and the Total Index – rising steadily, despite of its slightness.

4.1.2. Descriptive statistics for the ETR

In relation to the Hypothesis H2., which suggests that there was an evolution in ETR in between 2010 and 2014, the statistical information retrieved as regards the ETR of the PSI 20 entities, expressed as a portion of pre-tax profits, is synthesised in the Table 4.3.

Table 4.3 Descriptive statistics: ETR

	All period	2010	2011	2012	2013	2014
Number of observations	**85**	**17**	**17**	**17**	**17**	**17**
Average	0.15	0.22	0.13	0.22	-0.09	0.25
Median	0.22	0.23	0.21	0.26	0.15	0.19
Std. Deviation	0.57	0.11	0.20	0.20	1.06	0.62

Before the analysis of the data presented, the effects of the crisis in the Eurozone, including in Portugal, over the years up to 2015, and particularly the years 2011-2013 should be mentioned. During those years, the crisis has resulted in a significant downturn in the economic growth as evidenced by a negative change in the General Domestic Product (Statista Inc., 2015). For this reason, a few of the PSI 20 entities included in the population have suffered losses with an obvious impact on income tax expense. Existence of tax losses has resulted in the negative ETR shown by some financial statements examined.

In that context, as the figures included in the Table 4.3 demonstrate, there is a slight rise in the average ETR from 2010 to 2014 (from 0.22 to 0.25). However, there is a decrease in the median ETR within the time span under review (from 0.23 to 0.19). Henceforth, it is not possible to conclude on any evolution (either positive or negative) in respect to the ETR of the PSI 20 entities in the period under review. For this reason, the data does not appear to be in line with the affirmation stated in Hypothesis H2.

Finally, it is remarkable that in many cases, despite the significant standard deviation, and as evidenced by the average and the median values of the ETR throughout the years, the ETR of the PSI 20 entities is significantly lower than the applicable statutory aggregate income tax rate on companies in Portugal, and despite the increases of the statutory rate in three years out of 5 examined (26.5% in 2010, 28.5% in 2011 and 31.5% in 2012-2014). This, on one hand, is partially explained by the existence of tax losses, and on the other hand, by the availability of tax incentives and exemptions to the Portuguese companies in question, which lead to the ETR lower than the statutory rate.

The next section will additionally provide information on the evolution of dependent variables trough the bivariate tests made.

4.2. Bivariate tests for dependent variables

The Friedman test provides information on the differences and potential evolution as regards the dependent variables, with results shown in the Table 4.4, which includes the ITD Index and the Total Index as well as the ETR, for the analysis of the evolution of the disclosures and the income tax rate.

Table 4.4 Friedman test: Indices and ETR

Year	Average ranks		
	ITD Index	Total Index	ETR
2010	3.09	3.21	3.24
2011	2.68	2.79	2.53
2012	2.71	2.97	3.71
2013	3.21	3.29	2.82
2014	3.32	2.74	2.71
Number of entities	17	17	17
$\chi 2$	3.65	2.014	6.071
Degree of freedom	4	4	4
Asymptotic significance	0.46	0.733	0.194

According to the parameters of Friedman test, the levels of asymptotic significance (so-called p-values) must be lower than 5% (in some cases 10% is also acceptable) in order to reveal any statistically relevant differences. Based on the results of the test shown in the Table 4.4, none of the dependent variables present the value of asymptotic significance as low as 5%. Henceforth, neither the Indices nor the ETR reveal any statistically relevant difference within the period from 2010 to 2014. Thus, the results of the Friedman test do not confirm the Hypotheses H1. and H2.

Nevertheless, these results are generally in line with the previous descriptive analysis regarding the ITD and Total Indices (see Section 4.1.1. *Descriptive analysis of the CSR-related income tax disclosure* above), which showed certain but albeit very slow positive evolution of the indices. The test additionally confirms the stability (no evolution) of the ETR throughout the years, in line with the previous descriptive analysis (section 4.1.2. *Descriptive statistics for the ETR* above).

Next, the Wilcoxon test further provides information on the evolution and any potential differences between any of the years under the analysis. The results are reflected in the Table 4.5.

Table 4.5 Wilcoxon test: Indices and ETR

Years	ITD Index		Total Index		ETR	
	Z	Asymptotic significance (bilateral)	Z	Asymptotic significance (bilateral)	Z	Asymptotic significance (bilateral)
2010 vs. 2011	-.105[b]	.916	-.490[c]	.624	-1.586[c]	.113
2010 vs. 2012	-.157[c]	.875	-.489[b]	.624	-.970[b]	.332
2010 vs. 2013	-1.477[b]	.140	-1.137[b]	.256	-.592[c]	.554
2010 vs. 2014	-1.540[b]	.124	-.621[b]	.535	-.876[c]	.381
2011 vs. 2012	-.447[b]	.655	-1.033[b]	.302	-2.059[b]	.039
2011 vs. 2013	-1.838b	.066	-1.505b	.132	-.402c	.687
2011 vs. 2014	-2.146b	.032	-.409b	.682	-.355b	.723
2012 vs. 2013	-1.365b	.172	-1.100b	.271	-.876c	.381
2012 vs. 2014	-1.960b	.050	-.285c	.776	-.876c	.381
2013 vs. 2014	-1.342b	.180	-1.205c	.228	-.355b	.723

Legend: a - Wilcoxon rank tests; **b** - Based on negative ranks; **c** - Based on positive ranks; d - The sum of negative ranks equals the sum of positive ranks; vs. (versus)

The results of this test comparing the years under the analysis, once again, confirm the overall stability as regards the ITD and Total Indices as well as the ETR. There is a certain evolution of the ITD Index of 2011 as compared to 2013 and 2014, and of 2012 compared to 2014. It reflects a small growth in the average and median ITD Index of the relevant years confirmed by the descriptive statistical analysis in the Table 4.1.

The findings of the Wilcoxon test also show a difference in the ETR of 2011 as compared to 2012, which is also explained by the descriptive statistical analysis in the Table 4.2. However, despite the differences in the average and the median values of the ETR shown in the prior descriptive statistical analysis, the Wilcoxon test does not register any further significant statistical differences.

4.3. Descriptive analysis for independent variables

Before presenting the regression data obtained in relation to the Hypotheses H3. to H5., the Table 4.6 addresses the general data obtained with regard to independent variables used in this investigation, namely the size, profitability and leverage levels for the PSI 20 entities during the years 2010-2014 under examination.

Table 4.6 Descriptive statistics for size, profitability and leverage of the population

		Size*			**Profitability**			**Leverage**		
Range	**Period (Number of Observations)**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**
Lower than the median (=0)	**All period (45)**	**2.38**	**2.71**	**1.37**	**-0.01**	**0.01**	**0.11**	**0.18**	**0.19**	**0.10**
	2010 (9)	2.30	2.67	1.30	0.01	0.02	0.01	0.20	0.20	0.12
	2011 (9)	2.27	1.79	1.42	-0.02	-0.01	0.06	0.20	0.20	0.11
	2012 (9)	2.31	1.61	1.54	0.00	0.01	0.03	0.19	0.17	0.10
	2013 (9)	2.70	2.82	1.53	0.00	0.00	0.02	0.19	0.24	0.10
	2014 (9)	2.30	2.71	1.33	-0.07	0.00	0.23	0.14	0.16	0.10
Higher than the median (=1)	**All period (40)**	**28.34**	**14.58**	**27.32**	**0.05**	**0.04**	**0.02**	**0.40**	**0.39**	**0.08**
	2010 (8)	29.78	15.44	32.23	0.05	0.05	0.02	0.45	0.41	0.12
	2011 (8)	29.71	19.50	29.71	0.05	0.04	0.02	0.42	0.40	0.05
	2012 (8)	29.40	17.04	28.63	0.04	0.04	0.02	0.41	0.39	0.05
	2013 (8)	27.33	13.66	26.97	0.05	0.05	0.02	0.40	0.40	0.06
	2014 (8)	25.51	13.17	25.98	0.04	0.03	0.02	0.33	0.31	0.08
All firms	**All period (85)**	**14.60**	**4.46**	**22.75**	**0.01**	**0.02**	**0.08**	**0.29**	**0.31**	**0.15**
	2010 (17)	15.23	4.16	25.59	0.03	0.03	0.02	0.32	0.35	0.17
	2011 (17)	15.18	4.47	24.22	0.01	0.02	0.06	0.30	0.34	0.15
	2012 (17)	15.06	4.69	23.54	0.02	0.02	0.03	0.29	0.33	0.14
	2013 (17)	14.29	4.97	21.91	0.02	0.02	0.03	0.29	0.30	0.13
	2014 (17)	13.22	4.10	20.95	-0.02	0.03	0.17	0.23	0.25	0.13

Legend: * - in millions of EUR

Regarding the descriptive statistical data referred, it should be noted that within the period between 2010 and 2014, the general trend of the firms has pointed out to a reduction in asset size, more profoundly observed in the companies with larger size of assets. A reduction in leverage and profitability is also observed, regardless the group under analysis. This may be explained by the years of financial and economic crisis in Portugal, characterised by slowdown of the economy, decreased business and consumer financing and decreased or no growth.

It may be also mentioned that the results show a major gap between the two groups of entities in terms of size, which also presents a significant standard deviation. Conversely, the leverage factor presents the lower gap, where the second group (larger firms) presents a level of leverage two times higher than the first one, whereas the profitability is five times higher in the second group than in the first one.

4.4. Descriptive analysis for dependent variables

4.4.1. Total Index by independent variables

The Table 4.7a addresses a breakdown for the Total Index by size, profitability and leverage levels, which is useful for and may, to a certain extent, anticipate the results of the regression analysis.

Table 4.7a Statistics for Total Index by size, profitability and leverage

		Size			Profitability			Leverage		
Range	**Period (Number of Observations)**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**
Lower than the median (=0)	**All period (45)**	**0.50**	**0.48**	**0.11**	**0.52**	**0.52**	**0.09**	**0.53**	**0.54**	**0.09**
	2010 (9)	0.44	0.48	0.15	0.48	0.48	0.11	0.51	0.48	0.10
	2011 (9)	0.47	0.48	0.06	0.50	0.48	0.10	0.51	0.50	0.07
	2012 (9)	0.48	0.48	0.06	0.52	0.52	0.08	0.52	0.54	0.08
	2013 (9)	0.51	0.52	0.04	0.56	0.54	0.05	0.53	0.54	0.05
	2014 (9)	0.58	0.52	0.14	0.54	0.54	0.10	0.59	0.56	0.12
Higher than the median (=1)	**All period (40)**	**0.54**	**0.54**	**0.08**	**0.52**	**0.50**	**0.11**	**0.50**	**0.51**	**0.10**
	2010 (8)	0.54	0.56	0.12	0.49	0.53	0.18	0.46	0.49	0.18
	2011 (8)	0.54	0.53	0.09	0.51	0.49	0.06	0.49	0.48	0.09
	2012 (8)	0.55	0.54	0.06	0.52	0.52	0.06	0.52	0.52	0.06
	2013 (8)	0.55	0.54	0.06	0.50	0.49	0.04	0.53	0.53	0.05
	2014 (8)	0.53	0.53	0.10	0.57	0.51	0.15	0.52	0.51	0.11

As regards the size, the data show slightly higher scores for the Total Index for entities whose size is above the median (0.54 of median and average for larger companies and 0.50 median and 0.48 average for companies sized lower than median). This is in line and would confirm the Hypothesis H3.2. stating that there is a positive relationship between the Total Index and the size factor.

No significant differences can be observed as far as profitability is concerned. Thus, no preliminary insights can be drawn as regards the Hypothesis H3.3., exposing that there is a positive relationship between the Total Index and profitability factor.

Finally, companies with higher debt score higher in Total Index (the average of 0.53 and the median of 0.54) than those with lower leverage levels (the average of 0.50 and the median of 0.51), however, the difference being rather insignificant. Henceforth, no conclusions as regards how the level of leverage influences the CSR-related tax disclosure (Hypothesis H5.1.) can be drawn here.

The values of Total Index by sector are presented in the following Table 4.7b.

Table 4.7b Statistics for Total Index by sector

	Sector 1 – Industry		**Sector 2 – Financial**		**Sector 3 –Commerce&other**	
	Number of observations	**Average**	**Number of observations**	**Average**	**Number of observations**	**Average**
All period	**15**	**0.52**	**15**	**0.51**	**20**	**0.52**
2010	**3**	0.38	**3**	0.52	4	0.51
2011	**3**	0.51	**3**	0.49	4	0.5
2012	**3**	0.49	**3**	0.53	4	0.53
2013	**3**	0.53	**3**	0.53	4	0.53
2014	**3**	0.7	**3**	0.48	4	0.52
	Sector 4- Energy&Gas		**Sector 5 – Construction**		**Sector 6 – Telecom**	
	Number of observations	**Average**	**Number of observations**	**Average**	**Number of observations**	**Average**
All period	**15**	**0.52**	**10**	**0.45**	**10**	**0.58**
2010	**3**	0.49	**2**	0.44	**2**	0.59
2011	**3**	0.52	**2**	0.42	**2**	0.58
2012	**3**	0.53	**2**	0.42	**2**	0.56
2013	**3**	0.52	**2**	0.48	**2**	0.59
2014	**3**	0.55	**2**	0.48	**2**	0.59

The results show that there are no significant reporting differences for Total Index among the sectors in average terms, the Construction sector showing slightly lower scores than the other industries and Telecom sector the highest. It should be noted, however, that due to the reduced size of the population (17 entities), these results cannot be regarded as showing general trends in various sectors.

4.4.2. ETR by independent variables

In line with the above analysis for the Total Index by size, profitability and leverage, the Table 4.8a shows the general data obtained with regard to ETR.

Table 4.8a Statistics for ETR by size, profitability and leverage

		Size			Profitability			Leverage		
Range	**Period (Number of Observations)**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**	**Average**	**Median**	**Std. dvt.**
Lower than the median (=0)	**All period (45)**	**0.20**	**0.22**	**0.20**	**0.19**	**0.21**	**0.43**	**0.22**	**0.24**	**0.41**
	2010 (9)	0.23	0.21	0.08	0.21	0.23	0.13	0.22	0.21	0.11
	2011 (9)	0.16	0.22	0.16	0.05	0.16	0.25	0.13	0.22	0.22
	2012 (9)	0.25	0.31	0.24	0.19	0.26	0.27	0.31	0.30	0.11
	2013 (9)	0.21	0.22	0.26	0.15	0.13	0.33	0.16	0.22	0.28
	2014 (9)	0.16	0.19	0.22	0.33	0.19	0.85	0.30	0.19	0.85
Higher than the median (=1)	**All period (40)**	**0.19**	**0.23**	**0.43**	**0.21**	**0.24**	**0.14**	**0.16**	**0.20**	**0.21**
	2010 (8)	0.21	0.25	0.13	0.23	0.23	0.07	0.23	0.24	0.11
	2011 (8)	0.11	0.18	0.25	0.23	0.24	0.07	0.14	0.18	0.19
	2012 (8)	0.19	0.23	0.15	0.25	0.27	0.06	0.12	0.17	0.23
	2013 (8)	0.09	0.14	0.27	0.15	0.19	0.19	0.15	0.15	0.26
	2014 (8)	0.36	0.22	0.90	0.16	0.22	0.21	0.19	0.23	0.25

The data show that the ETR might not depend on the size of an entity, the median and average ETRs being rather close for both groups of larger and smaller companies (0.20 and 0.19 average ETRs and 0.22 and 0.23 median ETRs in two groups, respectively). Furthermore, the standard deviation for larger companies is significant, showing that there are bigger differences in ETRs for larger companies. Henceforth, these statistics show that ETR is likely not to be dependent on the size of the entity (Hypothesis H4.1.).

Next, companies showing lower profitability pay slightly lower tax. Taking into account that the period under review is the period of economic slow-down and even distress, this relationship could be perhaps explained by the existence of negative ETRs for companies, whose profitability is lower than median and which were showing losses.

Finally, the ETR of companies with higher borrowing is lower than of those who borrow less (average of 0.16 and median of 0.20 compared to average of 0.22 and median of 0.24 of companies with lower borrowings). This generally confirms the statement that debt capital reduces the ETR by virtue of interest deduction for tax purposes. In this way, the statistical data presented also confirm the Hypothesis H5.2., expressing that there is a negative relationship between the level of leverage and ETR.

With regard to potential sector differences in the ETRs, the data obtained is the following as reflected in the Table 4.8b.

Table 4.8b Statistics for ETR by sector

	Sector 1 – Industry		**Sector 2 – Financial**		**Sector 3 –Commerce&other**	
	Number of observations	**Average**	**Number of observations**	**Average**	**Number of observations**	**Average**
All period	**15**	**0.11**	**15**	**0.02**	**20**	**0.18**
2010	**3**	0.22	**3**	0.08	4	0.23
2011	**3**	0.18	**3**	-0.06	4	0.15
2012	**3**	0.22	**3**	0.07	4	0.13
2013	**3**	-0.02	**3**	0.10	4	0.13
2014	**3**	-0.05	**3**	-0.11	4	0.28
	Sector 4- Energy&Gas		**Sector 5 – Construction**		**Sector 6 – Telecom**	
	Number of observations	**Average**	**Number of observations**	**Average**	**Number of observations**	**Average**
All period	**15**	**0.40**	**10**	**0.27**	**10**	**0.23**
2010	**3**	0.29	**2**	0.31	**2**	0.22
2011	**3**	0.25	**2**	0.04	**2**	0.21
2012	**3**	0.27	**2**	0.46	**2**	0.32
2013	**3**	0.28	**2**	0.17	**2**	0.32
2014	**3**	0.93	**2**	0.34	**2**	0.07

The data show that financial sector entities have paid significantly lower taxes on income (the average and median values of 0.02) than the rest of the sectors. This is explained by the fact that in most years under the analysis, the financial entities have suffered losses, which resulted in negative ETRs. The figures further show that the ETR of enterprises in the industry sector is also significantly lower than the ETR of the remaining sectors. Again, it should be mentioned that due to the limited sample the findings by sector cannot be regarded as showing general sector trends.

4.5. Logistic regression analysis for the Total Index and ETR

4.5.1. Regression analysis for the Total Index

The findings of the logistic regression analysis to identify correlations between the Total Index and the independent variables are presented in the Table 4.9a.

Table 4.9a Total Index regression analysis

Variables	Coefficient	Z-stat
ETR	.438	.308
Size	2.642	6.637***
Profitability	-1.109	1.426
Leverage	-4.800	4.590**
Sector 1 (Industry)	-3.109	3.891**
Sector 2 (Financial)	-1.818	3.001*
Sector 3 (Commerce&other)	-2.925	4.704**
Sector 4 (Energy&Gas)	-2.986	3.748*
Sector 5 (Construction)	.565	.166
Constant	1.975	1.821

Model $\chi 2$	
Omnibus test †	27.683***
H. & L. test ‡	6.909
Pseudo R^2	0.374
% classified correctly	70.6
Number of observations	85

Legend: ***, ** and * indicates statistical significance (two-sided) at the 1%, 5% and 10% level, respectively; † relates to chi-square of Omnibus tests of model coefficients; ‡[r]relates to chi-square of Hosmer and Lemeshow test; § refers to Nagelkerke R^2

In terms of *goodness-of-fit test* (Hosmer and Lemeshow test or H.&L., which is designed to ascertain how well the data fit the model), the model presents a good fit for the data as the output values do not differ significantly from the observed values (*p-value* exceeds the minimum 10% significance). The quality of fit of the variables to the model (pseudo R^2) is moderate or good, being situated at 37.4% (i.e. within the range from 20% to 40% indicating a good model fit). The significance of the prediction of the Total Index (model $\chi 2$, Omnibus test of model coefficients) is situated at 1%.

Henceforth, the regression analysis identified the strongest positive relationship (the significance of 1%) between the Total Index and the size factor. In this way, it proves that bigger companies perform better as regards CSR-related tax disclosure, confirming the Hypothesis H3.2., which states that there is a positive relationship between the CSR-related tax disclosure (the Total Index) and the size factor. The results of the logistical regression analysis are entirely in line with the results of the descriptive analysis under the section 4.2.2. *Total Index* and its correlation to size.

As regards the profitability factor, no relationship is confirmed by the regression analysis. Consequently, oppositely to the Hypothesis H3.3., which expresses that there is a positive relationship between the Total Index and the profitability factor, is not confirmed by the logistical regression. These results coincide with the results of descriptive statistical analysis set out in section 4.2.2. *Total Index* and its correlation to size, profitability and leverage above.

Next, the logistic regression identifies a certain negative relationship as regards leverage, the level of significance being at 5%. These results, together with the descriptive statistical analysis (again, please refer to the section 4.2.2. above), confirm that companies with bigger debt have a lower standard of CSR-related income tax reporting. Thus, the Hypothesis H5.1. is confirmed, considering the negative relationship between the level of leverage and the Total Index.

Furthermore, the logistic regression analysis reveals no relationship between the Total Index and the ETR. In this way, the analysis does not confirm the Hypothesis H3.1., which suggests that there is a positive relationship between the Total Index and the ETR.

Finally, based on the results provided by the logistic regression, the relationship between the Total Index and the Industry and Commerce&Other sectors present the highest significance levels of the test (level of statistical significance at 5%), with a negative signal of association. For the purposes of Hypothesis H3.4, it may be also mentioned that only the Construction sector does not present a meaningful association with the Total Index, at least at 10% of significance, which does not contradict the descriptive statistical analysis under section 4.2.2. *Total Index* above where the lower level of disclosure for the Construction sector was identified. Overall, a negative association between the Total Index and sectors is determined, which means that the current results confirm the Hypothesis H3.4.

4.5.2 Regression analysis for ETR

The results of the logistic regression analysis to identify correlations between the ETR, the independent factors and the sectors are demonstrated in the Table 4.9b.

Table 4.9b ETR regression analysis

Variables	Coefficient	Z-stat
ETR	-1.201	2.393
Size	.886	1.265
Profitability	-.596	.091
Leverage	2.051	2.160
Sector 1 (Industry)	1.970	4.126**
Sector 2 (Financial)	3.311	8.627***
Sector 3 (Commerce&other)	2.166	3.344*
Sector 4 (Energy&Gas)	1.950	2.637
Sector 5 (Construction)	-1.692	1.689
Constant	-1.201	2.393

Model $\chi 2$	
Omnibus test †	15.763**
H. & L. test ‡	8.633
Pseudo R^2	0.226
% classified correctly	68.2
Number of observations	85

Legend: ***, ** and * indicates statistical significance (two-sided) at the 1%, 5% and 10% level, respectively; † relates to chi-square of Omnibus tests of model coefficients; ‡^{r}relates to chi-square of Hosmer and Lemeshow test; § refers to Nagelkerke R^2

In comparison to the foregoing Total Index analysis, the model for the logistic regression analysis for the ETR does not demonstrate the same quality of fit, suggesting that the model could be only partially defined.

On the one hand, the model shows good quality of fit under the *goodness-of-fit test* (Hosmer and Lemeshow test). On the other hand, the *p-value* indicates the level of significance exceeding 10%, hence the quality of fit of the variable factors of the model (pseudo R^2) is reported at 22.6%, i.e. at the level which is considered as ranging between weak and moderate. The model significance for the prediction of disclosure (model $\chi 2$, Omnibus test of model coefficients) is equally lower in comparison to the model proposed for the Total Index (5%, which compares with 1% obtained in the first one).

Additionally, the results of the analysis suggest that there is no correlation between ETR and size, profitability or leverage. Henceforth, these results do not confirm the Hypotheses H4.1. and H4.2. as well as the Hypothesis H5.2., which suggested the existence of a positive relationship between ETR and these explained factors.

As regards the sectors, the results generally show the existence of a positive association level between the sectors and the ETR of the companies. Thus, the results reflected in the Table 4.9b highlight the lower ETR for the financial sector (at the level of 1%) and the Industry sector (at the level of 5%), coinciding with the results of the descriptive analysis discussed in 4.4.2. *ETR* by independent variables before. In this way, it should be concluded that there is an association between the ETR and the sectors, thereby confirming the Hypothesis H5.3.

5. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

This final chapter presents, in a concise form, the main conclusions based on the review of the financial standards and CSR guidelines and the results of the empirical study of the data collected from the annual consolidated accounts and the CSR reports of PSI 20 entities. The chapter further deals with the limitations of the current study and outlines the possibilities for potential future research.

5.1. Conclusions regarding the theoretical background

All the most influential financial standards reviewed, namely IAS 12 on accounting for income tax, IAS 1 on presentation of financial statements and IAS 37 on provisions and contingencies, FAS 109 on income tax, FAS 5 on contingencies and FIN 48 on tax uncertainties, as well as the Portuguese NCRF 25 on income tax, NCRF 1 on presentation of financial statements and NCRF 21 on provisions and contingencies require mandatory disclosure of certain information related to corporate income tax. Specifically, all the standards require disclosure of the current and deferred tax expense, which are potentially the first main points that the users of the financial information would pay their attention if looking for the tax information from the CSR standpoint. Also, the standards require the disclosure of uncertainties, which would include disclosure of provisions or contingencies as regards potential uncertainties related to tax payments.

Although all the standards, along with annual tax charge disclosure, require the tax charge reconciliation with statutory corporate income tax rate as a numerical or percentage reconciliation, none makes percentage reconciliation mandatory, making the assessment of tax charge less transparent. Furthermore, the degree of detail as regards explaining the differences between the actual tax charge and the statutory rate is not defined, giving the companies an opportunity not to expose the more sensitive data and thereby making the essential information unavailable for those users of financial information, who seek to assess the CSR of the companies in tax field. Also, the geographical earnings and consequently geographical tax charge disclosure is not mandatory, making the information how much corporate tax has been paid in each particular jurisdiction of operation (and useful to assess CSR tax behaviour) often unavailable based on the financial statements.

It should be noted, however, the US SFAS (more specifically, FIN 48) require to report uncertain tax positions, the information that is certainly interesting to evaluate the company's behaviour as far as tax payments and aggressiveness in application of tax rules are concerned. In relation to FIN 48, the existing research provides evidence that tax aggressiveness of the US entities has diminished after the introduction of mandatory reporting of uncertain tax positions. As for the IASB issued standards, there is a Draft IFRIC Interpretation on the matter. The Draft IFRIC Interpretation is designed to deal with tax uncertainties. However, in contrast to its US counterpart, the Draft IFRIC Interpretation in its current version does not impose any additional reporting and disclosure but is designed to merely provide clarification to existing rules of IAS 12 and IAS 37. If this is not changed, the effects of its adoption, in the author's view, would be different compared to the introduction of FIN 48, which had been reported to have a big impact on the reporting practices of the US companies. Here, it should be noted that the Portuguese NFRCs remain silent on the topic, save for the general requirement to disclose contingencies.

Among the CSR standards analysed, namely the GRI G4 Guidelines, the UN Global Compact and the OECD Guidelines, only the latter directly addresses taxation as CSR matter extensively, stressing tax compliance behaviour and placing tax topic on the table of the board. The GRI G4 Guidelines nevertheless recognise payments to government as a reportable item, recommending to report the amounts of tax payment to each government (geographically) as well as separately the amount of fines and penalties related to tax. In this way, the GRI 4 Guidelines contain the recommendation, which could provide for the main information on tax as CSR-related subject and certainly remedy the absence of mandatory recognition geographical of tax expense in the financial statements.

The academic literature on tax as a CSR matter is emerging, with the authors accepting that tax is a matter of CSR. A significant body of research has developed as regards the US FIN 48 rules, demonstrating various aspects of its impact and the change in the tax behaviour of US corporations. International research provides evidence that more socially responsible firms are less tax aggressive, whereas, to the author's knowledge, no similar research has yet been conducted in Portugal. The Portuguese academic literature and research has focussed mainly on the issues of tax, tax avoidance, tax reporting and CSR reporting separately.

5.2. Conclusions from the empirical study

As a result of the practical part of the present thesis, it may be concluded that the Portuguese PSI 20 entities tend to generally comply with the minimum mandatory disclosure requirements as regards income taxation (75% in average terms). In the reconciliation of the tax charge with the statutory income taxes rate, most of the companies state the percentage ETR (13 out of 17 companies). Almost all (except one) provide for a certain detail explaining the differences. Only a few, however (4 out of 17), provide disclosure on tax charge geographically. This leads to the conclusion that the Portuguese companies under analysis do provide basic information permitting some conclusions regarding their tax-related CSR behaviour. It should be noted, however, that tax is not regarded as an issue to be addressed in the CSR reports of these companies: a note on tax or a statement on tax payments is found in the CSR reports of only six companies from the reports of the seventeen companies examined.

Furthermore, it may be also concluded that the disclosure of information related to income taxes (the ITD and the Total Index) has improved throughout 2010 and 2014, although the improvement is very slow. This is in line with the previous national research on disclosures related to income taxes or deferred taxation. No definite conclusions can be drawn as regards any trends in the development of the effective income tax payments (the ETR) of the entities surveyed, as the measure of their CSR in tax field.

In line with similar existing national and international research, the present study revealed that the level of disclosure of income tax related information (the Total Index) is positively associated with the size of the entities, whereas no association has been confirmed between the level of disclosure and the ETR or profitability.

Further, the present study has not identified any relationship between the ETR and the size or profitability of the PSI 20 entities in 2010-2014, but the relationship between the ETR and the sectors has been established.

Finally, it has been found that the leverage has no impact on the ETR but may be linked to disclosure of information related to income taxes (the Total Index) as it was confirmed that companies with higher leverage scored lower in disclosure of information related to income taxes (the Total Index).

5.3. Limitations of the present research

The present research has been limited to the study of the PSI 20 entities, which includes only a limited number of companies and thus may not be considered to reflect the national situation representing all Portuguese companies and sectors of economy, but only the Portuguese listed companies, i.e., the Portuguese capital market.

In terms of substantive limitations, the Indices were constructed based on specific chosen elements, which may be subject to change in any further research. The CSR reports were also subject to limited analysis, which may be extended. Also, the ETR taken into account was the current tax charge, which is limited because a so-called cash ETR (the tax payment stated in the cash-flow statement) may be also considered for the purposes of similar research.

It is also important to remind that the model for the logistic regression analysis for the ETR does not demonstrate the same quality of fit in comparison to the model proposed by the Total Index, which indicates that the conclusion related to the relationship between the ETR and the sectors must be considered with cautiousness.

As a final point, the research focused on certain specific elements of CSR-related reporting related to income taxes, such as overall completeness of information (i.e. the Indices) and ETR, and neither elaborated nor analysed all elements of CSR-related reporting aspects, such as, for example, statements of income tax charge geographically.

5.4. Suggestions for further research

The present master thesis provides for research into the issue of income taxes from the perspective of CSR, outlining the financial and CSR reporting rules applicable as well as providing the insight into the existing available research on the subject. It also examines the financial and CSR reporting by PSI 20 entities within the period from 2010 to 2014 on income taxes as a CSR matter, constructing the income tax reporting index from financial reporting and CSR perspective (the Total Index) and its correlation with the ETR, size, profitability and leverage. It is the first national research looking at the issue of reporting for income taxes from the CSR perspective.

Taking into account the limitations already outlined, the research may be repeated by extending, on the one hand, the range of entities as the current research was limited to quite narrow population and, on the other hand, the variables proposed, especially in the case of research seeking for explanatory factors of the ETR, where the quality of fit for the model presented more constraints.

It may be also applied with the purpose of identifying any differences in tax-related CSR reporting as well as ETR for entities operating in different sectors of a broader sample of the Portuguese non-financial corporations sector, which was not done in the present research because of the limited population.

Furthermore, the research may be further developed by focussing at the matter of reporting for income taxes solely in the CSR reports or by examining, in similar way, the more narrowly selected CSR-related reporting items in financial and CSR reports of the entities or constructing the weighted indices, which would particularly emphasize the CSR-related income tax reporting elements.

Finally, another separate item for further research could be geographical reporting of income tax expense and its relationship with the ETR and other independent variables as well as CSR reporting.

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APPENDIX

NO.	HYPOTHESES	METHODOLOGY	RESULTS	
H1.	There has been a certain evolution as regards CSR-related income tax disclosure from 2010 till 2014	Descriptive statistics, Friedman and Wilcoxon tests	Partially confirmed	The positive evolution is quite slow, not exceeding 10% during the 5-year period
H1.1.	The ITD Index has increased over the period from 2010 till 2014		Not confirmed	Slow growth identified via descriptive statistics methods is a possible cause of no confirmation under Friedman/Wilcoxon tests
H1.2.	The Total Index has increased over the period from 2010 till 2014		Not confirmed	
H2.	The ETR has increased over the period from 2010 till 2014		Not confirmed	The data evidence no evolution as regards ETR
H3.	There is a relationship between the level of CSR-related income tax disclosure and the ETR, size, profitability and sectors	Descriptive statistics and multivariate logistic regression	Confirmed for size factor and sectors as dependent variables	
H3.1.	There is a positive relationship between the Total Index and the ETR		Not confirmed	
H3.2.	There is a positive relationship between the Total Index and the size		Confirmed	
H3.3.	There is a positive relationship between the Total Index and profitability		Not confirmed	
H3.4.	There is an unknown relationship between the level of CSR-related income tax disclosure and sectors		Confirmed	Due to small size of population the analysis is limited
H4.	There is a positive relationship between ETR and size, profitability and sectors		Confirmed only for sectors as an independent variable	
H4.1.	There is a positive relationship between ETR and size factor		Not confirmed	
H4.2.	There is a positive relationship between ETR and profitability factor		Not confirmed	
H4.3.	There is an unknown relationship between ETR and sectors		Confirmed	Due to small size of population the analysis is limited
H5.	The level of leverage negatively influences ETR and the Total Index		Confirmed only for Total Index as a dependent variable	
H5.1	The level of leverage negatively influences the Total Index		Confirmed	
H5.2	The level of leverage negatively influences the ETR		Not confirmed	