

## Accounting and Auditing

### Public vs. Banking Sector Accounting - How Far Is Romania from International Referential?

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**Abstract:** The purpose of our paper is to identify the level of accounting harmonization in Romania for both public and banking sector with international referential (IPSAS and IFRS) focusing on financial reporting requirements, by providing both vertical and horizontal analysis beginning with the year 2001 up to present. Unlike prior studies conducted on the same topic, which measure the general accounting harmonization for private sector, our paper is focused on specific economic fields – public vs. banking sector – thus providing a different approach of accounting harmonization. The research methodology used for achieving our goal was based on both static and dynamic analysis of the degree of similarity and dissimilitude between national and international accounting frameworks, by using appropriate statistical tools (e.g. Euclidian distance, Jaccard and Spearman coefficients). Our results reveal continuous improvements in accounting regulations in both sectors along time, but banking sector was always much closer to international standards than the public one. Considering the controversies between cash and accrual basis accounting which affected harmonization in public sector, as well as the latest challenges for banking sector due to IFRS adoption, we appreciate the overview image of accounting development in Romania provided by our empirical results as valuable for a wide range of users: academics, researchers, practitioners for both public and banking sector.

**Keywords:** accounting harmonization; international referential (IFRS / IPSAS); public sector; banking sector; Romania

**JEL Classification:** M41, G21

#### 1. Introduction

International harmonization and convergence of accounting had gradually become one of the most challenging topic of worldwide research and a very hot debated issue in practitioners' sphere, too. It was mainly due to an increasing internationalization of capital markets based on the background of a rapid development of economic globalization. Even if we can talk about accounting harmonization for quite a very long time, the progress has been slow in achieving

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this goal, among the most common impediments being cultural, economic, political and legal differences among countries.

Puxty et al. (1987:275) argue that ‘the institutions and processes of accounting regulation in different countries cannot be understood independently of the historical and political-economical context of their emergence and development’. Haller (2002) insists on the political factor that it noticed in a different degree of manifestation in the European environment of Anglo-Saxon and Continental countries. Legal and political factors provide a much more substantial influence on standard development and implementation than cultural values provide (Sawani, 2009). From a historical point of view, accounting development is an evolutionary process dependent upon and interwoven with economic development (Lowe, 1967). The force of changing of accounting system may come from the effect of one or more factors mentioned above, the co-action of several factors or as a synthesis of all of them (Zhang, 2005). In support of the idea, Alexander and Archer (2001) recognize the need of accounting harmonization and convergence in the context of more slight desire of communication between countries, necessary to find viable solution that solve the global problems manifested, in all economic field (inclusive public and banking sector).

Harmonization scope allows making comparisons of international financial accounts easier, faster and cheaper (Carlson, 1997). Underlying the process of harmonization, financial statements must ensure a higher degree of comparability. Thus, the harmonization process request joint effort of legislators and accounting standards setters to accomplish a great goal, namely to provide a quality and transparent information.

The purpose of our study is to identify the level of accounting harmonization for both public and banking sector to international referential (IPSAS and IFRS) focusing on financial reporting requirements. Thus, our paper provides an historic research in both fields beginning with the year 2001, up to present.

The implications of the study are representative for two levels. Worldwide, manages to position Romania in countries emerging field, which is important for the international bodies empowered to issue accounting regulations. At national level, the study can be useful to a large category of users, namely: the bodies empowered to issue normative documents; the effective user of the legislative regulations, who by involving in the process of public debate of the normative documents will be able to influence their content through pertinent suggestions concerning their content, quality and novelty; the public who can have an idea about the way in which its representatives in Parliament and Government get involved in creating a correct, coherent and efficient accounting system in due time and with low costs.

Basing on this background, our paper proceeds as follows. Firstly, we briefly presenting the international referential (IPSAS and IFRS) applicable to public vs. banking sector, thus creating the basis for reviewing prior literature concerning accounting harmonization. We continued our study pointing out the main stages of accounting development in our country in these two areas – public vs. banking one. Than, we describe the research design, beginning by explaining the sample selection and data collection, followed by the research methodology used based on both vertical and horizontal analysis of material accounting harmonization. Finally, we provided our research findings and discussed their implications and future perspectives.

## **2. International Referential for Public vs. Banking Sector**

International Public Sector Accounting Standard (IPSAS) was prepared by the International Public Sector Accounting Standards Board (IPSASB), an independent standard-setting body within the International Federation of Accountants (IFAC). The objective of the IPSASB is to serve the public interest by developing high quality accounting standards for use by public sector entities around the world in the preparation of general purpose financial statements. Starting with 1998, the IPSASB has issued a total of 31 referential. This will enhance the quality and transparency of public sector financial reporting and strengthen public confidence in public sector financial management (IPSAS, 2012). They are based on IAS/IFAC referential.

There are several ways to characterize IPSAS: as an international version of national standards; as a government version of business accounting standards; and as a professional version of laws and regulations (Chan, 2008).

From this argument, in over 50 countries, IPSAS standards were actually applied in national and regional accounting system (Cardinaux et al., 2007). One thing is certain: international accounting standards become an international accounting culture (Whittington, 2008). Furthermore the standards are sustained by a large number of international organizations, including the United Nations, The Organization for Economic Co-operation and Development, NATO and others.

An undoubtedly contribution in worldwide accounting harmonization had the International Accounting Standards Committee (IASC) by issuing the so-called “IAS” (International Accounting Standards). Thus, anyway, between 1973 and 2001, a series of 41 accounting standards have been issued during that time ordered numerically, started with IAS 1, and concluded with the IAS 41.

Since 2001, the new International Accounting Standards Board (IASB) took over from the IASC its responsibility of standards settler and continued to develop the so-called “IFRS” (International Financial Reporting Standards), a series of 13

standards being issued up to present. One major implication worth noting is that any principles within IFRS that may be contradictory will definitely supersede those of the IAS. Basically, when contradictory standards are issued, older ones are usually disregarded.

By now, more than 100 countries and regions over the world have permitted or even required their domestic listing companies to adopt IFRS to different extent, thus appearing that international accounting harmonization has been an unconvertible trend. The main reason of following this trend came from the worldwide perception and acceptance of accounting as a “business language” that inevitably is leading to the following question that has been recently in the center of attention - “Can all accountants worldwide speak the same language?” (Rezaee, et. al, 2010).

Nonetheless, IFRS/IPSAS is not universally perceived as a “panacea” because convergence is a very complex process influenced by political, cultural, and regulatory differences that often generate significant uncertainty and resistance (Johnson and Leone, 2008).

Consequently, all these events and whole questions aroused created an opportunity for accounting researchers to analyze trends in research on international accounting harmonization and to assess where this research may proceed from here.

### **3. State of the Art in Accounting Harmonization**

Measuring accounting harmonization started in the early 1980’s, but these studies (Nair and Frank, 1981; McKinnon and Janell, 1984; Doupnik and Taylor, 1985), were mainly focused on the application of International Accounting Standards in various countries around the world, examining the change in the level of conformity over time, without distinguishing between formal and material harmonization. Analysis reveals that between 1979 and 1983 Europe registered the lowest level of compliance with IASC standards among five broadly-defined geographic areas.

For public sector, a review of public sector literature shows that it is focused on research into annual accounts or comparability of standards and legislation (Sanchez, 2003), while banking sector was not in authors’ interest for research papers on this topic.

Later, studies aiming to measure accounting harmonization were conducted on two different pillars: studies on *formal (de jure) harmonization* focused on accounting standards and studies on *material (de facto) harmonization* focused on accounting practice (financial reporting) (Van der Tas, 1988; Tay and Parker; 1990). The first attempt to measure the harmonization degree of a certain national accounting system (formal harmonization) led to development of a first indicator, namely

*Herfindahl or H Index* (Van der Tas, 1988), followed by two derivatives of it *C Index* and *I Index* for comparing more systems (Van der Tas, 1992).

Along time, further improvements or developments to those indices have been made by various researchers (Archer, et al., 1995; Archer, et al., 1996; Herrmann and Thomas, 1995; Morris and Parker, 1998; Aisbitt, 2001; Pierce and Weetman, 2002; Taplin, 2004) materialized in derived measurement such as the *Total Comparability Index*, the *Within-country Comparability Index*, the *Disclosure-adjusted Index*, the *Adjusted "Between-country" Index*, and *Associations Coefficients*, but most of them have been used in studies aimed to determine the level of harmonization among the practices and treatments, thus using accounting information prepared by companies. Consequently these derived instruments are considered more suitable for measuring material harmonization.

The next decade (1990-2000) provides new methodologies developed for measuring exclusively the formal harmonization level of accounting systems. Thus, a *cross-national disclosure model* was developed (Adhikari and Tondkar, 1992), followed by a *disclosure index framework* (Adhikari and Tondkar, 1995) and the *Mahalanobis distance* using a subsidiary indicator named *Exact Matches* (Rahman, et al., 1996), based on clustering and discriminating analysis, focusing on both disclosure and measurement requirements.

Beginning with the year 2000, we assisted to a pronounced enrichment of research tools, new accounting harmonization measurement instruments being developed, such as the *Euclidian Distances* (Garrido et al, 2002), which in fact represents a particular form of the Mahalanobis Distance Method, followed by *Jaccard's similarity coefficients* and *Spearman's correlation coefficients* (Fontes et al., 2005), which proved to be better in reaching their aim.

Further studies developed (Aisbitt, 2006; Delvaille, et al., 2005; Tarca, 2004; Rahman, 2002) reveal more suitability of using the correlation and association coefficients in measuring the degree of accounting harmonization compared with the other statistical tools used in prior studies.

Because, almost all of the above-mentioned studies had defined the international differences in accounting as a variety of choices for one accounting issue by different national standards, and few had taken into consideration the comprehensiveness of one set of accounting standards compared with another, a new approach of identifying the nature and significance of the differences between accounting standards was noticed (Ding et al., 2005; Ding et al., 2007) and a new measure called *Average distance* was developed (Wang, et al., 2005), that proved to be much simpler and able to reflect the influence of the different enforcement level of regulations on harmonization better than the Mahalanobis distance used in Rahman et al. (1996).

The latter decade (2001-2010) ends with a new approach for measuring formal accounting convergence in a more informative and reasonable manner, relying on *fuzzy clustering analysis* to measure the formal accounting convergence (Zhang and Qu, 2009).

In conclusion, a wide range of instruments have been developed along time aiming to measure formal accounting harmonization, each of it having both benefits and shortcoming. Basing on the latest study developed in this respect (Qu and Zhang, 2010), we can sum up at the least the following ideas related to the methods and methodology employed in prior literature:

- “static” (vertical) formal accounting harmonization is better assessed through measuring methods based on coefficients (Jaccard's and Spearman's coefficients) because of using nominal variables, data sources including mainly regulations, standards, and stock exchanges' listing requirements;
- “dynamic” (horizontal) formal accounting harmonization is better assessed by using distance measures (Euclidian distances and Mahalanobis distances) because of using ordinal or interval variables.

#### 4. Romanian Accounting System – An Overview from Public vs. Banking Perspective

##### 4.1. Developments in Accounting System for Public vs. Banking Sector

Considering the main rules that were issued in Romania for approving the accounting regulations for public and banking sector that are synthesized in the following table, we identified five important stages in the whole process of transition from national to international standards.

**Table 1 Accounting regulations in Romania – public vs. banking sector**

Stages	Public Sector	Banking sector
<b>before 2001</b>	Law no.10/1991; no. 72/1996	Order no. 344/1997; no. 362/1998
<b>2001 - 2005</b>	Order no.61/2001; no.1792/2002; no.81/2003; no.1746/2002	Order no. 5/2001
<b>2006 - 2008</b>	Order no.1917/2005	Order no. 5/2005
<b>2009 - 2011</b>	Order no.1917/2005	Order no. 13/2008
<b>2012 - present</b>	Order no.1917/2005	Order no. 27/2010

*Source: Own projection*

For the public system, integrating the accounting system afferent to the 1989 (post communist) – 2001 period in international context, we can affirm that there is a

cash basis accounting, which recognizes the incomes and expenses in the moment of pay. This period is characterized by a slow evolution of the public accounting system, which essentially was not influenced by the world tendencies. Technically, they use the same accounting chart as the one from the socialist period, approved in 1984, slightly updated to the present requirements (Nistor et al, 2008).

In the first stage of accounting reform, which starts in '90s and ends in year 2001, the accounting system in banking sector had strong origin in the continental system, being influenced by French rules regarding both the chart of accounts and the financial statements format.

Beginning with the year 2001, an infusion of Anglo-Saxon concepts and practices took place in Romanian accounting system as a whole.

The transition towards the accrual accounting system for public institutions imposed a series of preparation measures. These have brought major changes in comparison with the existing accounting technique, in addition to the cash basis accounting system, typical of the public institutions. So, in second period, stands the adoption of new treatments, regarding fixed assets, such as: material assets revaluation, fixed assets depreciation, provisions for material assets depreciation.

This influence left its mark on banking sector, too, by the first regulation issued by the National Bank of Romania and harmonized with European Standards through the conceptual framework elaborated by IASC retrieved inside it.

The year 2006 (third period) marks at a national level the implementation of the accrual based accounting system in all Romanian public institutions (Order no. 1917/2005). The main characteristics of the new accounting system can be resumed as follows (Nistor et al, 2008): harmonization of the public institutions' Accounts Chart with the economic entities' one developing and keeping some of their features; presenting the financial statements in a similar way as far as structure and content with the ones of the economic entities; the statement of earnings shows the financial performance of public entities, both for their own need and related to other governmental institutions, suppliers, creditors, clients and other users; the result of the exercise is a patrimonial result that contains engagements and obligations that are not yet paid; the evaluation methods of assets and liabilities are similar to the one of economic entities.

The process of harmonization with international standards and practices followed its third stage (2006 – 2008), when accounting regulations approved were conforming to the European Directives. During this stage, starting with the financial year 2007, all credit institutions were required to apply IFRS in their consolidated financial statements for prudential supervision purposes, irrespective of their listing status (Order no. 6/2007). This requirement became mandatory at individual level, too, in the next stage (2009 – 2011). Thus, beginning with year

2009, informative annual financial statement in accordance with IFRS provisions were required by the National Bank of Romania for all banking institutions (Order no. 15/2009). This measure was taken for assessing the ability of banking system to apply IFRS as the basis of accounting, the final decision being taken the following year by Order no. 9/2010 regarding the adoption of IFRS beginning with the year 2012.

Also, a comprehensive review followed by proper updates of reporting framework (Order no. 1/2011 regarding consolidated financial reporting and Order no. 3/2011 regarding individual financial reporting, respectively Order no. 2/2011 for statistical reporting applicable to branches of banking institutions from UE member states) and prudential regulations were made during this stage, too.

Currently, the Romanian public sector and banking system is still going through the continuous process of harmonization with international rules and practices in order to increase transparency and ensure comparability of information, through relevant and adequate assessments across the entire public/banking sector.

Thus, in banking sector beginning with the year 2012, accounting regulations conforming to the International Financial Reporting Standards (IFRS) became applicable to all credit institutions from Romanian banking system.

#### **4.2. Financial Reporting Environment – a “Mirror” of Accounting Harmonization**

The financial statements are the main vehicle of information available for all users (Muniain, 2003). Whether discussing the public or private interest, the accountability is a requirement of New Public Management (NPM) postulates. The financial statements are considered a key accountability tool for different users.

Increasing relevance of financial statements is due to the existence of evidence of limited financial resources whose use must take into account social needs, the interest of stakeholders, the citizen rights, the quality and efficiency of the public services.

Given that public institutions are increasingly approaching the status of business entities, the harmonization process must lead the financial reports to a higher degree of comparability (Wolk and Heaston, 1992). Thus, harmonization represents the effort undertaken by legislators and accounting standards setters in order to reduce the diversity of accounting treatments used to reflect economic reality.

Brusca and Condor (2002) shows that in disclosure degree appreciation of financial reports, there are differences given by a number of factors such as: legal system, principal users of financial reporting, the organization of the public/private sector, specific objectives of public/private financial reporting. Based on this assessment,



the study correlates acceptance of high disclosure with Anglo-Saxon accounting system and low disclosure with the continental one.

Thus, the present study uses in assessing formal harmonization, the financial statement of public/banking sector according to national rules, as the basis for comparison with international reference (IPSAS/IFRS).

## **5. Empirical Study on Formal Accounting Harmonization in Romania – Public vs. Banking Sector**

### **5.1. Research Design**

The purpose of our study is to empirically measure and compare the levels and progress of formal accounting harmonization in Romania in public vs. banking sector focusing on financial reporting. The reason of choosing IAS 1 and IAS 7, respectively IPSAS 1 and IPSAS 2 for assessing the extent of convergence derives from the general acceptance that financial reporting is “the best mirror” of accounting harmonization.

The research methodology of our study comprises both a static and a dynamic analysis, being aimed to provide a comprehensive overview of the evolution of accounting harmonization along time, as well as the level reached by now in both sectors. Thus, for performing our analysis we considered four stages of accounting system development, beginning with the year 2001, which were detailed in Table 1.

The statistical tools used for assessing the degree of convergence between national and international referential were appropriate to the type of analysis performed. Thus, while for the static analysis we considered *Jaccard's and Spearman coefficients*, the dynamic analysis was performed using the *Euclidian distance*. The use of SPSS statistical software for reaching the final results ensures transparency and relevance to our results, while data processing is accurate and controllable.

The aspects selected for performing the empirical analysis were structured in nine topics comprising issues related to form (Financial reporting structure; Basis of reporting; Assets ordering by liquidity; Liabilities ordering by chargeability; Financial performances; Cash-flow methods; Statement of responsibilities; Additional information; Qualitative characteristics) and six topics comprising issues related to content (Impairment; Reevaluation; Depreciation methods; Measurements for inventories (Input and Output); Measurements for financial assets / liabilities). Starting from these topics, we proceeded to compare the national referential for public and banking sector with the corresponding international accounting standard. Thus, we have allocated the 1 or 0 value for each possible and/or existent requirement within at least one of the considered

regulation, where the 1 value shows that the requirement exists within that framework, and 0 value is given for the situation when the requirement is not found within the considered framework.

In Table 2 there is presented a sample of 1 and 0 values that have been allocated for both public and banking sectors for issues related to form, namely Qualitative characteristics.

**Table 2 Exemplification of the analysis method used for the considered topics**

	IPSAS	IFRS	2001-2005		2006-2008		2009-2011		present	
			PS	BS	PS	BS	PS	BS	PS	BS
<b>Issues related to form</b>										
Qualitative characteristics										
- <i>relevance</i>	1	1	0	1	1	1	1	1	1	1
- <i>reliability</i>	1	1	0	1	0	1	0	1	0	1
- <i>comparability</i>	1	1	0	0	1	0	1	1	1	1
- <i>credibility</i>	1	0	0	0	1	0	1	0	1	0

*Source: Own projection*

Considering the main aim of our study – to provide a comprehensive image of accounting harmonization level with international standards along time for both public and banking sector – we stated the following hypotheses:

*H1: Financial reporting for public sector is in accordance with IPSAS from “form” point of view.*

*H2: Financial reporting for banking sector is in accordance with IFRS from “form” point of view.*

*H3: Financial reporting for public sector is in accordance with IPSAS from “content” point of view.*

*H4: Financial reporting for banking sector is in accordance with IFRS from “content” point of view.*

On the basis of the elements identified in the previous period, and by analysing the intensity of the changes we want to determine which is their meaning. Many times, the frequent changes transpose uncertainty and instability, whereas the lack of these may mean coherence and certainty.

## 5.2. Empirical Findings

For accepting or rejecting our hypotheses we proceeded at determining the degree of similarity and dissimilitude between Romanian accounting rules for both public and banking sector and corresponding international referential. A synthesis of

results reached by processing data collected into SPSS software is presented in details in Table 3, followed by an analysis of values calculated.

**Table 3 Comparison analysis based on Euclidian distance, Jaccard's and Spearman's coefficients**

	2001-2005		2006-2008		2009-2011		present	
	PS	BS	PS	BS	PS	BS	PS	BS
<b>Issues related to form</b>								
Euclidian distance	4.243	1.414	3.000	1.414	3.000	1.000	3.000	1.000
Jaccard's coefficient	0.143	0.889	0.609	0.889	0.609	0.944	0.609	0.944
Spearman's coefficients	0.143	0.816	0.000	0.816	0.000	0.900	0.000	0.900
<b>Issues related to content</b>								
Euclidian distance	3.317	2.236	2.000	2.000	2.000	2.000	2.000	1.414
Jaccard's coefficient	0.154	0.643	0.692	0.714	0.692	0.714	0.692	0.857
Spearman's coefficients	0.113	0.175	0.372	0.145	0.372	0.145	0.372	0.077

*Source: Own results using SPSS version 16*

We can notice that between 2001 and 2005 we did not find elements of accrual accounting because the rules for public sectors were elaborated on cash basis, irrespective of banking system, which was organized since the beginning on accrual basis. This statement is supported by the values of similarity and dissimilitude coefficients presented in Table 3. Thus, we can notice the difference between their values for both "form" and "content" issues (e.g. 0,154 for public sector, respectively 0,643 for banking sector in case of Jaccard's coefficient for "content" analysis), which reveals a low level of financial reporting harmonization to international standards especially for public sector.

However, we have to mention that during this period there were 13 public institutions which applied with experimental purpose the accrual accounting at the same time with cash principles. The results reached by these institutions stood as a basis of adopting accrual basis accounting since the year 2006. Consequently, we can notice an improvement in both form and content requirements also revealed by the values evolution of coefficients determined (e.g. 0,154 for previous period vs. 0,692 for current period). Actually, this is the result of a new public accounting regulation on accrual basis with IPSAS influences.

As regards the banking sector, our results also reveal an improvement in case of financial reporting "content" requirements (e.g. 0,643 for previous period vs. 0,714 for current period, sustained by fair value approach).

The next decades (beginning with the year 2009 up to present) the accounting system for public sector is characterized by continuity, being based on the same regulation with minor changes without IPSAS implications. In case of banking system, we can notice a continuous trend for accepting international standards for both form and content requirement for financial reporting (e.g. 0,889 vs. 0,944 for form analysis, respectively 0,714 vs. 0,857 for content analysis, sustained by adjustments for impairment and amortized cost concepts). This is mainly due to the requirement of preparing informative annual financial statements in accordance with IFRS provisions, which became mandatory beginning with the year 2012.

## **6. Conclusions and Perspectives**

Accounting harmonization in Romania proved to be a difficult process with major implications in theoretical and practical approach. Financial reporting provides the best image of this process, often being considered as the mirror of accounting system.

This is the main reason why we focused our research on the degree of juxtaposition between financial reporting in Romanian public and banking system according to national rules and international standards (IPSAS and IFRS). Thus, we analyzed both form and content requirements for financial reporting between 2001 and 2012, issues formulated into our research hypotheses.

According to our empirical findings, even if harmonization in public sector started later, between 2001 and 2005 the accounting system being based on cash principles, we can stated that beginning with the year 2006 there are significant influences of IPSAS referential. Consequently, we can assert that financial reporting analyzed by both form and content point of view are based on IPSAS 1 and IPSAS 2 requirements, thus two of our hypotheses (H1 and H3) being accepted.

Applying IFRS in Romanian banking system is considered “a big step ahead”. Thus, it not only complies with the request of the International Monetary Fund and the European Union, as part of the financing agreements concluded with the Romanian authorities, but also ensures comparability between banks, thus creating consistency in supervision (individual vs. consolidated) and providing relevant and reliable information to general users by eliminating confusions. These statements are also confirmed by our empirical findings, which reveal a continuous trend of harmonization to international standards, thus the rest of our hypotheses (H2 and H4) being accepted, too.

However, IFRS adoption will also create many challenges, the transition to an approach based on professional judgment being the most exciting. Banks have to

be aware as well of the costs incurred by IT solutions and to pay attention to the training of staff involved in this process.

Like any other research study, our analysis has limitations, too, which are mainly coming from the sample of issues considered for the analysis and the research technique used. But, these limitations offer us outlooks for future research, by extending the sample of issues required by IAS 1 and IAS 7, respectively IPSAS 1 and IPSAS 2 included in analysis, even by considering other international referential. Also, the research methodology might be improved by using other comprehensive statistical methods for testing the degree of similarity / dissimilitude between accounting systems considered, which gives us outlooks for future research.

Anyway, through the conclusions reached, our paper could be considered as valuable for a wide range of users: academics, researchers, practitioners for both public and banking sector.

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