Are Spanish GAAP for Private Companies Comparable to IFRS for SMEs?

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Abstract

The aim of this study is to test the level of convergence between the IFRS for SMEs and the Spanish GAAP. To do this, we develop a Convergence Index with the full IFRS, which we apply the local GAAP and the IFRS for SMEs. Results show that the Convergence Index is considerably greater for the local GAAP after the accounting reforms. Furthermore, results also show that values of the Convergence Index are qualitatively similar among local GAAP and IFRS for SMEs, what is line with our hypothesis that the accounting reform has achieved its objective of convergence towards IFRS, considering that national GAAP are mainly intended for private companies.

1. Introduction

There is an extensive research about the effects of the IFRS adoption on accounting quality. Previous studies have examined both voluntary (Barth et al., 2008; Daske et al., 2013; Cameran et al., 2014) and mandatory adoption (Byard et al., 2011; Barth et al., 2012; André et al., 2015). Most studies, however, are focused on samples of listed companies, for two basic reasons: i) IFRS are standards specially designed for publicly listed companies, and thus its adoption among private companies is rather scarce (Cameran et al., 2014; Bassemir and Novotny-Farkas, 2018); and ii) because of the lower importance of comparability among private companies, accounting standards harmonization among private companies has not reached the same level than among listed companies. Therefore, national standards continue to be in force in most countries in the private setting (IFRS Foundation). In that sense, the purpose of IFRS for SMEs is to provide high quality accounting standards for companies that, although do not have either the resources or abilities to apply "full" IFRS, can make the most for the use of them. In spite of the term "for SMEs", these standards are intended to be used for non-publicly accountable entities (NPAEs), rather than small and medium companies, strictly defined in terms of size (Nobes, 2010). Because of their recent history and limited adoption, there is little empirical evidence on the use of the IFRS for SMEs (Kaya and Koch, 2015).

It is worth noting that most members of the European Union carried out an accounting reform in order to converge to IFRS. In the Spanish case, this accounting reform was carried out in 2008, resulting in the enactment of a General Accounting Plan that replaced the previous Plan[1], which was in force from 1990. This reform affected the individual financial statements of both publicly listed and private companies; with regard to the consolidated financial statements, listed companies are required to apply full IFRS from 2004, while private companies can choose between them or national GAAP for consolidated financial statements[2].

In some extent, target companies for the Spanish GAAP are similar to those considered under IFRS for SMEs; hence, the comparison of both sets of standards may be of interest for regulators, who may decide to employ resources for the development of national accounting standards in line with full IFRS, or to directly adopt IFRS for SMEs. Therefore, the accounting reforms carried out in Spain provide a natural setting to examine both the harmonization process in these countries, and whether the use of simplified IFRS (but not necessarily IFRS for SMEs) have positive consequences among private companies.

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[1] We will refer to them as PGC'07 and PGC'90, respectively.
[2] Normas para la Formulación de las Cuentas Anuales Consolidadas (NOFCAC), 2010.

For this reason, the objective of this study is to examine whether the accounting reforms (the introduction of the PGC'07 and the NOFCAC in Spain) have involved a significant change with respect to the previous financial reporting framework (Spanish PGC'90), as well as to analyse whether the recent Spanish GAAP can be considered an approximation to the IFRS for SMEs, so that the effect of IFRS among private companies could be extrapolated from the national GAAP. To do this, following Nobes (2001), Ding et al. (2007), and Bae et al. (2008), in this study we develop a Convergence Index with the full IFRS, which we apply to the former PGC'90, the current PGC'07 (and NOFCAC) and the IFRS for SMEs, in order to examine both the changes in the Spanish GAAP because of the accounting reform, and the similarity level between the Spanish GAAP after the accounting reform and the IFRS for SMEs. In that sense, this is the first study that examines the convergence level of national GAAP after an in-depth accounting reform.

Results show that the Convergence Index is considerably greater for the PGC'07 than for the PGC'90, what suggests that the accounting reform has resulted in an important change with regard to the recognition, measurement and reporting of the accounting information. Furthermore, results also show that values of the Convergence Index are qualitatively similar among PGC'07 and IFRS for SMEs, what is line with our hypothesis that the accounting reform has achieved its objective of convergence towards IFRS, considering that national GAAP are mainly intended for private companies.

Results are of interest for potential users of IFRS for SMEs and for regulators, specially the European Commission, who has been in favour of a reduction of the accounting and reporting requirements for small companies, and for national regulators, who should pronounce about the convenience of using IFRS for SMEs or developing national GAAP for private companies. In the case of Spain, the study has more interest because of the expectations generated about the possibility of an accounting reform among SMEs, an idea that has finally resulted in a simplification on some reporting issues (Proyecto de Real Decreto, 2015[3]). The structure of the paper is as follows: i) Section 2 revises prior literature about international harmonization and how IFRS have been used in order to accomplish with this objective; in this section we also explain the Spanish institutional setting and present our hypotheses; ii) Section 3 explains the research design; iii) in Section 4 we show the results for the Convergence Indexes we developed; and iv) Section 5 presents the main conclusions of our study.

2. Theoretical background

2.1. The importance of comparability and harmonization

Globalization requires an only financial language which permits the comparison of accounting information and provides higher credibility to it, reducing the information asymmetries and thus resulting in a higher market efficiency and a reduction of the cost of capital (De Franco et al., 2011; DeFond et al., 2011; Daske et al., 2013). In that sense, the objective of accounting information is to provide useful information for the users' decision making, and comparability, with regard to both the same company over time and to other companies in the same time, is one of the key qualities to be fulfilled by accounting information, what involves that similar economic events should produce similar accounting outcomes. Comparability problems increase significantly when comparing information from different countries, which apply different accounting standards, what results in a divergent accounting treatment for similar operations (García and Gandía, 1998; Bradshaw and Miller, 2008; Barth et al., 2012). For this reason, previous literature has examined both the differences between national GAAP from different countries (Ding et al., 2007; Bae et al., 2008) and the comparability of accounting amounts among countries (Beuselinck et al., 2008; De Franco et al., 2011; Barth et al., 2012). With regard to the study of the differences in accounting standards, Ding et al. (2007) examine the determinants of the differences between local GAAP and IFRS, as well as the effects derived from these differences. Using a sample of 30 countries and based on Nobes (2001), who examines the differences between IFRS and national GAAP from the EU members, the authors create an Absence Index (absence of specific rules on recognition and measurement) and a Divergence Index (different treatment among local GAAP and IFRS). In a contemporary study, Bae et al. (2008) also develop Convergence and Absence Indexes, based in Nobes (2001), but in this case the Indexes are focused on the differences between countries, rather than differences with IFRS. They use these Indexes to examine the relationship between differences in standards across countries and foreign analyst following and forecast accuracy.

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[3]Besides the simplification of the accounting obligation for small companies, the Project also modifies the treatment of the goodwill.

With regard to the study of accounting amounts comparability, Beuselinck et al. (2008) examine the earnings comparability among 14 European countries in the period 1995-2005, previous to the mandatory adoption of IFRS. Bradshaw and Miller (2008) examine a sample of non-US companies that adopted US GAAP and find that, although the accounting amounts changed significantly, they did not completely converge to those reported by US companies. On the other hand, De Franco et al. (2011) develop a comparability measure, and find the measure to be positively associated with the analyst following and forecast accuracy. Finally, Barth et al. (2012) examine the comparability of IFRS and US GAAP; specifically, the authors study whether the adoption of IFRS by non-US firms result in accounting amounts which are comparable to those reported for US companies applying US GAAP. Although results show a higher comparability when companies use IFRS (compared to local GAAP), and comparability is higher for companies from common law countries and a high level of enforcement, significant differences persist between the two groups of companies. The limitations derived from the lack of comparability because of the use of different standards have been dealt with the accounting harmonization, which have been applied through two options: i) harmonization of the local GAAP, in order to converge to similar treatments (García and Gandía, 1998; Barth et al., 2012); and ii) the adoption of a single regulatory system, such as IFRS (Carmona and Trombetta, 2008; Brown et al., 2014). Nevertheless, we have to note that regulatory harmonization does not ensure comparability, because it does not depend only on the enforced standards, but on the level of enforcement and other institutional factors (Bradshaw and Miller, 2008; Barth et al., 2012; Brown et al., 2014).

2.2. About the use of IFRS to improve comparability and accounting quality

With regard to the use of IFRS, up to 119 countries have chosen its adoption, at least among listed companies (IFRS Foundation). In the case of the European Union, consolidated financial statements of listed companies have been prepared according to IFRS; EU members decide about their application on individual financial statements (regardless companies are private or public) and consolidated financial statements of private companies. The main reasons to explain the widespread use of IFRS are the enhancement of comparability across countries (Barth et al., 2012; Kvaal and Nobes, 2012; Brochet et al., 2013), and the improvement of accounting quality, as a result of the application of high quality standards (Hung and Subramanyam, 2007; Daske et al., 2013). With regard to the comparability of accounting amounts, empirical evidence shows that although harmonization is complete at a regulatory level among those countries that have adopted IFRS, there is still far to go in the complete comparability of accounting numbers (Soderstrom and Sun, 2007; Carmona and Trombetta, 2008), because the effective application of standards depends on other factors, such as preparers' motivations, institutional differences across countries, and the effectiveness of the national enforcement (Pope and McLeay, 2011; Kvaal and Nobes, 2012). With regard to accounting quality, although theory argues that the use of high quality standards will result in higher accounting quality, the empirical evidence is mixed: while some studies show that companies that adopted IFRS generally have higher accounting quality (Hung and Subramanyam, 2007; Barth et al., 2008), other studies do not find significant differences (Van Tendeloo and Vanstraelen, 2005; Daske et al., 2013), or they even show a worsening on accounting quality (Callao and Jarne, 2010; Ahmed et al., 2014; André et al., 2015; Cameran et al., 2014).

Regarding the use of IFRS among private companies and SMEs, literature is rather scarce, partly as a consequence of the limited application of IFRS by these companies (Cameran et al., 2014; Bassemir and Novotny-Farkas, 2018). This limited adoption among private companies and SMEs is mainly explained by two reasons: i) IFRS are specifically designed to be applied by publicly listed companies; and ii) complexity of standards deters their adoption among companies that lack the resources and abilities to correctly apply them. Considering these barriers to the use of IFRS, but also that the use of high quality standards may be beneficial for private companies, IASB published the IFRS for SMEs in 2009. Although the term "for SMEs" suggests that they are designed for small and medium companies, they are not defined in size terms, but as non-publicly accountable companies (NPAEs), a definition that encompasses in fact every private company. With regard to the lower information needs of these companies compared to the public ones, the standard simplifies some of the treatments considered in the full IFRS, and reduce their reporting requirements. Regarding the current adoption of IFRS for SMEs, it is rather scarce (Kaya and Koch, 2015). In the case of the European Union, the standard does not seem to be applicable in its current situation, because there exist a series of incompatibilities among the standard and the Directives, since some accounting treatments that are required by the IFRS for SMEs are not allowed by the Directives (EFRAG, 2010); furthermore, its adoption does not ensure the accounting harmonization (Fülbier and Gassen, 2010) and may involve an excessive burden for the smallest companies (Evans et al., 2005).

2.3. Local GAAP: The Spanish case

In Spain, as in the rest of the EU members, listed groups have to prepare their consolidated financial statements according to IFRS; on the other hand, individual financial statements of listed companies are prepared according to PGC'07. With regard to private companies, they use PGC'07 for their individual financial statements, while consolidated statements can be prepared using either IFRS or Spanish GAAP (NOFCAC). Small companies use PGC-Pymes[4]; finally, micro-companies can apply more simplified rules from PGC-Pymes. The accounting reform in 2008 involved an in-depth change on the Spanish GAAP, resulting in a substantial approach towards IFRS, although differences remain among both sets of standards (Garrido and Vázquez, 2011). These divergences are explained by the scope of the local GAAP, which are mainly considered to be used by private companies[5]. The regulatory system of Spain is similar to most of the EU members: i) the application of full IFRS to publicly listed companies; ii) an accounting reform in the private setting, with the purpose of converging towards IFRS; iii) a simplified set of rules for the smallest companies, avoiding an excessive burden for them; and iv) an intermediate position for private companies, excluding the smallest of them, to which local GAAP converging towards IFRS are in force.

In that sense, companies applying Spanish GAAP (except of the smallest firms) are similar to those target firms by IFRS for SMEs. A comparison of both sets standards may be of interest for regulators interested in the application of "simplified" IFRS, and they hence may choose between the development of national accounting standards in line with full IFRS, or the adoption IFRS for SMEs. In this regard, Ruiz Lamas (2009) compares PGC'07 and IFRS for SMEs; its analysis shows that there are persistent differences among both sets of standards. However, its comparison is made at a qualitatively level, and it is not structured in an index, so the level of convergence among the standards is not assessed. Therefore, this study lets us test the level of convergence between the Spanish GAAP and the IFRS for SMEs. We expect that the accounting reform has involved a remarkable approach among the standards, hence we formulate our first hypothesis as: *H1: Spanish GAAP are not significantly different from IFRS for SMEs.* On the other hand, considering the important changes derived from the introduction of PGC'07, we expect that differences among Spanish GAAP and full IFRS have been considerably reduced compared to PGC'90. *H2: Divergence of Spanish GAAP from IFRS has been significantly reduced after the accounting reform.*

3. Research design

In order to test our hypotheses, we develop a Convergence Index between the GAAP to be tested and full IFRS. Considering the studies of Ding et al. (2007) and Bae et al. (2008), we develop three alternative Indexes: i) the first one, composed of 78 items (IC1); ii) a second one composed of 51 items (IC2); and iii) the last one composed of 21 items (IC3). Each of these Indexes is estimated on PGC'90, PGC'07 and IFRS for SMEs, resulting in 9 values, which let us compare both the similarity between PGC'07[6] and IFRS for SMEs, and how depth the changes in Spanish GAAP have been. For IC1, we adapt the items included in Nobes (2001); since part of the IFRS have been modified and/or replaced, we eliminate those items that are not applicable. IC2 is based on one of the Indexes developed by Bae et al. (2008), which is composed of 52 items collected from Nobes (2001) for which differences among the countries included in the study were detected. We exclude one of these items because is not applicable after the withdrawal of IAS 31, which was replaced by IFRS 11 and 12. Finally, IC3 is based on the other Index developed by Bae et al. (2008), which is prepared using 21 items that encompass those differences across national GAAP which have been more examined in previous literature. The items used for each of our Indexes are detailed in Tables 1-3. Previously to the estimation of the Indexes, we have carried out a revision of the items included in the Indexes and their correspondence with the current wording of full IFRS. Ding et al. (2007) and Bae et al. (2008) develop two separated Indexes, depending on whether differences arise because of an absence of specific rules of recognition and measurement (Absence Index), or because there is a different treatment among local GAAP and IFRS (Divergence Index).

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[4] Pequeña y Mediana Empresa, meaning Small and Medium Enterprise (SME).

[5] About the use of PGC'07 on listed companies, Ruiz Lamas (2009) states that the ICAC intention has been the comparability among private and public companies.

[6] In those items related to consolidated statements, we consider NOFCAC to be encompassed in the regulatory framework of PGC'07.

Nevertheless, as suggested by Nobes (2009), concepts of "absence" and "divergence" cannot be considered as separated dimensions, because both results in differences in the accounting outcomes. For this reason, instead of developing separated indexes, our Indexes have a score between 0 (null convergence) and 100 (full convergence), which we obtain as the difference between the number of items that compose the Index and the Number of items for which the treatment in the tested standards does not coincide with this applied by IFRS:

$$IC_i = \frac{Total\ Number\ of\ Items - Not\ Fulfilled\ Items}{Total\ Number\ of\ Items} \times 100$$

With regard to these items, we classify the reason for which differences arise: i) absence of reporting rules (AD); ii) absence of recognition and measurement rules (ARV); and iii) differences in recognition and measurement rules (D).

Results

Table 1.- IC1

Item	Question	PGC'90	PGC'07	IFRS-SMEs
1.	When there are must consolidated accounts be prepared?			
2.	Subsidiary companies are defined on the basis of de facto control (which can exist without majority ownership).			
3.	Special purpose entities must be consolidated when they are controlled.	ARV		
4.	Subsidiaries must be consolidated, even those with "dissimilar" activities.	D		
5.	An investment is presumed not to be an associate where a holding is below 20% of voting power.	D		
6.	Associates must be accounted for the equity method.			D
7.	Joint venture entities must be equity accounted or proportionally consolidated.	D	D	D
8.	In a business combination, acquisition accounting must be apply.	D		
9.	In acquisition accounting contingent liabilities must be recognized even when provisions must be recognized even when an outflow of resources to settle the obligation is not probable.	ARV		
10.	Monetary items must be translated at the closing rate.			
11.	Non-monetary items that are measured at fair value in a foreign currency shall be translated using the exchange rates at the date when the fair value was determined..	D		
12.	Currency gains and loses must be taken to income Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous financial statements shall be recognised in profit or loss in the period in which they arise.	D		
13.	When a gain or loss on a non-monetary item is recognised in other comprehensive income, any	D		

	exchange component of that gain or loss shall be recognised in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognised in profit or loss, any exchange component of that gain or loss shall be recognised in profit or loss.			
14.	If the functional currency is the currency of a hyperinflationary economy, the entity's financial statements are restated in accordance with IAS 29.	D		
15.	On a disposal of a foreign entity, the cumulative amount of deferred exchange difference must be recognized in income.	D		
16.	Post-balance sheet adjusting events must be taken into account in the amounts recognized in the financial statements.			
17.	In impairment tests, book value is compared with its recoverable amount, defined as the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use.	D		
18.	Research costs are expended.	D	D	

Item	Question	PGC'90	PGC'07	IFRS-SMEs
19.	Internally generated brands remain unrecognized as assets.			
20.	Expenditures on intangibles items that cannot be capitalized must be expended.			
21.	Pre-operating costs cannot be capitalized.	D		
22.	Goodwill must be treated as an asset rather than being written off directly against equity.			
23.	On acquisition, valuation of net assets is limited to the amount of the difference between cost and book value.	D		
24.	Impairment tests on intangible assets must be carried out annually.	ARV		
25.	Impairment tests on goodwill must be carried out annually.	D		
26.	If tangible assets are revalued, valuations must be kept up to date.	D	D	D
27.	Gains and losses on disposal of revalued tangible fixed assets must be calculated by reference to book value.			
28.	Finance leases must be capitalized.	D		
29.	Finance leases are defined in terms of the transfer of substantially all risks and rewards.	D		
30.	Operating lease payments must be recognized on a straight line basis.	ARV		
31.	The aggregate benefit of incenves must be recognized as a reduction of rental expense.	ARV		
32.	Lessors are required to recognize finance lease income on the bases of return on net investment.	ARV		

33.	Inventories are required to be shown at the lower of cost and net realizable value..			
34.	Cost of inventories must include all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.			
35.	Replacement cost can be used instead of net realizable value as a measure of market value.			ARV
36.	LIFO is not admitted for valuation of inventories.	D		
37.	When the outcome of a construction contract can be measured reliably, costs and revenues must be recognized.	ARV	ARV	
38.	A provision must be recognized when: i) there is a legal or constructive obligation, as a result of a past event; ii) it is probable that the entity will be required to transfer economic benefits in settlement; and iii) the amount of the obligation can be estimated reliably.	D		
39.	When the effect of time value of money is material, the amount of the provision must be the present value of the amount expected to be required to settle the obligation.	ARV		
40.	Dividends must remain unrecognized as liabilities until they are declared.			
41.	Contingent liabilities must be disclosed.			
42.	Enterprises are required to account for constructive as well as legal obligations for all forms of employee benefit plan.			
43.	Unit credit method is required to be used to calculate defined benefit obligations.	D	D	

Item	Question	PGC'90	PGC'07	IFRS-SMEs
44.	The discount rate used in the determination of employee benefit obligations must be based on the current yield on high quality corporate bonds.	D	D	
45.	Calculation of obligations for employee benefits must include estimated future salary increases.	D	D	
46.	An enterprise must recognize past service cost immediately in the first of these dates: a) when a modification or reduction of the plan is made; when the entity recognized the corresponding restructuring costs.			
47.	Temporary differences are divergences between the carrying amounts and tax bases on the recognition of assets and liabilities.	D		
48.	A deferred tax liability shall be recognised for all taxable temporary differences, except to the extent that the deferred tax liability arises from the initial recognition of goodwill, or the initial recognition of an asset or liability in a transaction which (i) is not a business combination; and (ii)	D		

Item	Question	PGC'90	PGC'07	IFRS-SMEs
	at the time of the transaction, affects neither accounting profit nor taxable profit.			
49.	A deferred tax asset shall be recognised for the carryforward of unused tax losses and unused tax credits to the extent that it is probable that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilised.	D		
50.	Deferred tax assets and liabilities shall be measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled.	D		
51.	Discounting of deferred tax balances is prohibited.			
52.	Financial instruments must be accounted for on the basis of its substance, rather than its legal form.	D		
53.	Compound instruments must be split into liability and equity components.	D		
54.	Treasury shares must be shown as a deduction from an enterprise's equity. Gain or loss is not recognised on the purchase, sale, issue, or cancellation of treasury shares.	D		
55.	There must be disclosures relating to relationships and transactions with parent and subsidiaries.	AD		
56.	Information about discontinued operations must be disclosed.	AD		
57.	Extraordinary items are not defined.	D	D	
58.	Publicly listed companies must provide segment information.	AD		AD
59.	Segment information must be conciliated with information from financial statements.	AD	AD	AD
60.	Segment information must be reported using operating segments of the entity.	AD		AD
61.	Segment information must include information about the gain or loss of the segments, including ordinary incomes and expenses.	AD	AD	AD
62.	Segment information must include disclosures of assets and liabilities.	AD	AD	AD
63.	Cash flow statement is required.	AD		
64.	Cash flow statement must reconcile to cash and cash equivalents.	AD		

Item	Question	PGC'90	PGC'07	IFRS-SMEs
65.	Statement of changes in equity is required.	AD		
66.	Departure from standards is permitted in order to give a fair presentation, only if its application conflicts with the objective of financial statements set out in the Framework.			AD
67.	If so, there must be disclosure of the financial impact of such a departure.			AD

68.	Publicly listed companies must disclose an earnings per share amount.	AD	AD	AD
69.	Earnings per share must be determined as in IAS 33.	AD	AD	AD
70.	Financial assets (except those in IAS 39.69) are required to be measured at fair value.	D		
71.	Trading and derivative liabilities must be measured at fair value.	D		
72.	There are other financial and liabilities required to be fair valued.	D		
73.	An enterprise may derecognise a financial asset (or a portion) at any time other when the enterprise has lost control of the contractual rights that comprise the financial asset (or a portion).	ARV		
74.	Gains and losses on the change in value of trading financial assets and liabilities are required to be taken immediately to income.	D		
75.	Hedge accounting.	D		
76.	Investment properties can be measured at historical cost or a fair value.	ARV	D	D
77.	Gains and losses derived from investment properties must be recognized in the income statement.	ARV		
78.	Disclosure of fair value of any investment property that is held on a cost basis is required.	AD	AD	AD
	Absence of reporting rules (AD)	13	6	10
	Absence of recognition and measurement rules (ARV)	11	1	1
	Differences in recognition and measurement rules (D)	35	8	4
	Total Score	24.36	80.77	80.77

Table 2.- IC2

Item	Question	PGC'90	PGC'07	IFRS-SMEs
1.	Statement of changes in equity (IAS 1)	AD		
2.	Cash flow statement (IAS 7)	AD		
3.	Reconciliation of cash flow to cash and cash equivalents (IAS 7)	AD		
4.	Extraordinary items (IAS 8)	D	D	
5.	Subsequent events (IAS 10)			
6.	Construction contracts (IAS 11)	ARV	ARV	
7.	Contract method for construction contracts (IAS 11)	ARV	ARV	
8.	Deferred taxes (IAS 12)	D		
9.	Discounting of deferred taxes (IAS 12)			
10.	Segment information (IFRS 8)	AD		AD
11.	Basis determining segments (IFRS 8)	AD		AD
12.	Segment reporting of assets and liabilities (IFRS 8)	AD	AD	AD
13.	Asset revaluation (IAS 16)	D	D	D
14.	Leases (IAS 17)			
15.	Finance leases (IAS 17)	D		
16.	Operating lease expenses (IAS 17)	ARV		
17.	Finance lease incomes (IAS 17)	D		
18.	Employee benefits obligations (IAS 19)			
19.	Constructive obligation under pension plans (IAS 19)			
20.	Pension obligation measurement (IAS 19)	D	D	
21.	Actuarial gains and losses on employee benefit obligations (IAS 19)	D		
22.	Asset impairment testing (IAS 2)	D		
23.	Foreign currency monetary balances (IAS 21)	D		
24.	Price level adjustment in hyperinflationary economies (IAS 21)	D		
25.	Disposal of foreign segments (IAS 21)	D		
26.	Classification of business combinations on acquisition (IFRS 3)	D		
27.	Provisions in the context of acquisitions (IFRS 3)	ARV		
28.	Business combinations (IFRS 3)	D		
29.	Related-party transactions (IAS 24)	AD		
30.	Accounting for associates (IAS 28)	D		D
31.	Inflation accounting (IAS 29)	D		
32.	Joint ventures (IFRS 11 and 12)	D	D	D
33.	Classification of issuer's financial instruments (IAS 32)	D		
34.	Compound financial instruments (IAS 32)	D		
35.	Disclosure of fair values of financial assets and liabilities (IAS 32)			
36.	Earnings per share (IAS 33)	AD	AD	AD
37.	Discontinued operations (IFRS 5)	AD		
38.	Asset impairment (IAS 36)	D		
39.	Conditions to record asset impairment (IAS 36)	D		
40.	Provisions (IAS 37)	D		

Item	Question	PGC'90	PGC'07	IFRS-SMEs
41.	Discounting of provisions (IAS 37)	ARV		
42.	Intangible assets (IAS 38)	D		
43.	Research and development (IAS 38)	D	D	
44.	Capitalization of internally generated intangibles (IAS 38)			
45.	Start-up costs (IAS 38)	D		
46.	Training, advertising and pre-opening costs (IAS 38)			
47.	Annual impairment reviews on long-lived assets (IAS 38)	ARV		
48.	Hedge accounting for derivatives (IAS 39)	D		
49.	Derecognition of financial assets (IAS 39)	ARV		
50.	Trading liabilities and derivatives (IAS 39)	D		
51.	Fair values of investment properties (IAS 40)	D	D	D
	Absence of reporting rules (AD)	9	2	4
	Absence of recognition and measurement rules (ARV)	7	2	0
	Differences in recognition and measurement rules (D)	27	6	4
	Total Score	15.69	80.39	84.31

4.1. Main analysis: IC1

Once we have structured the Indexes, we examine the concordance of the three GAAP to be compared (PGC'90, PGC'07, and IFRS for SMEs) with the items included in each of the Indexes. Results for IC1 are included in Table 1, while results for IC2 and IC3 are shown in Tables 2 and 3, respectively, which we comment in the following sections. The comparison between the estimate of IC1 for PGC'07 and IFRS for SMEs shows that both GAAP obtain the same score; however, the breakdown of the score shows differences among both GAAP: while PGC'07 has more differences in recognition and measurement rules when compared to full IFRS (8 differences for PGC'07 vs 4 differences for IFRS for SMEs), IFRS for SMEs have more items categorized as "absence of reporting rules". Therefore, results suggest that, although PGC'07 provides a higher level of reporting compared to IFRS for SMEs, these ones have a higher level of concordance with full IFRS. In any case, the score obtained by both GAAP shows that differences among them are rather small. Items where Spanish GAAP and IFRS for SMEs differ are:

- According to IAS 28, Spanish GAAP (NOFCAC) establish that associates must be accounted for by the equity method; on the other hand, IFRS for SMEs allow three options: i) cost; ii) equity method; and iii) fair value.
- According to IAS 38, IFRS for SMEs establish that research costs must be expensed; on the contrary, Spanish GAAP permit their capitalization if a series or requirements are fulfilled.
- Unlike IAS 2 and PGC'07, IFRS for SMEs do not refer to have any reference to the replacement cost be as a measure of market value for inventories valuation
- PGC'07 does not take into account measurement rules for construction contracts.
- While IAS 8 and IFRS for SMEs do not refer to extraordinary items in the income statement, PGC'07 permits the reporting of exceptional incomes and expenses.

With regard to Hypothesis 2, IC1 estimate for PGC'90 is 24.36; it shows low convergence with IFRS, in line with Absence and Divergence Indexes obtained by Ding et al. (2007) and Bae et al. (2008), as well as with comments of Nobes (2001) about Spain. The comparison of the scores obtained by PGC'90 and PGC'07 shows that the accounting reform has involved an in-depth change at regulatory level, which has significantly reduced the gap between Spanish GAAP and IFRS.

Table 3.- IC3

Item	Question	PGC'90	PGC'07	IFRS-SMEs
1.	Statement of changes in equity (IAS 1)	AD		
2.	Deferred tax accounting (IAS 12)	D		
3.	Segment reporting (IFRS 8)	AD		AD
4.	Capitalization of leases (IAS 17)	D		
5.	Accounting for employee benefit obligations, other than defined contribution plans (IAS 19)			
6.	Accounting for employees benefits other than pensions (IAS 19)			
7.	LIFO	D		
8.	Impairment testing of goodwill or other intangible assets (IFRS 3)	ARV		
9.	Related-party transactions (IAS 24)	AD		
10.	Financial instruments - substance over form (IAS 32)	D		
11.	Fair value of financial assets and liabilities (IAS 32)			
12.	Discontinued operations (IFRS 5)	AD		
13.	Assets impairment (IAS 36)	D		
14.	Provisions (IAS 37)	D		
15.	Generic provisions (IAS 37)	D		
16.	Discounting of provisions (IAS 37)	ARV		
17.	Capitalization of research and development costs (IAS 38)	D	D	
18.	Capitalization of internally generated intangibles (IAS 38)			
19.	Statement of cash flows (IAS 7)	AD		
20.	Extraordinary items (IAS 8)	D	D	
21.	Consolidation of special purpose entities (IFRS 10)			
	Absence of reporting rules (AD)	5	0	1
	Absence of recognition and measurement rules (ARV)	2	0	0
	Differences in recognition and measurement rules (D)	9	2	0
	Total Score	23.81	90.48	95.24

4.2. Additional analysis: IC2 and IC3

IC1 includes items about every difference detected by Nobes (2001), modifying or excluding some of them in order to having in account the changes in IFRS since the report was published. Nevertheless, we have to note that, although the weight of the items is equal, their effect on the comparability of accounting amounts is not the same. Considering that, Bae et al. (2008) developed two different lists of items: i) the first one based on those items for which differences across countries arose; the second one whose items were based on those differences across countries which have been considered more interesting by previous literature. Those lists have been our basis to the development of IC2 and IC3, which we use as additional convergence measures. Table 2 shows results of IC2. We can observe that scores are qualitatively similar to those obtained in Table 1, although differences among estimates are higher: IFRS for SMEs obtain the highest score (84.31), obtaining approximately 4 points more than PGC'07; however, the breakdown of the score is similar to that obtained in Table 1, showing that PGC'07 requires a higher level of reporting, while it has more differences in the treatment of operations.

The difference between both GAAP is maintained in Table 3: while NIIF for SMEs reach a score of 95.24, PGC'07 obtains a score of 90.48. Again, PGC'07 shows more differences in recognition and measurement rules, while IFRS for SMEs require a lower level of reporting. In IC3, differences arise from:

- Capitalization of research and development costs by PGC'07
- Absence of extraordinary items in IFRS (and IFRS for SMEs)
- Absence of segment information in IFRS for SMEs

With regard to results obtained by PGC'90, both Indexes show a low score: 15.69 in IC2, and 23.81 in IC3. In both Indexes, we have to note the high number of differences in recognition and measurement rules (such as financial leases or financial instruments), followed by the absence of reporting rules (absence of cash flow statement and statement of changes in equity); the absence of recognition and measurement rules is the last source of differences among GAAP (such as the discount of provisions). The comparison of these scores with those obtained by PGC'07 support the results in previous Section, and show that the changes in the Spanish GAAP towards a convergence with IFRS have been significant.

5. Conclusions

IFRS for SMEs are intended by IASB to provide high quality accounting standards for non-publicly accountable companies. In that sense, in Spain an accounting reform carried out in 2008 involved a major reform of the accounting regulatory system in order to adapt it to IFRS, but considering the information needs of private companies. Therefore, both Spanish GAAP after the accounting reform and IFRS for SMEs can be considered as adaptations of full IFRS for their use among unlisted companies. The purpose of IFRS for SMEs is to provide high quality accounting standards for companies that, although do not have either the resources or abilities to apply "full" IFRS, can make the most for the use of them. In spite of the term "for SMEs", these standards are intended to be used for non-publicly accountable entities. The study examines the differences between Spanish GAAP (PGC'07 and NOFCAC) with IFRS for SMEs, in order to analyse the convergence level among both GAAP. Furthermore, we also examine whether the accounting reform has significantly changed the regulatory framework as compared to the previous Spanish GAAP (PGC'90).

Therefore, we develop three Convergence Index to full IFRS, which we apply to the former PGC'90, the current PGC'07 and IFRS for SMEs, and we also compare the scores obtained to analyse the similarity between Spanish GAAP and IFRS for SMEs, as well as the changes in the convergence between local GAAP and full IFRS. Results show that IC scores for PGC'07 and IFRS for SMEs, are qualitatively similar, what is in line with our hypothesis that the accounting reform has reached its objective of regulatory convergence to IFRS. However, there are differences in the way Spanish GAAP and IFRS for SMEs have converged to full IFRS: while IFRS for SMEs differences are mainly driven by the simplification in the reporting, differences between PGC'07 and full IFRS arise because of differences in recognition and measurement rules. On the other hand, results also show that IC scores are remarkably higher for PGC'07 than for PGC'90, what suggests that the accounting reform has involved an in-depth change with regard to the recognition, measurement and reporting of the accounting information.

Results are of special interest for national regulators which are considering to adapt their local GAAP with the aim of converging to IFRS but maintaining lower accounting and reporting requirements for the small companies, such as the European Union, as well as the potential users of IFRS for SMEs. The main limitation of the study is that the comparison is based on differences among accounting standards, rather than accounting practices that may affect not only comparability but accounting quality. Furthermore, the effect of these differences on the comparability of accounting amounts is not tested. These limitations, though, can be considered as opportunities for future research.

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