THE INCOME STATEMENT FORMAT NEW TRENDS FROM THE ADOPTION OF INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AND EXTENSIBLE BUSINESS REPORTING LANGUAGE (XBRL)

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Abstract:

The Annual Report is a good mean of describing the situation of a company to all the stakeholders although it is difficult to compare Annual Reports coming from different entities. A process of harmonization of European accounting standards was started in order to bring Annual Reports into line and it is currently being carried out through the adoption of IFRS standards.

Once Annual Reports have been created adopting a common accounting standard, the very next step is to code them using the same IT language. If a common computer language is selected, Annual Reports or other documents can easily be compared without recoding and retyping them. The starting point of this process is the definition of an appropriate *taxonomy* to be used by both those drafting and reading the documents. The process of adopting an appropriate set of accounting standards, selecting the related taxonomy and, finally, drawing up documents using a new business language, called eXtensible Business Reporting Language (XBRL) leads companies to produce sound, meaningful and clear documents that greatly improve sharing of useful information. Moreover, the adoption of IFRS standards and XBRL encoded statements provides a set of measures for building sound and widely accepted models.

The aim of the present paper is to analyze the changes to income statement presentation and the new concept of financial performance that emerges as a result of the adoption of IFRS and XBRL language. The drawing up of the Income Statement by XBRL may improve the financial performance measurement and disclosure with many benefits for all the stakeholders.

Key Words: Income Statement, Financial Performance, IFRS, XBRL, taxonomy

Introduction

The Annual Report is a good mean of describing the financial performance of a company to all the stakeholders although it is difficult to compare Annual Reports coming from different entities. A process of harmonization of European accounting standards was started in order to bring Annual Reports into line and it is currently being carried out through the adoption of IFRS standards.

Once Annual Reports have been created adopting a common accounting standard, the very next step is to code them using the same IT language. If a common computer language is selected, Annual Reports or other documents can easily be compared without recoding and retyping them. The starting point of this process is the definition of an appropriate *taxonomy* to be used by both those drafting and reading the documents. The process of adopting an appropriate set of accounting standards, selecting the related taxonomy and, finally, compiling documents using XBRL language leads companies to produce sound, meaningful and clear documents that greatly improve sharing of useful information. Moreover, the implementation of IFRS standards and XBRL encoded statements provides a set of measures for building sound and widely accepted models.

This process will be of great interest to the end users as it reduces the time and costs required for document preparation and also enables more efficient and less expensive distribution and transmission of the same. Further more, users such as all the company stakeholders, will receive the

reports more quickly and they will be able to analyze documents in an easier and more effective way, because they won't need to retype the reports themselves.

The implementation of the IFRS standards has brought about a radical change in certain key aspects of the drawing of the financial statements. One of the themes that will be affected by this revision process is the concept of income formation, and therefore the IFRS approach to the Income Statement structure (IAS 1, *revised* 2007). The changes to income statement presentation and the new concept of financial performance that emerges as a result of the adoption of IFRS lead to some research questions:

RQ1: How should XBRL be applied in drawing up the financial statements, including the income statement?

RQ2:What may be the impact of adopting the IFRS taxonomy?

RQ3: Will there be positive effects in terms of the performance disclosure?

The remainder of this paper is set out as follows: Section 2 explains the interrelations between the IFRS Income Statement format and XBRL language, Sections 3 focuses on a Discussion Paper on Financial Statement Presentation (IASB, 2008), Section 4 emphasizes the benefits arising from the adoption of XBRL in terms of performance disclosure, and finally Section 5 describes the summary and conclusions.

IFRS-compliant Income Statements and XBRL language

IFRS development is indissolubly linked to the adoption of XBRL[53]: in 2001 the IASB[54] assumed jurisdiction over XBRL (http://www.iasb.org/xbrl), i.e. the institutional role required to set up the official IFRS taxonomy. From the very beginning, XBRL played a central and strategic role in the activities of the Board, which deemed it vitally important to define a high-quality taxonomy in order for "the development of IFRSs and the availability of a high quality IFRS Taxonomy based on XBRL standards go hand in hand[55]". Thus, taxonomy was developed in parallel with the accounting principles: in fact, the XBRL team operating within the Board agreed to publish the Taxonomy within the same time frame planned for the publication of the Bound Volume, in addition to ensuring its quality through an appropriate development process. To create the taxonomy, it is not enough to simply transfer information from paper (the *Bound Volume*) to an electronic medium (the XBRL format): two key roles play a part in this process, the computer architecture manager and the project manager in charge of defining the accounting characteristics of the taxonomy, who participates in the meetings of the Board's technical teams responsible for setting up the accounting principles. In summary, several issues arise from the definition of an IFRS taxonomy, of which the following are relevant for the purposes of this work:

1. while it allows a more effective international circulation of economic and financial data, the XBRL language requires the definition of a shared set of accounting principles to use as the source for defining the taxonomic dictionary;
2. on the one hand, the new electronic format is extremely flexible enabling a choice between different financial statement presentation models and accounting record calculation methods; on the other, however, it influences the financial statement presentation form by identifying standard labels to be associated to the different items;

53 Both IFRSs and XBRL are intended to standardize financial reporting in order to promote transparency and to improve the quality and comparability of business information, therefore the two form a perfect partnership. The IFRS Foundation XBRL Team is responsible for developing and maintaining the XBRL representation of the IFRSs, known as the IFRS Taxonomy. The IFRS Taxonomy is used around the world to facilitate the electronic use and exchange of financial data prepared in accordance with IFRSs. The IFRS Foundation's XBRL activities include: Taxonomy development- for companies reporting in IFRS, the Foundation publishes tags for each IFRS disclosure. These tags are organized and contained within the IFRS Taxonomy. Support materials- the Foundation produces support materials to facilitate use and understanding of the IFRS Taxonomy. Translations- translations of the IFRS Taxonomy into key languages are provided to support users of IFRSs and the IFRS Taxonomy whose primary language is not English. Global outreach- the Foundation makes a concerted effort to promote the use of XBRL in conjunction with IFRSs around the world. The Foundation also encourages co-operation and communication with users of the IFRS Taxonomy. See www.iasb.org.

54 Please note that the IASC Foundation, as established jurisdiction, was one of the founding members of XBRL International, the non-profit consortium, with the task of developing and promoting the new business and financial language.

55 From the speech given by Gerrit Zalm, Chairman of Trustees, during the 17th XBRL International Conference organized by XBRL International in May 2008, available at http://www.iasb.org.

3. while IFRS translation into XBRL language helps to improve disclosure in terms of comparability, it does not play a mere role of "container", but rather it standardizes the method of transmission of business and financial data.

This would undeniably result in benefits, including greater comparability between financial statements through the use of a standardized encoding system and the possibility of using a huge amount of qualitative and quantitative information that could be very conveniently accessed using tags and links. However, the key issue remains the definition of an adequate, complete, reliable and high-quality taxonomy, without which XBRL, as an open standard, has no reason to exist. The purpose of the taxonomy, conceived as a sort of XBRL "dictionary", is not only to classify the items by identify the contents as part of a hierarchical structure, but can also "understand" the quantitative relations between data, regulatory references, and representation criteria[56].

The matching of taxonomy and actual disclosure present in companies' annual reports is perhaps the most critical issue with respect to XBRL impact on business and financial reporting. The creation of an instance document "imposes" the association of each accounting item with a single XML tag, which results in a need to harmonize taxonomy with accounting practices (Baldwin, et al., 2006). In the presence of regulations imposing strict financial statement formats, this is not a problem, but such is not the case with the set of IFRS accounting principles, as discussed above. The same problem arises in connection with the translation into XBRL of the narrative parts ("notes") and of information voluntarily provided in the annual report. This could have negative effects in terms of reduced transparency and comparability, discouraging companies from voluntarily converting business and financial information into XBRL[57].

The inadequate fit between taxonomy and common accounting practices [58] and the companies' unwillingness to change their accounting policies lead to two different types of behaviors:

1) the use of custom tags[59] added to the XBRL taxonomy;

2) the use of extensions common to a certain number of companies, generally operating in certain sectors. The first option results in extreme flexibility of the XBRL language: the contents of the disclosure are broad and can be constantly modified due to the open-source structure of XBRL (Arnold et al. 2009; Locke et al., 2007). The second option is present in many jurisdictions: to quote

[56] Taxonomies may be distinguished on the basis of a hierarchical classification structured according to the so-called three tier approach: 1) GAAPs applicable to all entities; 2) sector-specific principles; 3) firm-specific principles.

57 The IFRS Foundation is establishing a task force to examine detailed XBRL tagging in IFRS (International Financial Reporting Standards) financial statements, and is looking to work directly with preparers from listed companies from different industries and regions. The Foundation has initiated the task force as a follow-up to the pilot initiative that it recently concluded with US-listed foreign companies to produce US-SEC (United States Securities and Exchange Commission)-compliant IFRS financial reports in XBRL format. The objectives of this initiative are: The aim of the task force is for listed companies to produce fully-tagged financial statements using the IFRS Taxonomy. Detailed tagging up to level-4 will be applied to participants' financial statements, whereby all primary financial statement line items and notes disclosures will be tagged using the IFRS Taxonomy 2011 (which is published at the end of March 2011). The task force will be a means for the Foundation to engage with stakeholders and obtain feedback on the usability of the IFRS Taxonomy for filers and for users of filed XBRL content in the context of detailed note tagging. The IFRS Foundation is seeking participation from preparers of financial statements for listed companies who report in IFRS. Participation from companies operating in all industries and geographical regions is welcome, and it would be particularly useful to have participation by foreign private issuers listed in the United States because of the expected requirement for foreign private issuers reporting in IFRS to submit IFRS XBRL filings from June 2011. Participating companies will: 1) examine major sections within financial statements - such as operating segments, share-based payments, property, plant and equipment, etc - and the corresponding parts of the IFRS Taxonomy that relate to disclosures within those sections, with support and feedback from the IFRS Foundation XBRL Team. 2) Apply IFRS Taxonomy tags to financial statement note disclosures either in Microsoft Excel or Word or directly in XBRL, again with support and feedback from the IFRS Foundation XBRL Team. 3) Generate an XBRL file using their preferred software. For more details see www.iasb.org. available from 21 march 2011.

58 Some interesting empirical studies have been conducted in the following works: evaluation of the fit of the taxonomy developed in 2000 for US commercial and industrial companies, in Bovee M., Ettredge M., Srivastava R.P., Vasarhely M., (2002) "Does the Year 2000 XBRL Taxonomy Accomodate Current Business Financial Reporting Practice?", Journal of Information System, vol. 16, n. 2, fall, pages 165-182; the evaluation of the effectiveness of the IFRS-GP taxonomy, developed for the conversion of IFRS-compliant financial statements, in Bònson E., CortijoV., Escobar T., (2009) "Towards the Global Adoption of XBRL using International Financial Reporting Standards", International Journal of Accounting Information Systems, vol. 10, pages 46-60.

[59] We find particularly interesting the possibility of "customizing" contents according to the different categories of stakeholders. "Continuos delivery of customized and standardized external reporting is now possible through enterprice-wide systems, wide-area, high-bandwidth networks, and XML". (Hunton et al., 2003).

but one, in the US a framework including different components has been developed for the US GAAPs. The components are organized into different levels: add-on taxonomies, common terms, common relations, and industry relationships, which are basically industry-specific extensions. The different taxonomies are applicable both to listed and unlisted companies; three industry-specific taxonomies are currently recognized: industrial and commercial entities, banking and savings institutions, and insurance companies. (Hoffman C., Homer B., 2005, US GAAP Taxonomy Framework, available at www.xbrl.org). The extensions choice appears to be preferable to the adoption of firm-specific custom tags: on the other hand, the risk exists that an excessive number of taxonomies (a "Tower of Babel" of tags according to Bergeron, 2003) will cause an "anti-standardization" effect, leading to the creation of multiple business/financial dialects (Carpenter, 2003).

In summary, one can largely agree with the following opinion on consistency and comparability: "The use of XBRL tags combined with a clearly defined XBRL taxonomy will reduce terminology issues related to homonyms and synonyms in published financial statements[60]. A trade-off exists between a comprehensive taxonomy allowing firm specific information and standardization that improves comparison among firms (Wagenhofer, 2003). XBRL facilitates comparability among firms when common taxonomies are used, but when companies create their extension taxonomy, some of that comparability is lost. The use of extensions should decrease over time as the number of sector taxonomies increases (Debreceny et al., 2005). However XBRL per se does not resolve the inconsistency of measurement allowed by GAAP". (Baldwin et al., 2006).

The other possibility available to companies is that of modifying XBRL encoded information: clearly, this is only possible if the information is provided voluntarily, although it is particularly interesting to observe, also for mandatory disclosures, the choices adopted by companies in the presence of different alternatives, the so-called options that are frequently found in IFRS principles. The consequence could be a worsening – in both quantitative and qualitative terms – of the disclosure, as companies might prefer to reduce the degree of detail of the disclosure (Bovee et al. 2002). Another issue is the adjustment of the disclosure contents to the taxonomy's hierarchical relations, which could result in problems for the users in terms of reprocessing the data through software able to detect certain encoded data only.

Discussion Paper Preliminary View of Financial Statement Presentation October 2008

Lastly, it is worthwhile to discuss briefly the recent developments in the IASB-FASB joint project, making reference to the Discussion Paper issued by the Board in October 2008, on the basis of which a draft was issued (Staff draft of Exposure Draft IFRS X Financial Statement Presentation, July 2010) that could provide a reference basis for a further revision of IAS 1 (see Figure 3 and 4).

The project's main proposals are:

1) cohesive financial statements that share a common structure, separately presenting operating, investing and financing activities as well as income tax and discontinued operations;
2) disaggregation in each financial statement, considering its function, nature and measurement basis, with some disaggregation included in the notes;
3) more disaggregation of operating cash receipts and payments, and reconciliation of profit or loss from operating activities to cash flows from operating activities;
4) analyses of changes in asset and liability line items (including net debt – IASB only);
5) and disclosure of remeasurement information

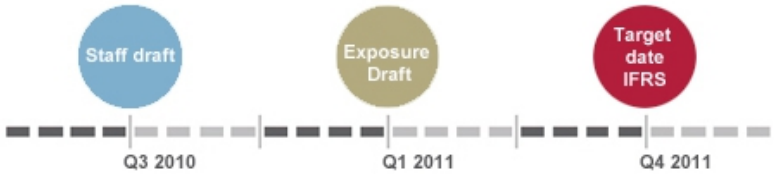

Figure 2: Financial Statement presentation project

60 Problems encountered in automatically processing untagged financial information are well documented by FRAANK system. See Bovee et al. 2005.

The proposals would improve the comparability and understandability of information presented in financial statements, by imposing some degree of standardization in the way that information is presented in the financial statements, particularly regarding how information is classified, and the degree to which it is disaggregated.

In particular, we will focus on proposals 1, 2 and 5. In the last few years, the prevalent direction followed by international standard setters has been to increase the decision relevance of financial disclosures. However, both the IASB and the FASB have remained firm in the belief that the financial statements play a crucial role in informing users: "How an entity presents information in its financial statements is vitally important because financial statements are a central feature of financial reporting – a principal means of communicating financial information to those outside an entity".

Two basic issues are highlighted: 1) the presence of too many alternatives allowed in presenting the financial statements; 2) the information is presented in excessively aggregated form and inconsistently, so that it is not possible to understand the connection between the financial statements and the company's results or financial performance.

The DP has two key purposes, described in the section entitled "Core principles of financial statement presentation" (page 12 of the Staff draft):

1) **Portray a cohesive financial picture of an entity's**. A cohesive financial picture means that the relationships between items across financial statements is clear and that an entity's financial statement complement each other as much as possible.

2) **Disaggregate information so that it is useful in predicting an entity's future cash flows.** Financial statement analysis aimed at objectives such as assessing the amount timing, and uncertainty of future cash flows require financial information that is disaggregated into reasonably homogenous groups of items. If items differ economically, users may wish to take into account differently in predictive future cash flows.

The two fundamental principles that are proposed are: 1) cohesiveness; 2) disaggregation; the strong complementarity between the two principles is emphasized: "The disaggregation and cohesiveness principles work together to enhance the understandability of an entity's financial presentation".

Financial statement presentation must be centered on the methods according to which the value creation process occurs within the company, and therefore the information concerning business activities must be separate from the information through which the company finds financing sources to conduct business (financing activities). This is useful in that the information "about non-owner sources of finance (and related changes) should be presented separately from owner sources of finance (and related changes)[61]". Similarly, the need is pointed out to record information on "continued operations" separately. The proposed classification table for the three main statements in the annual report[62] is shown below; as can be seen, the triple distinction appears to be strictly complementary.

Statement of Financial Position	**Statement of Comprehensive Income**	**Statement of Cash Flows**
Business	***Business***	***Business***
• Operating assets and liabilities	• Operating income and expenses	• Operating cash flows
• Investing assets and liabilities	• Investment income and expenses	• Investing cash flows
Financing	***Financing***	***Financing***
• Financing assets	• Financing asset income	• Financing asset cash flows
• Financing liabilities	• Financing liability expenses	• Financing liability cash flows
Income taxes	***Income taxes*** on continuing operations (business and financing)	***Income taxes***

[61] PVF Document, reduced, page xiv.

62 The statements are: Statement of Financial Position, Statement of Comprehensive Income, Statement of Cash Flow. The statement of changes in equity, mandatorily required under the IFRS, "is not included in this table because it would not include the sections and categories used in the other financial statements". PVF Document, reduced, page xiv.

Discontinued operations	***Discontinued operations,*** net of tax	***Discontinued operations***
	Other comprehensive income, net of tax	
Equity		***Equity***

Table 1: Classification Table (PVF document, reduced available at www.ifrs.org)

The rules proposed by the Board ("*Classification guidance*") to prepare these statements require a sort of "parallelism" on how to enter the accounting records in the three statements: the choice made by the company on where to record the assets and liabilities into the sections and the categories of the Statement of Financial Position reflects on the entry of accounting records in the other two statements, the statement of comprehensive income and cash flows. The statements below appear to be relevant in that the Board expresses the intention to apply to the Financial Statement Presentation Guidelines the so-called Management Approach, already present in IFRS 8 "Operating segment", effective as of 2009, replacing the previous principle, IAS 14[63]. "Classification should be consistent with how the asset or liability is used within an entity and the way an entity views its activities; an entity with more than one reportable segment should classify items according to how they are used in its reportable segments. This approach should allow management to communicate the unique aspects of its business(es) to users of its financial statements. The classification decision would reside with management and its classification rationale would be presented in the notes to Financial Statements as part of the accounting policy discussion. The Boards support a management approach to classification rather than a prescriptive approach because they believe it will result in financial statements that reflect how management views and manages the entity and its resources".

Therefore, this perspective allows the representation of data in the financial statements "through the eyes of management", enabling users to "read" the corporate reality from an internal point of view, as if they were assuming the functions of the management itself. This reasoning makes realistic the third key concept set forth in the Jenkin's Committee Report: 1) Explain the nature of a company's businesses, including the linkage between events and activities and the financial impact on company of those events and activities; 2) Provide a forward-looking perspective; 3) Provide management's perspective.

In effect, the Committee had put into practice the users' wish to perceive the company's business through the principles, values and culture of the managers who operate within the company. From the point of view of the users, being informed of the measurements and indicators built for the senior management facilitates their understanding of future strategies and helps to estimate the actual value of the company.

From the point of view of data presentation methods, the primary purpose is the cohesiveness principle that must characterize the financial statements, and XBRL is more than a means of communicating information, it is also a powerful tool for presenting it. In fact, the Boards request as follows: to present a cohesive set of financial statements, an entity should align the line items, their descriptions, and the order of presentation of information in the statements of financial position, comprehensive income, and cash flows. To the extent that it is practical, an entity should disaggregate, label, and total individual items similarly in each statement. Doing so should present a cohesive relationship at the line level among individual assets, liabilities, income, expense, and cash flow items" (page xv).

The benefits of XBRL for the performance measurement and disclosure

No mention of XBRL is found in the IASB-FASB joint project: nonetheless, the proposed innovations – i.e. the need to present data in a "cohesive" manner and at the same time to "disaggregate" the information – could find considerable benefits in XBRL. "XBRL tagged data enables users to see financial data in multiple different formats and using multiple different assumptions, consistent with a bottom up demand-pull vision of financial reporting" (Alles, Piechocki, 2009). The main difficulty is the excessive importance attributed to compliance with certain models of financial statements and notes. It is stated, therefore, that one of the decisive shifts

[63] The adoption of this approach is one of the major differences compared to the previous IAS 14 principle. The US adopted this approach back in 1997, when the Statement SFAS 131 was issued.

in this perspective, in the case of XBRL tagged data, will be the shift from document-centric taxonomies to data-centric taxonomies.

The joint project (DP and ED) focuses on interesting aspects that should help to strengthen the "multidimensional modeling" of financial information. To this effect, for example, the income statement currently envisaged in the IFRS taxonomy may be modified, as shown in Figure 3.

Figure 4 presents line items from the XBRL IFRS taxonomy income statement (a similar model approach can be found in the vast majority of XBRL taxonomies) The distinction between continuing and discontinued operations is provided on a line item level, for example, Profit (loss) from discontinued operations is a different line item form Profit (loss) from continuing operations and both as distinct from the aggregate Profit (loss) line item.

The same income statement could be modeled by the means of axes thus leading to a more consistent and logical multidimensional data model. The ownership (the categorization into line items attributable to owners of parent or non-controlling interest or aggregate ownership) as well as the distinction into line items referring to continuing and discontinued operations can be modeled by means of axes thus creating a model presented in Figure 4.

While not directly required by IFRS, the Revenue line item can logically also be reported as Revenue from Discontinued operations and Attributable to owner of parent. In practice a number of financial statements provide such financial information although the current IFRS taxonomy does not directly foresee such a possibility.

Income statement	
Profit (loss)	
Revenue	
Cost of sales	
Gross profit	
Other income	
Distribution costs	
Administrative expense	
Other expense	
Other gains (losses)	
Finance income	
Finance costs	
Share of profit (loss) of associates and joint ventures accounted for using equity method	
Profit (loss) before tax	
Income tax expense	
Profit (loss) from continuing operations	
Profit (loss) from discontinued operations	
Profit (loss)	
Profit (loss), attributable to	
Profit (loss), attributable to owners of parent	
Profit (loss), attributable to non-controlling interests	
Earnings per share	
Basic earnings per share	
Basic earnings (loss) per share from continuing operations	
Basic earnings (loss) per share from discontinued operations	
Basic earnings (loss) per share	
Diluted earnings per share	
Diluted earnings (loss) per share from continuing operations	
Diluted earnings (loss) per share from discontinued operations	
Diluted earnings (loss) per share	

Figure 3: Income Statement model in XBRL IFRS Taxonomy.

Multidimensional modeling may also be applied to the statement of financial position, where in the current taxonomy the individual values are recorded partly on a current and partly on a non-current basis, while a distinction between operating, financing and investing, and aggregate activities may also be recorded, and these in turn may be entered as partly current and partly non current.

Additionally, multidimensional modeling by the means of XBRL increases the analytical capabilities especially for selecting (*slicing* and *dicing*) appropriate data and viewing them in appropriate way. For analysis of the Revenue, Cost of sales and Other income, and their classification into "Attributable to owners of parent" or "Attributable to non-controlling interest or for all aggregate ownership operations, a simple operation on the multidimensional data model can be conducted leading to the result presented in Alles, Piechocki, 2009.

	Aggregate ownership								
				Attributable to owners of parent			Attributable to non-controlling interest		
	Aggregate continuing and discontinued operations			**Aggregate continuing and discontinued operations**			**Aggregate continuing and discontinued operations**		
		Continuing operations	Discontinued operations		Continuing operations	Discontinued operations		Continuing operations	Discontinued operations
Income statement									
Profit (loss)									
Revenue									
Cost of sales									
Gross profit									
Other income									
Distribution costs									
Administrative expense									
Other expense, by function									
Other gains (losses)									
Finance income									
Finance costs									
Share of profit (loss) of associates and joint ventures accounted for using equity method									
Profit (loss) before tax									
Income tax expense									
Profit (loss)									
Earnings per share									
Basic earnings (loss) per share									
Diluted earnings (loss) per share									

Figure 4: Modeling of Income Statement by the means of axes

As it may be noted, the use of the XBRL technology and the introduction of the axes suggested in the Presentation of Financial Statements Project of the IASB and FASB bring about a significant change: the presentation itself become less relevant with the enhanced analytical capabilities playing the predominant role.

This reminds us of Hoffmann's definition of the XBRL specification (1998): "XBRL is the specification of the eXtensible Business Reporting Language (which) allows software vendors, programmers, (and) intermediaries in the preparation and distribution process and end users who adopt it as a specification to enhance the creation, exchange, and comparison of business reporting information". This significant statement underlies all XBRL specifications. It shows that the orientation of the XBRL Consortium is towards enabling XBRL for use in the financial information value chain. Willis and Hannon (2005) state that to achieve this goal XBRL provides a common standardized format that enables applications to seamlessly share and process data.

The taxonomies reflect the existing accounting standards (IASCF, 2008) and/or reporting best practices (XBRL US, 2008). The process of taxonomy development encompasses the creation of a data model on the basis of accounting standard (or other sources of information) and instantiating of the data model by the means of XBRL specifications. In the case of the IFRS taxonomy the underlying legal source are the IFRSs. XBRL has evolved from a simple transmission protocol for financial information into a comprehensive set of technologies which supports data modeling (and more importantly, multidimensional data modeling with XBRL Dimensions), financial data querying and setting of business rules (XBRL formulas) and also the visualizations of business information (Inline XBRL and XBRL rendering).

The evolution of XBRL technology was not followed by a similar development in the accounting standard issuing process: we still find a strong bias towards document-oriented financial reporting, since considerable importance is attributed to the distinction between statements and notes. "While such an approach is based on tradition for accountants it is not the optimal approach for IT and data modeling experts or for data analysts. The latter have moved towards a more analytical view of business information which leads to multidimensional modeling with possibilities to **slice, dice, pivot or rotate multidimensional data**. XBRL has recently attempted to bridge this gap by offering multidimensional modeling of accounting standards (Alles, Piechocki, 2010).

Although it is used in IFRS and US GAAP taxonomies, the multidimensional approach has broader use possibilities, as for example in the case of COREP and FINREP[64] taxonomies. The introduction of the dimensional specification leads to a fundamental shift towards "more data-centric" and "less document-centric" taxonomies. This aspect also emerges from a comparison between IFRS and US GAAP taxonomy: the former follows a balanced approach between data and document orientation, for example, by using concept per cell in the tables for the movements in property, plant and equipment while disclosure of operating segments is expressed by the means of dimensions. By contrast, the US GAAP taxonomy introduces dimensions for a significant number of schedules which reduces the number of concepts in the taxonomy as well as better reflecting the relationships among the concepts.

This makes the multidimensional approach of the US GAAP taxonomy more similar to that of the FINREP and COREP taxonomies. For example, the architecture used to design the table structures of the IFRS taxonomy does not use XBRL dimensions; the use of multidimensional entities is limited to the modeling of certain reports at the instance level (e.g. breakdown by geographical areas). COREP, in particular, is a highly dimensional taxonomy utilizing up to seven dimensions (axes) in one hypercube (by comparison, the IFRS and the US GAAP taxonomies, usually provide only one dimension for a given measure – for example, Revenue reported for breakdown of Geographical area).

Another aspect that emerges from the joint project is the possibility of both Statement of financial position data and, consequently, Income Statement data in such a way as to identify the three types of activities: operating, financing and investing. "The presentation of assets and liabilities in the business and financing sections will clearly communicate the net assets that management uses in its business and financing activities. That change in presentation coupled with the separation of business and financing activities in the statements of comprehensive income and cash flows should make it easier for users to calculate some key financial ratios for an entity's business activities or financing activities.

This facilitates the calculation of certain indexes: this is another aspect that highlights the remarkable use potential of XBRL. The possibility of accessing "tagged in depth" XBRL data is essential and, together with the proposal to modify financial statements as discussed above, represents a basic opportunity for stakeholders – specifically, it leads to strong simplification in the performance of business analyses. The real power of XBRL is *democratization* of financial data, giving the user rather than the firm, or the regulator, control over how data is presented and perceived. Of course, the firm and the regulators would still determine what information is publicly released, but when that data is XBRL tagged the user obtains the ability to slice and dice that data as they choose and not be constrained to view the data in only the way the firm chooses to display it. Such a capabilities already exists if the users is willing to rekey in the data in public financial statements into their own data analysis system, but that entails high cost and can only be undertaken by such professionals as analysts, or those with the resources to purchase reformatted data from data intermediaries. With XBRL tagging anyone can examine data in any way they choose at very low cost, which is why we argue that XBRL will increase access to financial data and so "democratize" it. Another aspect is the possibility to liberate the substance of financial data from its form, avoiding any conditioning linked

64 The Committee of European Banking Supervisors (CEBS) models the taxonomies for Common Reporting (COREP) and Financial Reporting (FINREP). While COREP reflects the Basel II regulations for reporting of solvency ratio and is stand-alone taxonomy, FINREP reflects the financial reporting of financial institutions based on IFRS and is extension of IFRS taxonomy. These are the first multi-dimensional taxonomies, i.e. taxonomies compliant with XBRL . Dimensions 1.0 specifications, and were developed in 2006. Since then, XBRL Dimensions have received growing attention from international XBRL experts. Many taxonomies intend to adopt this module during their periodical revision process.

to the way in which data are presented in the financial statements. This is authoritatively confirmed by Mike Willis of PWC and Founding Chairman of XBRL International, in whose words: "XBRL-enabled democratization of financial markets will provide enhanced analytical, presentation and referential insights that are developed by consumers collaborating with standardized disclosure, analytical and referential concepts in public and/or proprietary social networks in a manner similar to the current mediums such as Facebook or Wikipedia[65]".

Another problem is related to the need to obtain data in real time: as an example, we could quote empirical research studies conducted by scientists using data obtained very late and with few possibilities of providing information that will help the managers' decision making process. The use of XBRL tagged data and real-time reporting may enable managers to carry out the same analyses that are generally conducted by third party aggregators. "XBRL thus enables analysts, auditors and boards of directors to replicate an academic analysis for their firms more easily, in time to be actionable". (Alles, Piechocki, 2010, page 10)

With specific reference to profitability indexes, the calculation of adequate financial ratios may improve corporate performance measurement, with beneficial effects in terms of improvement of the governance decision-making process, which represents the last step in the information value chain (Elliot, 1998).

Conclusion

The aim of this paper is to analyze the connection that links financial performance, adoption of IFRS standards and XBRL language. The first point was that the adoption of IFRS standards greatly improved the disclosure of performance information itself. The very next step was to emphasize the relevant role of XBRL in improving business reporting. By means of XBRL, it is possible to provide a sound framework for the measurement and evaluation of Business Performance by means of a specific set of Key Performance Indicators (KPIs). In particular, we emphasized the potential benefits of the use of XBRL in providing integrated reports in a more timely and accurate manner.

As the worldwide financial crisis continues, calls for greater transparency in financial reporting are increasing (Laux, 2009). The adoption of IFRS standards may only partially fulfil these requests. While the current GAAP reporting model provides an effective foundation from which business reporting should start, timely decisions can only be made by looking at both lagging indicators (such as those found in historical financial statements) and leading indicators (such as value drivers and KPIs), which provide more predictive information about future cash flows and the viability itself of a business. Although this is the kind of information that management currently uses to make key decisions, there is still a fracture within the corporate reporting process between the information that management uses internally for decision-making purposes, and the one that is provided externally to the market-place (Laux, 2009).

The development of XBRL taxonomy may produce benefits because the high level items within this framework can be "tagged". XBRL enables providers and users of information to produce, capture and analyze information much more efficiently and effectively on a timely basis and across all software via the Internet. Coupled with the Internet – which allows key financial and nonfinancial business information to be widely available electronically – XBRL will enable a more effective utilization of financial disclosure. Some stakeholders in particular will be strongly interested in this process. Financial institutions and financial analysts will spend less time on technical issues about data and thereby will have more time for analyses and evaluations.

The analysis of financial information is based on a three-step process: 1) data gathering and data enter; 2) data cleaning, data reclassification and data merging; 3) data analysis and data evaluation. By means of XBRL it is possible to drastically reduce the time to devote to the first two steps, thereby increasing the time available for the latter step. In addition, XBRL will make it easier for companies to track the performance of competitors and customers, and to benchmark their own performance (Kugel, 2008). The impact of IFRS and XBRL on performance measurement and disclosure will affect both financial reporting and Business Performance Management (BPM) processes. Financial reporting is the window through which capital markets view a business's performance. The move to IFRS will not only affect accounting and reporting functions, but also

65 Comments made at the academic track of the 19th XBRL International Conference in Paris, June, 2009.

investor relations and all other areas of the business that rely on accounting information – including tax, IT, HR, and legal departments.

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