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Study**

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The Portuguese Accounting System and International Accounting Harmonization: A Formal Harmonization Study

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Abstract

Over the last few decades, the globalization of capital markets and the consequent problems arising from the diversity of accounting practices has raised the need to establish a single set of accounting standards, in order to attain an adequate level of accounting harmonization internationally.

The International Accounting Standards Board (IASB) has been carrying out a review of its standards, aiming to reduce existing alternatives. On its hand, the Accounting Standardization Commission (*Comissão de Normalização Contabilística - CNC*), as the Portuguese accounting standardization body, has been attempting to follow recent international accounting developments, and adapt them for use in Portugal.

Using the concept of Euclidian distances proposed by Zorio Grima (2001), the main objectives of this paper are: (i) to measure the formal harmonization advances achieved in the successive stages of issue of the International Accounting Standards (IASs); (ii) to assess the evolution of national accounting standards and; (iii) to obtain empirical evidence on the level of consensus between the Portuguese accounting standards and the IASs.

The results of this study confirm the progresses towards the comparability of financial information and a reduction in the gap between Portuguese accounting standards and IASs.

Introduction

Recently, we have observed the globalization of the capital markets, as a consequence of the improvements in information technologies, the enterprise's need to raise capital in the global market places, as well as investor's needs to diversify security portfolios. Given this process of globalization and the consequent problems arising from the diversity of accounting practices across countries, it has become crucial to establish

a single set of accounting standards to achieve an adequate level of accounting harmonization in the international framework.

In this context, the International Accounting Standards Board (IASB) was committed by the International Organization of Securities Commissions (IOSCO) to develop a core set of accounting standards of high quality that would be accepted in all country's capital markets. Portugal has not been divorced from this trend towards international harmonization. In spite of the need to harmonize financial information produced by Portuguese enterprises with the international practices, the Accounting Standardization Commission has published over the last twelve years successive accounting standards (DCs), which reflect, essentially, the IASB's standards in the Portuguese accounting system.

Having identified a lacuna regarding formal harmonization studies in the accounting literature, this paper aims to contribute to fill in this gap, through applying for the first time, the concept of Euclidian distances to measure the degree of formal harmonization of Portuguese standards. The study reveals that the formal harmonization in Portugal has been increasing over time and the Euclidian distances show a progressive concurrence towards the IASB's standards.

We examine, in the first section, the evolution that has occurred in the accounting harmonization produced by the IASB and by the CNC. The second section presents some formal harmonization studies. In section three we demonstrate the application of the Euclidian distance's concept both to the evolution of the IASB's and Portuguese standards, in order to conclude about the degree of harmonization of the two systems and about the approximation of Portugal to IASB. Finally, we draw some conclusions about the formal harmonization achievements in the national and international contexts.

1. The Accounting Harmonization Phenomenon

The Accounting Harmonization developed by IASB

The role played by the IASB in the scope of the worldwide accounting harmonization has registered some changes. Thus, according to Epstein and Mirza (1997), the IASB's progress can be seen as taking place within three phases. The first phase, which involves the period since its creation in 1973 until 1989, has been characterized by the high flexibility of its standards. Hence, based upon a descriptive

approach of the practices used in different countries, the IASB has developed its proposals with a high flexibility, having recommended a range set of alternatives. By this way, the IASB proposed two or more acceptable alternatives for almost every theme so as to avoid problems emerging from the existence of different cultures and legal systems.

Among the numerous criticisms and opinions regarding the work developed by the IASB in its first phase, there is a consensus that the myriad of alternatives allowed by the IASB standards is a major reason for the lack of impact of the IASs on international comparability of financial information.

After the first phase of diffusion and generalized acceptance of the international standards, in 1989 the IASB initiated a new stage in its process of harmonization, aimed at improving the international comparability of financial statements. Hence, the period 1989-95 (2nd stage) is characterized by the implementation of the financial statements comparability project. With this project, the IASB aimed to remove the multiplicity of accounting alternatives implicit in its standards for the different themes, and to accomplish, in this manner, a higher international harmonization level. To that purpose, the IASB's Council set to a review of the alternatives included by the standards issued until 1989, which could have a material effect regarding the definition, recognition, measurement and presentation of the net income, the assets and liabilities of enterprises' financial statements (IAS 2, 5, 8, 9, 11, 16, 17, 18, 21, 22, 23 and 25). This stage was also characterized by the publication of the IASB's conceptual framework.

As a result of the Comparability Project, the number of alternative accounting treatments has dwindled substantially, once the IASB attempted to adopt a single accounting treatment, having eliminated the others. However, in certain circumstances, given the impossibility of narrowing the alternatives to just one, the IASB established a reference treatment and allowed an alternative treatment, in order to give a signal to the standardized bodies to leave the seconds in favor of the firsts (Tua Pereda, 2001).

The last stage had its beginning in 1995, with an agreement between the IASB and IOSCO. Out of this agreement, the IASB was committed to completing, by 1999, a core set of high quality standards (*core standards*), identified by IOSCO. On the other hand, this institution assumed the compromise to recommend the use of the IASB's standards for cross-border reporting after the project completion.¹

¹ Note that among the 24 standards in force at the agreement date, the IOSCO considered that 14 were acceptable, 6 would have to be reviewed and 4 eliminated.

The referred agreement was revised by the IASB in March of 1996, out of which were identified twelve areas that needed either reviewing the extant standards or issuing new standards. At this time, a plan was implemented to accelerate the establishment of high quality core standards. Later, in May of 2000, the IOSCO, after having proceeded to evaluate the IAS's core standards, identified 30 standards, which could be accepted by the capital markets. Indeed, the IOSCO accepted all of the existent IAS, except for the IAS 15 (non compulsory standard), the IAS 26 and 30 (standards with limited application to a determined type of enterprises) and the IAS 40.

Accounting Harmonization produced by CNC

The thrust of literature classifies the Portuguese accounting system in the set of countries belonging to the "continental block", which is characterized as based on a structure inspired on the Roman Code (cf. studies of Nobes (1981), American Accounting Association (AAA) (1997), Muller, Gernon and Meek (1997), Jarne Jarne (1997) and Nobes and Parker (1998)). The inclusion of Portugal in the continental group is based on its strong legal tradition (*Roman Law* influence), the strong influence of other legal systems (namely the Corporate Code (*Código das Sociedades*) and the Commercial law Code (*Código Comercial*)), on the strong relationship between accounting and taxation, on the limited influence of the accounting profession in the standard-setters process, on capital provided by banks is very significant, and on the fact that the State is the privileged user of financial statements.

The first movement towards accounting harmonization took place in 1977, with the creation of the Accounting Standards Committee (CNC)² and the publication of the first Official Accounting Plan (POC/77) through the decree number 44/77 of 7 February, 1977. Among the specific attributions committed to this commission at this time, special mention was made to the need to: "*promote the studies necessities to the adoption principles, concepts and accounting procedures which should be considered of general acceptance*" and "*to participate in the international discussions, in which are treated matters concerned to accounting standardization, in order to issue a technical opinion*".

² Despite the CNC had been created in 1977, the decree associated with the specification of its structure has only appeared in October of 1980, and the commission members were only designated in March of 1983.

The POC/77 was the result of various studies developed in Portugal, based on the several types of standardization existent in the international context. However, one of the strongest influences arises from the French accounting system. So, despite the various streams of thought underlying the first POC, the similarities with the French accounting plan are substantial in various aspects, such as the format.

The membership of Portugal to the European Economic Community (actual European Union), on 1st January 1986 resulted in the need to adopt the fourth and the seventh community directives into Portuguese internal law. Thus, in November 1989, a revised version of the POC (chapters 1 to 12), known as POC/89, (Decree n° 410/89 from 21st November of 1989) was issued to adopt the fourth directive into internal law. Later, on the 2 July 1991, Decree n° 238/91 (chapters 13 and 14 of POC) was issued to implement the seventh community directive, applicable to consolidated accounts since the 1 January 1991.

Comparing POC/89 with the previous Plan (POC/77), the composition of POC/89 became substantially more advanced, namely due to the development of the chapters regarding financial information characteristics, accounting principles and measurement criteria (non-existent in POC/77), issues in which it was substantially close to those established by the IASB. Indeed, among the options allowed by the directives, the CNC had adopted those that were not in conflict with the international standards.

Hence, this stage is characterized by the existence of a tacit compromise among the member states to assess the possible accounting solutions regarding the non-existent accounting practices in the directives and to improve the level of comparability of the accounting information. Nevertheless, despite recognizing the need to reduce the multiple options contained in the directives, any attempt in this regard has been in direct confrontation with the interests of some countries, which prevented a satisfactory agreement being reached.

In this context, given the stagnation occurring in the European accounting harmonization, Portugal has passed to adopt into its accounting standards the IASB's standards. Thus, since 1991, the CNC has been issuing Accounting Standards³ (*Directrizes Contabilísticas* –DC's) whose objective is to complete and to update the POC (through the inclusion of information to amplify and to explain certain items in the

³ Until this moment, the CNC published 28 DC's regarding various themes.

POC; to resolve issues that have not been anticipated or/and to clarify doubtful questions). Thus, the DCs correspond to the visible phase of approximation of the CNC towards the international accounting developments, fitting completely within the strategy that is being traced by the EU. Indeed, on 13th June 2000, the European Commission issued a communication titled “European Union financial reporting strategy: a way forward”, where it proposed all European companies listed in regulated markets present their consolidated accounts in accordance with the IASB’s standards, by 2005 at the latest.

However, it is important to note that until 1999, the DC’s did not have “juridical validity” (since they were not supported by any legal diploma – e.g. Decree), having been considered, until then, as mere technical opinions. With the issue of DC n° 18/97 “Objectives of the financial statements and generally accepted accounting principles”, it was already established a hierarchy of the Portuguese accounting standards: 1st) POC; 2nd) DC; 3rd) IAS issued by the IASB. Hence the mentioned standard, in its item 4, specifies that the accounting principles “*are implicit in the POC, in the accounting standards and, in case of questions not anticipated in the standards established in an international level, as the issued by the International Accounting Standards Committee (IASC)*”. Later, DC 18 adds that the adoption of the accounting principles does not necessarily require them to be defined in legal diploma in an explicit way.

Yet, the DC 18 did not solve the juridical validity problem, since this is just another standard devoted to provide the force of law to the other accounting standards. Thus, only recently was this problem completely solved with the issue Decree n° 367/99, of 18th September, which has introduced improvements in both the structure and performance of the CNC. According the art° 2 of the referred decree, the accounting standards gain compulsory effects under the Prime Minister’s promulgation. In this context, Pereira *et al.* (2001) claim that this modification emphasizes the increasing permeability of the Portuguese accounting system to Anglo-Saxon influence.

In view of the above, the Portuguese accounting system can be characterized by the coexistence of a Plan of continental European influence (specifically French) and a group of accounting standards based on the IASB’s international standards (Góis, 2000).

2. The Empirical Research developed in the scope of Formal Accounting Harmonization

One of the conceptual aspects developed in the accounting literature refers to the distinction between formal harmonization (or *de jure harmonization*) and material harmonization (or *de facto harmonization*). The former is concerned with the study of the normative accounting harmonization, whereas the latter refers to the analysis of the level of harmony exhibited by the actual practices of companies (Tay and Parker, 1990; Van der Tas, 1988 and 1992).

In this context, it is worth emphasizing that the majority of the empirical studies on the evaluation of accounting harmonization have mainly focused on either the investigation of material harmonization or its effects, rather than researching aspects of formal harmonization⁴.

Regarding the analysis of formal harmonization, once this is based on the study of the accounting regulations, it becomes difficult to obtain a high number of frequencies (high number of standards) to apply the methods used to measure material harmonization (where it is possible to work with representative samples, which include a high number of enterprises). Perhaps, due to this reason, there is a gap in the literature with respect to formal harmonization measurement methodologies. Indeed, among the few formal harmonization studies (e.g., Nair and Frank, 1981; Doupnik and Taylor, 1985; Rahman *et al.*, 1996; Zorio Grima, 2001), only the last two studies presented methodologies, which allow measuring the formal harmonization advances.

It is precisely the measure proposed by Zorio Grima (2001), the use of the Euclidian distances concept to measure the level of formal harmonization, which we propose to demonstrate.

3. The use of Euclidian distances to measure the formal harmonization of Portuguese standards across the time and the approach towards the IAS's

As mentioned earlier, the harmonization strategy followed by the IASB can be split into three different stages as to the evolution of its harmonization model: (i) the

⁴ However, as Rahman (1996) pointed out, almost every study evaluating material harmonization has measured the effects of the state of formal harmony on practice. For example, Nair and Frank (1981), Evans and Taylor (1982), Doupnik and Taylor (1985) and Yang and Lee (1994) have explored the effects of the IAS's; Emenyoun and Gray (1992), Van der Tas (1992) and Walton (1992) studied the impact of the EU fourth directive. It is, therefore, well recognized that a primary factor driving material harmonization is formal harmonization.

stage of high flexible standards, which encompasses the period since its creation until 1989; (ii) the period corresponding to the implementation of the comparability project (1989 -1995); and (iii) a last stage which had its beginning in 1995 with the celebration of the agreement with the IOSCO.

To these stages of progress the IASB went through, we could identify the corresponding periods of Portuguese accounting standardization. The first consists of the validity period of POC/77 (1977-1989), while the second stage (1989 – 1995) is characterized by the adoption into the internal law of the fourth and seventh community directives (POC revision), and the international standards (publication of 14 DC). The last stage began in 1995 and corresponds to the actual stage of progressive approximation towards international trends. The stages identified to the Portuguese normative do not correspond to those specified in the literature review. Indeed, this last identification serves, essentially, to pursue the goals of our research (i.e., we attempted to identify for Portugal the periods correspondent to the evolution occurred in the international normative).

Sample, Methodology and Limitation of the Study

Concerning the sample used, we have proceeded to analyze the accounting items, which have undergone significant changes throughout the IASB's harmonized trajectory, namely the accounting treatments recognized in the international standards. Besides these concepts, to evaluate the distance between the national standards towards the international ones, we examined certain concepts that were adopted by the national accounting standards.⁵Based on these assumptions, we selected from both standards systems 20 accounting concepts, namely:

- Inventories, Fundamental Errors, Development Costs, Research Costs, Subsequent Events, Dividends Proposal, Construction Contracts, Income Taxes, Tangible Assets, Revenue, Retirement Benefits, Foreign Exchange differences, Accounting for Business Combinations, Positive Goodwill, Negative Goodwill, Borrowing Costs, Contingent Liabilities, Intangible Assets; Hedging with Financial Instruments and Current Financial Instruments.

After a descriptive analysis of the evolution of both normative systems (national and international), we study the various alternatives contemplated by them according to

⁵ Despite they have not suffered changes in the international standard's treatments.

the typology proposed by Rahman *et al.* (1996). Under this approach, the typology used to identify the nature of the treatments is as follows:

- *Type 1- Required Treatment*: the application of accounting practice is expressly required by an accounting standard;
- *Type 2 – Recommended Treatment*: when more than one accounting alternative exists; or if there are alternatives, it is the one applied with more frequency; or among the various alternatives, the application of a certain practice is expressly recommended by a determined accounting standard;
- *Type 3 – Allowed Treatment*: the practice that is applied with less frequency than the others; or exists only in exceptional cases; or is a method with exceptional characteristics of application; or the standard establishes certain reserves towards the application of this accounting practice.
- *Type 4 – Not Permitted Treatment*: the application of a determined accounting method is forbidden by a certain accounting standard.⁶

Lastly, once classified and codified the various accounting concepts contemplated in the present sample, we assessed the formal harmonization advances achieved in the national and international context.

The methodology used in this study to quantify the level of formal harmonization is based on the concept of Euclidian distance between two points, as defined in Lancaster and Tismenestky (1985). According to the referred authors, the Euclidian distance between two points X and Y (with coordinate $X = (x_1, x_2, x_3, \dots, x_j)$ and $Y = (y_1, y_2, y_3, \dots, y_j)$) is defined as:

$$(a) \ d(X, Y) = \left[\sum_{j=1}^j (x_j - y_j)^2 \right]^{1/2} \quad (\text{Lancaster and Tismenestky, 1985: 351})$$

Equation (a) results from the following mathematic deduction. Being Z the difference vector between two points X and Y (this is, $Z = X - Y$ with coordinates $Z = (z_1, \dots, z_j) = (x_1 - y_1, x_2 - y_2, \dots, x_j - y_j)$), the distance between two points X and Y is defined as:

⁶ Note that the requirements types identified do not represent a particular order of intensity in regard to accounting harmonization. Whereas the type 1 and 4 requirements are coercive enough to create definite patterns of accounting practice, type 2 and 3 requirements lack the strength to create such an impact. This means that the requirements type 2 and 3 are not sufficiently coercive to normalize the practices, consequently if the national and international standards adopt any of these requirements for an accounting issue, there will be ample room for disharmony in practice for that issue. Given that the requirement type 1 and 4 are strengthen than type 2 and 3, it could be suggested some way to reflect this. However, it was not used any procedure to evaluate this issue, because such procedures could introduce some subjectivity.

$$||Z||_p = (\sum_{j=1}^n |z_j|^p)^{1/p}, \quad p \geq 1$$

$$= (|z_1|^p + |z_2|^p + \dots + |z_j|^p)^{1/p}, \quad p \geq 1$$

(Lancaste and Tismenestky, 1985: 352)

Where $||$ represents the absolute value. To differentiate values of p , a different concept of distance is achieved. Particularly to $p=2$ we obtain the Euclidian distance employed in this study.

Other alternative measurement distances usually used are:

$$(b) ||Z||_1 = (|z_1| + |z_2| + \dots + |z_j|)$$

$$(c) ||Z||_\infty = \max. \{z_1, z_2, \dots, z_j\}$$

Based on the formula (a), concerning the international accounting standards, we defined as vectors each of the concepts of the sample with its respective possible treatments, as follows:

$$IA_i, IB_i, IC_i \quad i=1, 2, \dots, 20$$

Where:

IA, IB, IC = IASB's standard phases; and

(IA = Phase of high flexibility of standards (1977- 1989); IB = Period of the Comparability Project (1989-1995) e; IC = Phase of the Agreement IASB/IOSCO (since 1995)

i = accounting issues contemplated in the sample.

Regarding the formal harmonization measure of the national accounting standards, we will use the following concepts, to define its respective vectors:

$$PA_i, PB_i, PC_i \quad i=1, 2, \dots, 20$$

Where,

PA, PB, PC = normative phases identified to the Portuguese accounting system;

and

(PA =Period 1977-1985; PB = Period 1985- 1995 and; PC= since 1995)

i = accounting issues contemplated in the sample.

The several stages identified for the international and national accounting standards (IA_i, IB_i e IC_i and PA_i, PB_i, PC_i , respectively) are vectors of k order, where k is the number of different types of accounting treatments, which in this case equals 4 (required treatment, reference treatment, allowed treatment, not permitted treatment).

Hence, for example, in each one of the considered stages, the vectors related to the first concept studied, “Inventories” will be the following: (i) $IA_1 = (0, 4, 0, 0)$, $IB_1 = (0, 2, 1, 1)$ e $IC_1 = (0, 2, 1, 1)$ – related to the IASB’s standards; and (ii) $PA_1 = (0, 5, 0, 0)$, $PB_1 = (0, 4, 1, 0)$ e $PC_1 = (0, 4, 1, 0)$ – related to the Portuguese accounting standards.

Accordingly, for the inventories concept, the distance between the phase IA and IC is calculated by means of the following formula:

$$(d) \ d(IA_1, IC_1) = [\sum (ia_k - ic_k)^2]^{1/2}$$

Consequently, the measure of formal harmonization (to the overall analyzed concepts) of the phase IA in relation to phase IC is expressed by the following formula:

$$(e) \ D_{IA}^{IC} = \sum_{i=1}^n d_{k, IA}^{IC};$$

Generalizing, we have:

$$(f) \ D_m^{IC} = \sum_{i=1}^n d_{k, m}^{IC}; \quad m = IA, IB, IC \text{ and } PA, PB, PC; K=4$$

Where D_m^{IC} represents the comparability measure with reference to phase IC, n the number of concepts comprised in the present sample and m corresponds to the stages of both systems. Thus, as the index D_m^{IC} value converges towards zero there is an increase of the formal harmonization of the phase in relation to phase IC, since a decrease in this index means a reduction of the distances between the analyzed stages. By contrast, increases in this index (increase of the distances of the phase m regarding phase IC) must be interpreted as a reduction of the comparability of financial information. Hence under this approach, the movements in this index indicate the level of formal harmonization.

Thus, based on equation (f) we have determined:

- the distances of all vectors correspondent to stages IA, IB in relation to stage IC (stage correspondent to the agreement IOSCO-IASB);
- the distances of all vectors correspondent to stages PA, PB in relation to stage PC and;
- the distances of all vectors correspondent to stages PA, PB, PC in relation to stage IC.

Based upon the methodology described above we calculated three types of measure: (i) an overall measure, which contains all the concepts included in the sample (i.e., the 20 concepts); (ii) one of the Balance sheet, which is determined considering the

concepts that affect essentially the Balance sheet; (iii) and another measure of Income that contemplates the standards related to the income accounts. In the following table are classified the various accounting issues under analysis in accordance with a classification developed by the IASB⁷.

Table 1:
Classification of the Concepts Analyzed

BALANCE SHEET	
1	Inventories
2	Fundamental Errors
5	Subsequent Events
6	Dividends Proposal
9	Tangible Assets
12	Foreign Exchange differences
13	Accounting for Business Combinations
14	Positive Goodwill
15	Negative Goodwill
17	Contingent Liabilities
18	Intangible Assets
20	Current Financial Instruments
INCOME STATEMENT	
3	Development Costs
4	Research Costs
7	Construction Contracts
8	Income Taxes
10	Revenue
11	Retirement Benefits
16	Borrowing Costs
19	Hedging with Financial Instruments

Source: IASB Insight (1999)

However, it is important to say that this analysis suffers from some weaknesses. Particularly, the fact that the sample includes only 20 accounting concepts may cast doubt on the empirical validity of this study. Nevertheless, as we had opportunity to mention in the literature review, the analysis of formal harmonization is based on the study of the accounting standards, which makes it difficult to obtain a high number of frequencies (high number of standards).

Thus, as we have pointed out, the accounting issues covered by this sample are only those, which were subject to modification of valuation treatment. Yet, apart from these changes on valuation treatments, we have also identified important normative changes regarding the disclosure level of information. Such developments have not been included in our formal harmonization study because the analysis and the methodology employed can only be used to evaluate the changes relative to the valuation treatments.

⁷ IASB, "IASB Insight", March of 1999, according to Zorio Grima (2001).

Further limitations of this study are the subjectivity implicit to the codification of the accounting treatments (as required, recommended, allowed and not permitted). Indeed, in the various accounting issues, we have been confronted with some difficulties of classification. To overcome this difficulty and to obtain a consistency in our codification, we opted to establish certain conditions regarding the codification of the accounting practices. On the other hand, the presented methodology, Euclidian distances, is only sensitive in quantitative terms and not in qualitative terms, which means that the adoption of one treatment or another, in a compulsory form or only allowed are not traduced through this type of methodology.

Presentation and Analysis of the Results Obtained

Evolution of the International Accounting Harmonization

Concerning the international accounting standards, we have noticed that the number of accounting treatments contemplated by each of the analyzed issues decreases as we approach the stage corresponding to the agreement IASB/IOSCO. We present in table 2, adapted from Zorio Grima (2001), the analysis of the various treatments contemplated in the international accounting standards regarding the 20 selected concepts.

Table 2: Evolution of the International Accounting Standards

	Stage IA 1977-1989	Stage IB 1989-1995	Stage IC 1995-present
1. Inventories	IAS 2 (1975)	IAS 2 (1993)	IAS 2 (1993)
Required.....	0	0	0
Recommended.....	4 (specific cost, weighted average, FIFO, LIFO)	2 (FIFO, weighted average)	2 (FIFO, weighted average)
Allowed.....	0	1 (LIFO)	1 (LIFO)
Not permitted.....	0	1 (specific cost)	1 (specific cost)
2. Fundamental Errors	IAS 8 (1978)	IAS 8 (1993)	IAS 8 (1993)
Required.....	0	0	0
Recommended.....	2 (adjust reserves; or recognition in income)	1 (adjust reserves)	1 (adjust reserves)
Allowed.....	0	1 (adjust income)	1 (adjust income)
Not permitted.....	0	0	0
3. Development Costs	IAS 9 (1978)	IAS 9 (1993)	IAS 38 (1998)
Required.....	0	1 (expense)	1 (expense)
Recommended.....	2 (expense, capitalize)	0	0
Allowed.....	0	1 (capitalize if certain conditions are met)	1 (capitalize if certain conditions are met)
Not permitted.....	0	0	0
4. Research Costs	IAS 9 (1978)	IAS 9 (1993)	IAS 38 (1998)
Required.....	0	1 (expense)	1 (expense)
Recommended.....	1 (expense)	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	0
5. Subsequent Events	IAS 10 (1978)	IAS 10 (reI. 1994)	IAS 10 (1999)
Required.....	1 (adjust financial statements if the events are related with conditions existents at the balance sheet date or that indicates that the continuity assumption concerning to the total or a part of the enterprise is not appropriated)	1 (adjust financial statements if the events are related with conditions existents at the balance sheet date or that indicates that the continuity assumption concerning to the total or a part of the enterprise is not appropriated)	1 (adjust financial statements if the events set danger in the enterprise continuity)
Recommended.....	0	0	0
Allowed.....	0	0	1 (adjust the facts that suppose evidences of conditions that arise after the balance sheet date that affect the principle of continuity of the enterprise)
Not permitted.....	1 (adjust the events not existent at the balance sheet date)	1 (adjust the events not existent at the balance sheet date)	1 (adjust the events not existent at the balance sheet date)
6. Dividends Proposal	IAS 10 (1978)	IAS 10 (1978)	IAS 10 (1999)
Required.....	0	0	1 (inform in the notes)
Recommended.....	2 (adjust as a liability; inform in the notes)	2 (adjust as a liability; inform in the notes)	0
Allowed.....	0	0	0
Not permitted.....	0	0	1 (adjust as a liability)
7. Construction Contracts	IAS 11 (1979)	IAS 11 (1993)	IAS 11 (1993)
Required.....	0	1 (percentage of completion method)	1 (percentage of completion method)
Recommended.....	2 (percentage of completion method; completed contract method)	0	0
Allowed.....	0	0	0
Not permitted.....	0	1 (completed contract method)	1 (completed contract method)

Table 2: Evolution of the International Accounting Standards (cont)

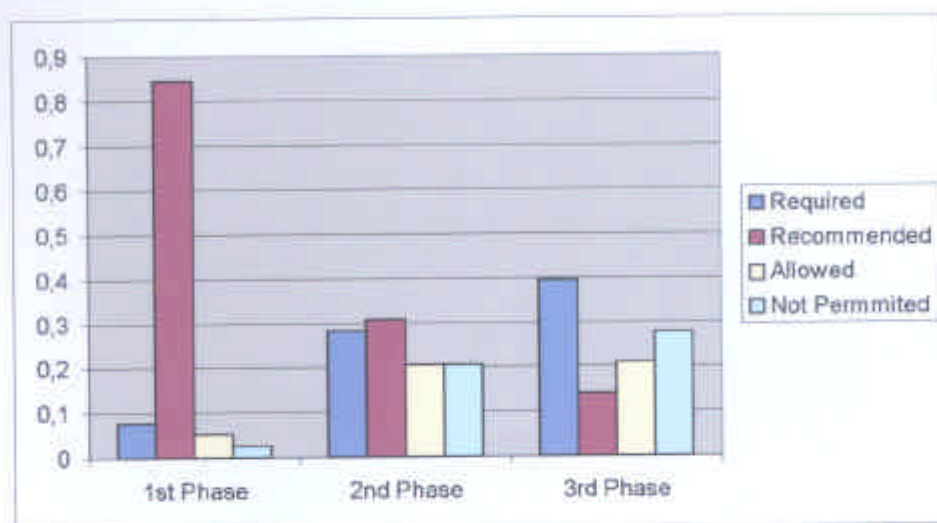
	Stage IA 1972-1989	Stage IB 1989-1995	Stage IC 1995-present
8. Accounting for Deferred taxes	IAS 12 (1979)	IAS 12 (1979)	IAS 12 (1996)
Required	0	0	1 (liability method)
Recommended	2 (deferral method; liability method)	2 (deferral method; liability method)	0
Allowed	0	0	0
Not permitted	0	0	1 (deferral method)
9. Fixed Assets	IAS 16 (1982)	IAS 16 (1993)	IAS 16 (1993)
Required	0	0	0
Recommended	2 (historical cost; revaluation)	1 (historical cost)	1 (historical cost)
Allowed	0	1 (revaluation)	1 (revaluation)
Not permitted	0	0	0
10. Revenue	IAS 18 (1983)	IAS 18 (1993)	IAS 18 (1993)
Required	0	1 (percentage of completion method)	1 (percentage of completion method)
Recommended	2 (percentage of completion method; completed contract method)	0	0
Allowed	0	0	0
Not permitted	0	1 (completed contract method)	1 (completed contract method)
11. Retirement Benefits	IAS 19 (1983)	IAS 19 (1993)	IAS 19 (1998)
Defined benefits plan method			
Required	0	0	1 (accrued benefit method)
Recommended	2 (accrued benefit method; projected benefits method)	1 (accrued benefit method)	0
Allowed	0	1 (projected benefits method)	0
Not permitted	0	0	1 (projected benefits method)
12. Foreign Exchange Difference	IAS 21 (1983)	IAS 21 (1993)	IAS 21 (1993)
Required	0	1 (recognize any income/expense during the period in which they arise)	1 (recognize any income/expense during the period in which they arise)
Recommended	2 (recognize any income/expense during the period in which they arise; deferral)	0	0
Allowed	0	0	0
Not permitted	0	1 (deferral)	1 (deferral)
13. Accounting for Business Combinations	IAS 22 (1983)	IAS 22 (1993)	IAS 22 (1998)
Required	0	1 (purchase method)	1 (purchase method)
Recommended	2 (purchase method; pooling of interest method)	0	0
Allowed	0	1 (pooling of interest method)	1 (pooling of interest method)
Not permitted	0	0	0
14. Positive Goodwill	IAS 22 (1983)	IAS 22 (1993)	IAS 22 (1998)
Required	0	1 (asset)	1 (asset)
Recommended	0	0	0
Allowed	2 (asset; immediate write-off against equity)	0	0
Not permitted	0	1 (immediate write-off against equity)	1 (immediate write-off against equity)

Table 2: Evolution of the International Accounting Standards (cont.)

	Stage IA 1977-1989	Stage IB 1989-1995	Stage IC 1995-present
15. Negative Goodwill	IAS 22 (1983)	IAS 22 (1993)	IAS 22 (1998)
Required	0	0	2 (deferred income, recognize as income)
Recommended	3 (deferred income; reduce the non-monetary assets; recognize in equity)	1 (reduce the non-monetary assets)	0
Allowed	0	1 (deferred income)	0
Not permitted	0	1 (recognize in equity)	2 (recognize in equity; reduce the non-monetary assets)
16. Borrowing Costs	IAS 23 (1984)	IAS 23 (1993)	IAS 23 (1993)
Required	0	0	0
Recommended	2 (expense; capitalize)	1 (expense)	1 (expense)
Allowed	0	1 (capitalize)	1 (capitalize)
Not permitted	0	0	0
17. Contingent Liabilities	IAS 10 (1978)	IAS 10 (1978)	IAS 37 (1998)
Required	1 (liability and cost, i.e., provision)	1 (liability and cost, i.e., provision)	1 (inform in the notes)
Recommended	1 (inform in the notes if the provision recognition conditions are not met)	1 (inform in the notes if the provision recognition conditions are not met)	0
Allowed	0	0	0
Not permitted	0	0	1 (liability and cost)
18. Intangible Assets	IAS 9 (1978)	IAS 9 (1978)	IAS 38 (1998)
Required	1 (historical cost)	1 (historical cost)	0
Recommended	0	0	1 (historical cost)
Allowed	0	0	1 (revaluated amounts)
Not permitted	0	0	0
19. Hedging with Financial Instruments- (recognition of loss and gain)	—	—	IAS 39 (1998)
Required	0	0	2 (income; equity)
Recommended	0	0	0
Allowed	0	0	0
Not permitted	0	0	0
20. Current Instruments	IAS 25 (1986)	IAS 25 (ref. 1994)	IAS 39 (1998)
Required	0	0	1 (Fair value, except if there are certain circumstances in which they would be valued at their cost)
Recommended	2 (market; lower of cost or market)	2 (market; lower of cost or market)	0
Allowed	0	0	1 (acquisition cost, this is, amortized cost)
Not permitted	0	0	0

In the following figure is presented the percentage of alternative treatments (required, recommended, allowed, and not permitted) in each one of the evolution phases of the IASB's standards:

Figure nº 1: Evolution of the accounting treatments in the three phases of IASB



Through the application of the methodology presented above, we obtained the following indicators of IASB's formal harmonization (Table 3). It is important to remember that such indicators quantify the advances of this international organization in terms of comparability of financial information.

Table 3: Indicators of Formal Harmonization
(with reference to phase IC- Agreement IASB/IOSCO)

Phases	General	Balance	Income
IA to IC	42. 871	25. 795	17. 076
IB to IC	15. 691	11. 691	4.00

As we can observe from the analysis of table 3, taken overall, it has occurred a significant advance regarding the harmonization of the standards issued by the IASB in phase IB (phase correspondent to the Comparability Projects) with regard to phase IC. Therefore, the overall index of formal harmonization has decreased in the period, in which was developed the Conceptual Framework (1989) and that was published the Comparability Project. Such decrease in this index indicates an advance concerning the comparability of financial information (we have noticed an advance, by fluctuating from 42, 891 to 15, 691).

This increasing harmonization tendency is evident not only at the Balance level (the balance index varies from 25, 795 to 11, 04), but also at the income concept's level (varies from 17, 076 to 4). With respect to the reduction in the Balance index, this has been due, particularly, to the changes made in the accounting treatments related to the

dividends proposal, foreign exchange difference, accounting for business combinations and, negative and positive goodwill.

The advance occurred at the income level is explained, essentially, by the modifications introduced with respect to the reduction of alternatives on the accounting for development costs, construction contracts, income taxes and revenue.

The evidence obtained shows that the IASB has made important progress towards the comparability of financial information. This gives support to the literature that argues the improvement of the comparability of financial statements prepared in accordance with the IAS's.

Evolution of the Portuguese Accounting Standards

Once analyzed the results related to the advance of the international accounting harmonization, we evaluate the advances that have occurred in the Portuguese accounting system. To attain such an objective, we proceed to determinate the distances among the various phases identified in the national standards. Yet, as we could not evaluate the national standards without comparing it with the international, we developed a comparison between the national and international standards, to assess the level of approximation of the Portuguese accounting system towards the international trends.

Table 4: Evolution of the National Accounting Standards

	Stage PA 1977-1989	Stage PB 1989-1995	Stage PC 1995-present
1. Inventories	POC/77, chapter XII, item 2.2.3	POC/89, chapter 5, item 5.3.11	POC/89, chapter 5, item 5.3.11
Required.....	0	0	0
Recommended.....	5 (Specific Cost, Weighted average cost, FIFO, LIFO, Standard Cost)	4 (Specific Cost, Weighted average cost, FIFO, LIFO)	4 (Specific Cost, Weighted average cost, FIFO, LIFO)
Allowed.....	0	1 (Standard Cost)	1 (Standard Cost)
Not permitted.....	0	0	0
2. Fundamental Errors	POC/77	POC/89 and DC 8/91	POC/89 and DC 8/91
Required.....	0	2 (adjust to translated income concerning to significant changes, adjust income errors with little meaning)	2 (adjust to translated income concerning to significant changes, adjust income errors with little meaning)
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	0
3. Development Costs	POC/77	POC/89, note to account 43; DC 7/92	POC/89, note to account 43; DC 7/92
Required.....	0	1 (expense)	1 (expense)
Recommended.....	1 (asset)	0	0
Allowed.....	0	1 (capitalize if certain conditions are met)	1 (capitalize if certain conditions are met)
Not permitted.....	0	0	0
4. Research Costs	POC/77	POC/89, note to account 43; DC 7/92	POC/89, note to account 43; DC 7/92
Required.....	0	1 (expenses)	1 (expenses)
Recommended.....	2 (phased-invent costs, expenses)	0	0
Allowed.....	0	1 (only capitalized in exceptional circumstances)	1 (only capitalized in exceptional circumstances)
Not permitted.....	0	0	0
5. Subsequent Events	POC/77	POC/89	POC/89
Required.....	0	0	0
Recommended.....	0	1 (disclosure in the notes)	1 (disclosure in the notes)
Allowed.....	0	0	0
Not permitted.....	0	0	0
6. Dividends Proposal	POC/77	POC/89	POC/89
Required.....	0	0	0
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	0
7. Construction Contracts	POC/77	POC/89, chapter 5, item 5.3.11; DC 3/91	POC/89, chapter 5, item 5.3.11; DC 3/91
Required.....	0	0	0
Recommended.....	0	1 (percentage completion method)	1 (percentage completion method)
Allowed.....	0	1 (completion contract method)	1 (completion contract method)
Not permitted.....	0	0	0
8. Accounting for Deferred Taxes	POC/77	POC/89	DC 28
Required.....	0	0	1 (deferred method)
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	1 (liability method)
9. Fixed Assets	POC/77, chapter XII, item 2.5	POC/89, chapter 5, item 5.4.1	POC/89, chapter 5, item 5.4.1; DC 16/95
Required.....	1 (historical cost)	0	0
Recommended.....	0	1 (historical cost)	1 (historical cost)
Allowed.....	0	1 (revaluated amounts)	1 (revaluated amounts)
Not permitted.....	1 (revaluation)	0	0

Table 4: Evolution of the National Accounting Standards (cont.)

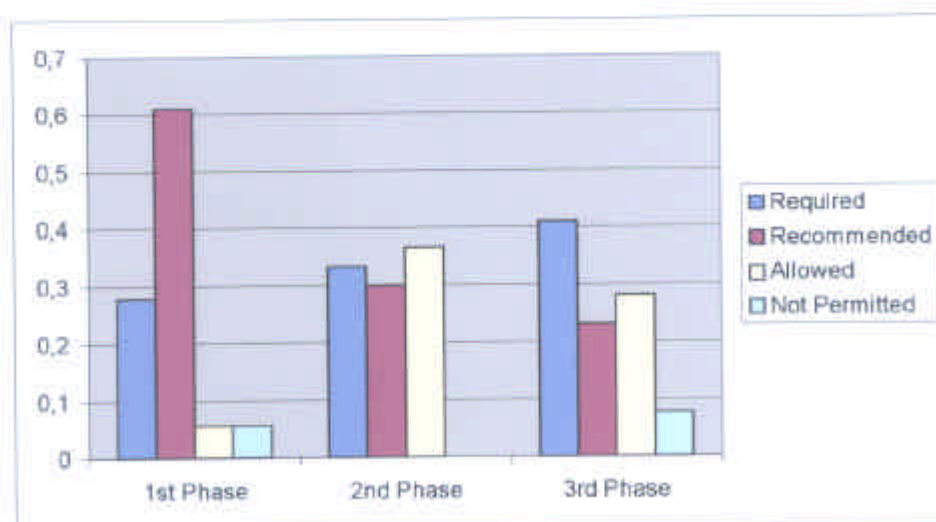
	Stage PA 1977-1989	Stage PB 1989-1995	Stage PC 1995-present
10. Revenue	POC/77	POC/89	DC 76/99
Required.....	0	0	1 (percentage completion method)
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	1 (completed contract method)
11. Retirement Benefits	POC/77	POC/89	DC 19/98
Defined benefits plan method			
Required.....	0	0	1 (actuarial benefits method)
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	1 (projected benefits method)
12. Foreign exchange differences	POC/77	POC/89, chapter 5, item 5.2.2	POC/89, chapter 5, item 5.2.2
Required.....	1 (recognize in net income)	1 (recognize in net income)	1 (recognize in net income)
Recommended.....	0	0	0
Allowed.....	0	1 (defer income, if related with long term debts and in case of reasonable expectations that the gain is reversible)	1 (defer income, if related with long term debts and in case of reasonable expectations that the gain is reversible)
Not permitted.....	0	0	0
13. Accounting for Business Combinations	POC/77	DC 1/92, item 3.2.1 e 3.3.1	DC 1/92, item 3.2.1 e 3.3.1
Required.....	0	0	0
Recommended.....	0	1 (purchase method)	1 (purchase method)
Allowed.....	0	1 (pooling of interest method)	1 (pooling of interest method)
Not permitted.....	0	0	0
14. Positive Goodwill	POC/77	POC/89, chapter 13, item 13.3.1 (DI, 238/91); DC 1/92	POC/89, chapter 13, item 13.3.1 (DI, 238/91); DC 1/92
Required.....	0	1 (capitalize)	1 (capitalize)
Recommended.....	0	0	0
Allowed.....	0	0	0
Not permitted.....	0	0	0
15. Negative Goodwill	POC/77	POC/89, chapter 13, item 13.3.1 (DI, 238/91); DC 1/92	POC/89, chapter 5, item 5.2.2; DC 1/92
Required.....	0	1 (recognize in equity)	1 (recognize in equity)
Recommended.....	0	0	0
Allowed.....	0	3 (deferred income; reduce non monetary assets; recognize an income if it corresponds to an unfavorable evolution of the company's future losses and expenses)	3 (deferred income; reduce non monetary assets; recognize an income if it corresponds to an unfavorable evolution of the company's future losses and expenses)
Not permitted.....	0	0	0
16. Borrowing Costs	POC/77; DL 174/96	POC/89, chapter 5, item 5.4.5	POC/89, chapter 5, item 5.4.5
Required.....	0	0	0
Recommended.....	2 (recognize as income; financial costs)	1 (expense)	1 (expense)
Allowed.....	1 (inclusion on the acquisition cost, as long as is considered adequate)	1 (capitalized during the period of construction, as long as is considered adequate)	1 (capitalized during the period of construction, as long as is considered adequate)
Not permitted.....	0	0	0

Table 4: Evolution of the National Accounting Standards (cont.)

	Stage PA 1977- 1980	Stage PB 1989-1995	Stage PC 1995-Present
17. Contingent Liabilities	POC/77	POC/89/ Note 48 of annex	POC/89/ Note 48 of annex
Required	1 (provision)	1 (disclosure in the notes)	1 (disclosure in the notes)
Recommended	1 (disclosure in the notes)	0	0
Allowed	0	0	0
Not permitted	0	0	0
18. Intangible Assets	POC/77, chapter XII, item 2.6.	POC/89, chapter 5, item 5.4.1	POC/89, chapter 5, item 5.4.1
Required	1 (historical cost)	1 (historical cost)	1 (historical cost)
Recommended	0	0	0
Allowed	0	0	0
Not permitted	0	0	0
19. Hedging with Financial Instruments	————	————	DC 17/ 97
Required	0	0	3 (income, equity, differ in asset)
Recommended	0	0	0
Allowed	0	0	0
Not permitted	0	0	0
20. Current Investments	POC/77, chapter XII, item 2.4.	POC/89, chapter 5, item 5.1.2	POC/89, chapter 5, item 5.1.2
Required	1 (acquisition cost or market, if lower)	1 (acquisition cost or market, if lower)	1 (acquisition cost or market, if lower)
Recommended	0	0	0
Allowed	0	0	0
Not permitted	0	0	0

Similarly to what happens with the IASB, Figure 2 reveals that while the number of required treatments increases, the number of recommended treatments decreases. However, in the Portuguese case, this trend is not so visible as it is on IASB, once the number of the treatments increases too much on the three phases (from 18 to 39, in contrast with the IASB, that increases only from 39 to 43).

Figure nº 2: Evolution of the accounting treatments on the three Phases of CNC



As is perceptible from Table 5, a decrease of Euclidian distances among the stages of the Portuguese accounting system has occurred. More precisely we observe a reduction in the distance of PB to PC with respect to the distance obtained between phase PA and PC (which varies from 27, 819 to 7, 243). This decrease is explained by various factors, with particular reference, to the recognition of fundamental errors (with the emission of DC 8/91), issue that in phase PA was not regulated. Yet, with respect to the balance concepts, the distance between phase PB and PC is zero. As mentioned earlier, this result is due to not having been introduced any changes to the balances' issues in the national standards in stage PC.

Table 5:
Euclidian Distances among the Portuguese Standardization Phases

Phases	General	Balance	Income
PA to PC	27. 819	13. 991	13. 838
PB to PC	7. 243	0	7. 243
PA to PB	20. 587	13. 991	6. 596

In order to analyze the extent to which the accounting standardization in Portugal has followed the international accounting trends, it is fundamental to ascertain the influence of the international accounting standards, issued by the IASB upon the Portuguese accounting system. To accomplish such purpose, tables 6 and 7 are presented, covering the results from the comparison of the stages of the national standards with the IASB's standards.

Indeed, when we proceed to the determination of the Euclidian distances between the stages of the Portuguese standards and the Phase IC of IASB (Agreement IOSCO/IASB), we are assessing the level of approximation of the Portuguese accounting standards towards the actual trends of the IASB's standards. As we can observe from the analysis of Table 6, these distances have suffered a progressive reduction. Hence, while the d (PA, IC) registered a value of 33,005, the d (PC, IC) is 23, 402. Accordingly, and as we intended to demonstrate, a gradual convergence of the Portuguese standards towards the IASB's standards has occurred.

This advance of the Portuguese accounting harmonization is due, fundamentally, to the accounting standards that have been issued by the Accounting Standards Committee since the stage PB (namely because these standards receive the main guidelines proposed by the IASB).

As to the indicators of balance, in phase PB there is a marked improvement, which varies from 20, 680 to 19, 402. Among the various issues that have contributed to this approximation towards the international standards, a mention should be made of the changes introduced on the recognition of tangible assets (POC/89, chapter 5, item 5.4.1 and DC 16/95), as well as on the recognition of the negative goodwill resulting from an acquisition process (DC 1/92). Nevertheless, in stage PC this index has remained constant, since as we have perceived earlier, the balance items of the national standards (analyzed in this sample) have not been subject to any change in phase PC.

Yet, with regard to the income indices we observe that the tendency of approximation towards the international standards is common to the three stages of the Portuguese standards. Thus, initially this index decreases gradually, from 12, 625(d (PA, IC)) to 9, 249 (d (PB, IC)) and, subsequently, to 4 (d (PC; IC) = 4). Such reduction in this index came, precisely, to compensate the result obtained in the balance index of this stage. This result stems from the changes introduced in the Portuguese accounting standards in this last stage having been more closely related with issues of the income statement included in this sample. A decomposition of the index of income (PC; IC) allows us to identify the factors responsible for this improvement: the transposition into the Portuguese normative of IAS 12 (relative to the recognition of deferred taxes – through the emission of DC 28), IAS 18 (with respect to the recognition of the revenue – DC 18); and IAS 19 (determination of pension costs – DC 19).

So, the formal harmonization advances achieved in the Portuguese accounting system have resulted, fundamentally, from the changes introduced in the accounting concepts related to the Income Statement.

Table 6: Indicators of Formal Harmonization to the Portuguese Standards- Comparison with the IASB (with reference to phase IC- Agreement IASB/IOSCO)

Phases	General	Balance	Income
PA to IC	33. 005	20. 680	12. 625
PB to IC	28. 645	19. 402	9. 243
PC to IC	23. 402	19. 402	4.000

Table 7: Indicators of Formal Harmonization to the Portuguese Standards- Comparison with the IASB

Phases	General	Balance	Income
PA to IA	31. 750	20. 750	11. 00
PB to IB	25. 371	18. 128	7. 243
PC to IC	23. 402	19. 402	4.000

The conclusions emergent from this work are in consonance with the results of Jarne Jarne (1997) study, which suggested an approximation of the accounting standards issued by the CNC towards the international standards proposed by IASB.

4. Conclusions

The future of the Portuguese accounting standardization should be analyzed in the scope of the process of European and international harmonization, emergent from the tendency of globalization of the worldwide economy. Indeed, the internationalization of the Portuguese enterprises, the opening to the international capital markets and the creation, at an European level, of a common market and a single currency have resulted in the need to adapt the Portuguese accounting standards to the process of worldwide harmonization.

This study intended to demonstrate the extent to which a reduction of the alternatives contemplated in the IASB's standards has occurred, as well as, to what extent the national accounting standards has been approximated from the standards issued by the IASB. The first conclusion that can be drawn from the findings is that, as already demonstrated by Zorio Grima (2001), effectively, a reduction of the alternatives allowed by the IAS has occurred, and, consequently, an improvement of the comparability of the financial information. Accordingly, the evidence obtained shows that the IASB has made important progress towards the comparability of financial statements prepared in accordance with the IASs.

Also in Portugal, the accounting system has achieved significant improvements towards the formal harmonization. Furthermore, we detected that the degree of consensus between the Portuguese accounting standards and the position adopted by IASB has been increasing, especially since the second stage of the Portuguese standards. Such approximation towards the IASB's standards has essentially been the result of the adoption of the international accounting standards into the national standards, as we observed. This conclusion is corroborated in Jarne Jarne (1997), who classifies the Portuguese accounting system as one of the closest to the international accounting standards in the worldwide context. However it is important to highlight that this approximation towards the IASB's standards, has taken place, mainly, through the changes introduced to the treatments of concepts associated with the income statement.

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