

Turning accounting for emissions rights inside out as well as upside down

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Abstract: This study involves narrative research on the importance of a life cycle norm in the context of accounting for emissions allowances. The analysis presented in this article emphasizes, in particular, those technical challenges that standard setters face when governing and legislating on how emissions rights are financially accounted. This study supports the notion that the legitimacy of standard setters during these occasions is highly influenced by the market and by political forces. This study also suggests that setting financial reporting standards on emissions allowances must follow a cycle to secure detailed research on the topic and to promote broader stakeholder engagement.

Keywords: Carbon accounting, carbon markets, IFRIC 3 and normativity

Paper type: Original Article

1. INTRODUCTION

The accounting literature has developed several definitions and frameworks that address carbon accounting (Ascui and Lovell, 2011; Bowen and Wittneben, 2011). According to Ascui and Lovell (2011), there are at least five different normative structures (i.e., physical, political, market-enabling, financial, and social and environmental) for carbon accounting. This research concentrates mostly on the financial framework by exploring the difficulties that standard setters face when addressing carbon accounting in financial statements. Valuing emissions' allowances and recognizing such valuations in financial statements is challenging (Bebbington and Larrinaga-González, 2008) because the accounting profession must confront the predicament in which the financial framework of carbon accounting overlaps with other structures, such as those discussed immediately above (Lovell and MacKenzie, 2011).

At present, there are no financial reporting standards that address emissions allowances. The absence of a norm on this matter compromises the transparency and comparability of financial statements. Thus, this research contributes to the debate on accounting for pollutant pricing mechanisms by analysing and comparing the emergence of two conflicting financial reporting standards: the IFRIC 3 *Emissions Rights* and the FASⁱ 8 *Accounting for Translation of Foreign Currency and Foreign Currency Financial Statements*. Both standards have been withdrawn due to technical issues involving mismatch reporting. In particular, I conducted narrative research based on documentary analysis to accomplish the following two specific objectives: (i) to understand the importance of financial reporting standard setters in terms of promoting socialization/engagement during the emergence of a norm regarding pollutant pricing mechanisms and (ii) to explore how the analysis of a life cycle norm can help standards setters to consider the contrasts between environmental and financial information when formulating the technicalities on pollutant pricing mechanisms.

These objectives contribute to a deeper evaluation of technical, political and market forces when crafting how accounting should recognize emissions allowances in financial statements. Climate change is an environmental issue that is regulated not only at the global but also at the local level. Carbon markets represent an important climate change regulatory instrument that helps relate the use of natural resources to an economic value. In a globalized capitalist economy, the recognition of such social and environmental aspects in the private financial domain can significantly impact the representation of private wealth, influencing extant concepts of financial reality. Thus, carbon markets create abstract sets of assets and liabilities (MacKenzie, 2009) that are difficult to fit within current financial reporting frameworks. Understanding these particularities can support the foundations for constructing a possible norm regarding a pollutant pricing mechanism.

The remainder of this paper is organized as follows. The second section explains the debate on the role of financial accounting standards in governing carbon emissions. The third section presents the research questions and elaborates upon the research methodology and methods. The fourth section provides a comparative analysis between FAS 8 and IFRIC 3. Finally, the fifth section adds some final comments.

2. A NORM GOVERNING EMISSIONS ALLOWANCE-RELATED ACCOUNTING

Financial reporting standards offer guidance on how to communicate and measure the economic value of firms (Thistlethwaite, 2015) to more accurately represent ‘a true and fair view’ of an organization’s financial position (Hines, 1988). Thus, accounting cannot be interpreted as a ‘neutral process’ because it allows groups to react to this specific vocabulary and language, transforming these reactions into social reality (Miller and O’Leary, 1987; Miller

and O'Leary, 1994). Environmental costs are constantly increasing and organizations must reflect these costs in their financial statements (Wilkins, 2014). Including (or excluding) an item from the accounting representation of 'a true and fair view' exercises a powerful influence on 'economic reality' (Hines, 1988; Miller and O'Leary, 1987; Miller and O'Leary, 1994; Young, 2003).

Accounting is also associated with the concept of 'governmentality' because governments can make use of accounting techniques to influence individuals (Miller and Rose, 1990). For example, carbon markets have translated emissions consumption into monetary terms by transforming carbon emissions into a sellable commodity (Bumpus, 2011; Burtraw et al., 2002; Descheneau, 2012). Therefore, representing emissions allowances in financial statements not only implies observing a set of techniques but also influencing political, social and economic decision-making (Lohmann, 2009). In this specific context, the accounting profession can shape society by governing emissions reductions (Lovell and MacKenzie, 2011; MacKenzie, 2009; Thistlethwaite, 2015).

Financial reporting standard setters are considered a technical authority because they implement scientific and technical rules (Porter, 2005). Technical authorities can be considered an organized group to isolate the influence and lobbying of the public (i.e., by establishing rules aiming at promoting the public good and public well-being) and the private authorities (i.e., by establishing rules that maximize wealth) (Porter, 2005). However, the public, market and technical authorities may on certain occasions interact closely with one another to further their abilities (Porter, 2005).

As an illustration, the two most influential financial reporting standard setters are the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) (Fleckner, 2008). The FASB sets standards regionally in the US context, whereas the IASB functions using an international approach by setting standards in the ‘world’s capital markets’ (Fleckner, 2008). Despite functioning privately, these organizations are influenced by their relevant political systems (Fleckner, 2008). For example, the FASB operates with SEC oversight (Mattli and Buthe, 2005). In contrast to the FASB, the IASB operates in an international context. The International Financial Reporting Standards Interpretation Committee (IFRIC) is part of the International Financial Reporting Foundation’s structure, and it is responsible for building consensus (i.e., the IFRIC interpretations) on accounting in the presence of financial reporting issues and/or unsatisfactory/conflicted interpretations in an international context (Bradbury, 2007). IFRIC interpretations must be approved by the IASBⁱⁱ to achieve similar ‘authoritative status’ as International Financial Reporting Standards (IFRSs) (Bradbury, 2007). The EU is one of the most important political and economic authorities that has incorporated the IFRS (Fleckner, 2008).

Standard setters should facilitate impartial and equal representation of different interest groups (Jorissen et al., 2013). Biased representation during the standard-setting process can directly impact on standards’ quality and legitimacy (Carmona and Trombetta, 2008; Jorissen et al., 2013; Richardson and Eberlein, 2011; Whittington, 2008). The process of determining financial accounting standards lacks of active participation from broader societal groups because such determinations are considered a ‘depoliticized’ processes (Mattli and Buthe, 2005; Nölke and Perry, 2007) that are essential for developing reliable financial snapshots of organizations that can be used to make decisions about future resource allocations (Nölke and Perry, 2007). Determining financial accounting practices is a political act but does not tend to

be a politicized practice (Nölke and Perry, 2007). Thus, financial accounting standards should be created by a politicized production of knowledge via democratic representation of humans and non-humans as well as accepted by broader societal groups (Malsch, 2013; Martinez-Diaz, 2005).

Financial accounting information should also demonstrate the risks and opportunities of engaging with social and environmental responsibilities by enabling organizations to self-govern and by preventing potential regulation as well as market exclusion (resulting from failing to identify profitable opportunities) (Malsch, 2013). This scenario represents a shift in decision-making by recognizing groups that have been previously ignored (Malsch, 2013). Thus, a participatory approach during the standard-setting process is relevant because it allows to identify issues and to open a debate on the reactions of different groups of interests in the early stages (Wilkins, 2014).

Analysing the life cycle of an accounting norm requires an investigation into the actors involved and into the social contexts in which a particular norm will function (Bebbington et al., 2012; Finnemore and Sikkink, 2001; Sunstein, 1996). The literature suggests that a life cycle norm will include three stages. The first stage is called '*emergence*' and refers to the context in which entrepreneurs discuss the new understanding of an issue (Finnemore and Sikkink, 1998). This discussion emerges in a highly contested environment in which new guidance will compete with other extant norms. Consequently, it is essential to persuade actors to support the new norm (Finnemore and Sikkink, 1998). The second stage is called '*norm cascade*' and reflects a context in which new dynamics are set (Finnemore and Sikkink, 1998). At this point, active socialization is essential to convince new adopters that actors' support is important, but unanimity is not essential (Finnemore and Sikkink, 1998). The third step is

called '*internalization*' and is the stage when new norms are internalized and become taken for-granted. The '*tipping point*' is the level between the '*emergence*' stage and the '*cascade*' stage that occurs when a norm is adopted by a mass of actors.

Norms can then be perceived as a prescription regarding social behaviour in which guidance is set to indicate what to approve and what to disapprove, thus changing the social reality (Sunstein, 1996). This paper seeks to explore how technical, market and political forces can influence the life cycle of financial accounting standards in emissions rights, and how engagement can help to manage such influences in the context of accounting technical approach. The next section presents the research questions followed by the methods and methodology.

3. RESEARCH QUESTIONS AND METHODS

In view of the previous literature presented above, this article aims to answer the following questions.

- (i) Why should financial reporting standard setters promote socialization/engagement during the emergence of a norm for a pollutant pricing mechanism?
- (ii) How can the analysis of a life cycle norm help financial reporting standard setters to better approach the differences between environmental and financial information while shaping the technicalities regarding a pollutant pricing mechanism?

This study compares the life cycle and conditions of compliance of two financial reporting standards. It is not the first study to compare financial reporting standards to illuminate the role of standard setters in providing guidance to controversial topics (Thistlethwaite, 2011; Young, 2003). However, this article complements this field of knowledge by analysing the specific

case of accounting for emissions rights. FAS 8 and IFRIC 3 were selected for this analysis for two main reasons. First, both standards emerged to address specific economic market conditions (e.g., currency translation and the emissions market). Second, these standards generated reporting controversies and both standards were ultimately withdrawn.

The reasons discussed above emphasize the existence of relevant narratives and stories related to standard setters and life cycle norms, justifying the use of a narrative research approach (Boje, 2001; Czarniawska, 1997; Eriksson and Kovalainen, 2010). According to Eriksson and Kovalainen (2010), "...narrative research is the belief that people are storytellers because telling and sharing stories help us understand ourselves and connect to each other". Thus, narrative research can provide a context for understanding real life issues and supporting changes, while reflecting on events (Czarniawska, 1997).

Secondary data are used as a source for comparative analysis. Examples of secondary sources of data used in this paper are: accounting standards, reports published by professional bodies, material produced during the standard-setting process (e.g., consultations, research, project plan and minutes of standard setters boards meetings), journal articlesⁱⁱⁱ and books (Eriksson and Kovalainen, 2010). A thematic analysis (Joffe and Yardley, 2004) is conducted to study the data collected. Thematic analyses "examine the narratives as they are told or written by other actors in order to find patterns of themes" (Eriksson and Kovalainen, 2010:219). This research method centres on coding a text but does not produce a numerical outcome. Instead, it concentrates on qualitative aspects of the text (Boyatzis, 1998; Joffe and Yardley, 2004). A deductive thematic approach was implemented in this study because it uses extant theoretical frames to analyse narratives, allowing researchers to expand and/or contest prior contributions (Boyatzis, 1998; Joffe and Yardley, 2004). More specifically, this research identifies and

analyses narratives related to different stages of life cycle norm and conditions that allows for the norm's acceptance (Bebbington et al., 2012; Finnemore and Sikkink, 1998).

The results of this narrative research will be provided over the next sections by discussing three different but complementary topics: (1) a life cycle analysis of FAS 8 and IFRIC 3 contexts; (2) a description of the main conditions driving non-compliance with FAS 8 and IFRIC 3; and (3) identification of conditions that may drive compliance with a norm.

4. THE CASE OF FAS 8 AND IFRIC 3

4.1 Context and life cycle analysis

4.1.1 FAS 8

The period of '*emergence*' to FAS 8 was characterized by discussions of translation, which is the term used by accountants to express the process in which financial data are restated from one currency to another (Nobes and Parker, 2010; Norr, 1976). The main problem related to translation, in that period, was to determine the appropriate rate, while translating currency across different items in the financial statements, such as assets and liabilities (Nobes and Parker, 2010; Norr, 1976). FAS 8 was issued by the FASB in 1975 (FASB, 1975) to solve problems involving translation, but it did not lead to the '*tipping point*' because of difficulties related to the temporal methods it employed. For example, FAS 8 involved assets and liabilities that were valued differently (Nobes and Parker, 2010; Shank, 1976), and gain and/or loss related to the translation of different items were also recognized differently (Nobes and Parker, 2010; Rodriguez, 1977; Shank, 1976). The assets valued at historic cost would not reflect any changes in financial statements (Nobes and Parker, 2010). Nevertheless, the resources borrowed to buy these assets would have to be valued to reflect losses in the income statement (Nobes and Parker, 2010; Rodriguez, 1977). This situation led to substantial fluctuations that

seriously affected the economic position of multinationals in the mid-1970s when the dollar lost value against other currencies. As a result, FAS 8 was withdrawn in 1976 (Ziebart and Kim, 1987) and was declared not to reflect the ‘economic reality’ of foreign operations as its application led to economic consequences, such as discrepancies on the measurement of investment risks (Chen et al., 1990).

In 1981, the FASB decided to release an exposure draft of an alternative standard called FAS 52 *Foreign Currency Translation* (Ziebart and Kim, 1987). FAS 52 was set to ‘review’ FAS 8, and to provide guidance compatible with the ‘expected economic effects of a rate change’ in financial statements (FASB, 1981). FAS 52 was released only after research was conducted on the topic, including a period for discussion and implementation of the new norm (see Table 1). This sequence of actions suggests that financial market operations may have influenced changes in accounting guidance to ensure patterns of ‘economic reality’ that are not supposed to negatively impact international trading (Chen et al., 1990).

[Insert Table 1 around here]

The context of FAS 8, as described above, shows that the main obstacle to its implementation was market opposition to the technical approach suggested by the FASB. There are similarities between FAS 8 and IFRIC 3 in terms of the accounting approach undertaken by both norms. These commonalities will be explained next.

4.1.2 IFRIC 3

This section aims to describe the context in which IFRIC 3 was developed and debated by comparing it to FAS 8. Two observations should be articulated before beginning a comparison

of FAS 8 and IFRIC 3. The first observation refers to the fact that FAS 8 was set by the FASB, which is a standard-setter legislating in the US. Although FAS 8 was set by the FASB, FAS 8 had an international impact in that it set guidance on consolidated financial reporting for multinationals. Hence, it is possible to conclude that both FAS 8 and IFRIC 3 framed international realities. The second observation is the fact that FAS 8 and IFRIC 3 were set in different periods, functioning in different economic contexts. There is a gap of almost 30 years between the standards. Despite this gap in time, both norms were set to address challenges in market structures (e.g., the currency and emissions markets) that had to be acknowledged (i.e., turned visible) in financial statements. Thus, it can be argued that these two guides presented relevant common characteristics and can certainly illuminate the decision making of the standard setters in situations involving international economic challenges.

The analysis of IFRIC 3 life cycle and its comparison to FAS 8 life cycle will be presented in the next paragraphs using a narrative approach. To structure and organize the discussion, the text will emphasize the technical, political and market forces extant during different periods of the life cycle analysis.

4.1.2.1 Technical pressures

The '*emergence*' period for IFRIC 3 was characterized by the attempt to design a norm for a 'cap and trade' emissions trading scheme. In May 2003, an interpretation draft for IFRIC 3 was published (Moore, 2011). The period between the draft and its implementation conflicted because some disagreed with the approach presented (Moore, 2011). Despite these differences, IFRIC 3 was issued in September 2004 (IASB, 2004). The IASB mentioned that the IFRIC was under 'pressure from constituents' due to the lack of guidance regarding the EU ETS^{iv}. Thus, IFRIC 3 was set as being only an 'interpretation' that was elaborated within a short timeframe

to provide guidance for participants in the EU ETS, which was launched in January 2005 (IASB, 2005).

4.1.2.2 Market pressures

As with FAS 8, IFRIC 3 did not achieve a '*tipping point*'. One of the main difficulties with IFRIC 3 was that it required different measurements and recognition for the change in value of assets and liabilities, which led to possible mismatches and income volatility. For example, whereas changes in the value of assets are not recognized in the income statement, changes in the value of liabilities are. Thus, losses may increase if companies are operating in an emissions market in which allowance prices fluctuate. FAS 8 and IFRIC 3 seemed technically inadequate for application in the market.

4.1.2.2 Political pressures – the European context

In May 2005, the European Financial Reporting Advisory Group (EFRAG) recommended to the EU Commission not to endorse IFRIC 3 because it did not meet the 'true and fair' representation of 'economic reality' and led to 'compromising understandability, relevance, reliability and comparability of financial statements' (EFRAG, 2005). Finally, the EFRAG stated that it was not 'in the European interest to adopt IFRIC 3 in its present form' (EFRAG, 2005). Following the EFRAG's recommendation, the EU Commission asked the IASB to remove IFRIC 3 (Moore, 2011).

The IASB recognized that IFRIC 3 created 'unsatisfactory measurement and reporting mismatches', leading to its withdrawal in July 2005 (IASB, 2005), which was only a few months after the launch of the EU ETS (see Table 2). The political approach taken by the EU/EFRAG was extremely influential in IFRIC/IASB operations, as it pressured standard-

setters to produce a new norm by exerting its political power to enforce the IASB's decision to withdraw IFRIC 3. In the case of FAS 8, business was apparently the most influential actor that drove its withdrawal (Chen et al., 1990). The US Congress did not play a direct role in this decision because the FASB operates under SEC oversight. This contrast between IFRIC 3 and FAS 8 is relevant because it might recommend that an international standard on emissions allowances should consider interactions between public, private and technical authorities more closely (Ascuí and Lovell, 2011). In fact, the relation between these three frames was recently recognized by the IASB.

“Emission trading schemes are designed to achieve a reduction of greenhouse gases through the use of tradeable emission permits. They are a relatively recent phenomenon, although the concept of using a tradeable permit as a means of efficiently achieving a social objective has been familiar to economists for some time. Such schemes are an integral part of the Kyoto Protocol, the 1997 international agreement under which most developed countries agreed to legally binding targets that will reduce emissions of the six main greenhouse gases by at least 5% below 1990 levels over the period 2008-2012.” (IFRS, 2010)

By describing an emissions trading scheme, the IASB attempts to create the impression that the concept of emissions allowances belongs in the political and economic domains. The IASB also describes it as a ‘recent phenomenon’, associating the concept with a new idea to likely justify the fact that the accounting profession tried to provide a prompt response to govern it.

[Insert Table 2 around here]

4.1.2.3 Political pressures – the US influence

In 2008, the IASB, in partnership with the FASB, included emissions trading schemes as part of its agenda (IASB, 2013). The two boards indicated that they had made ‘tentative decisions’ regarding several aspects of such schemes, but discussions were never completed (see table 3). In 2014, the FASB stated that ‘the Board met to prioritize the FASB’s agenda and voted to

remove this project from the Board's agenda'^v.

[Insert Table 3 around here]

The decision to include a project on accounting for emissions trading program in the FASB's agenda seemed to have been driven by the political context. The minutes of the meetings published by the FASB clearly stated the point at which the Board inquired about the US government's strategies to implement emissions trading programs. Such programs were understood (and acknowledged) to be increasing in importance not only in the US but also around the world. As a consequence, the FASB considered that a prompt decision on the emissions trading program would be an occasion to issue '*timely guidance at an opportune time*' (FASB, 2007).

The period in which the FASB decided to include emissions trading in its agenda was the time that there was a debate on the so called 'American Energy and Security Act of 2009', which included a cap and trade system. The US Congress approved this act in 2009, but it never passed the US Senate, which may explain the reason why the FASB moved away from the debate. It seems that the political context again influenced the '*emergence*' of a norm on emissions allowances in the FASB/IASB context. At the time that the FASB had withdrawn, there were regional initiatives in the US to reduce carbon emissions, such as a cap-and-trade scheme in the state of California^{vi}. The emergence of a norm on emissions rights at that point in time may have contributed to the quality of information discharged by the organizations involved in these initiatives.

4.1.2.4 The unsolved dilemma

Through all these years, there has been no international guidance in place to report emissions allowances in financial statements, and companies have adopted a variety of approaches to accounting for emissions allowances (Black, 2013; Cook, 2009; IFRS, 2014b; Lovell et al., 2013; Lovell et al., 2010; PWC and IETA, 2007). For example, in the first two phases of the EU ETS, the initial allocation of emissions allowances was mostly granted for free. Thus, some participants in the EU ETS accounted for these emissions allowances at nil value (a net liability approach) (Lovell et al., 2013). Organizations that adopted this approach promoted the invisibility of emissions allowances in financial statements (Karai and Barany, 2013; MacKenzie, 2009; Lovell et al., 2013). Different accounting approaches also have a significant impact on the comparability of financial statements (Karai and Barany, 2013; MacKenzie, 2009; Lovell et al., 2013). The plan for EU ETS operations after 2020 is to continue considering a significant amount of free allocation (European Parliament, 2016).

In 2012, the EFRAG issued a comment paper to stimulate discussions on emissions trading schemes, and the recommendations received are now published (EFRAG, 2012, 2013). The IASB reactivated a research discussion paper with some results published in 2014 (IFRS, 2014a, b) and a project plan for an emissions trading scheme was discussed by the IASB in 2015 (IFRS, 2015i). It was decided that the IFRS Foundation staff would continue researching the topic before asking the IASB to deliberate on possible accounting approaches^{vii}.

The research was an important factor in the successful implementation of FAS 52 and, as table 2 shows; the IASB has taken a similar approach to research. Table 4 shows the development of the emissions trading scheme debate under the IASB agenda. After analysing development on the research project, it is possible to identify research topics that remain underdeveloped. For

example, the research concentrated only on cap and trade schemes. In addition, the characteristics of cap and trade were described with a focus on the EU ETS and with little emphasis on other types of mechanisms that work with emissions allowances.

[Insert Table 4 around here]

Another relevant point for FAS 52 acceptance was the time provided for discussion and implementation, which confirms the importance of a life cycle in which socialization plays an important role in the ‘*emergence*’ of a norm. A broader stakeholder participation during the early stages of standard setting on a project can avoid differences in the future stages of setting guidance (EFRAG, 2013). Table 5 shows that discussions under the IASB agenda nonetheless lack broader stakeholder engagement (IFRS, 2010, 2012, 2014a, b, 2015a, b, c, d, e, f, g, h, i, 2016). According to Bertomeu and Magee (2015), the process of setting financial reporting standards is currently dominated by discussions within small groups of stakeholders, not fully including unorganized and minority groups. Some authors highlighted the need to include non-accountants in the debate because the concept of emissions allowances can only be fully understood when knowledge from other areas is considered (e.g., policies and ecosystems) (Ascui and Lovell, 2012; Lovell and MacKenzie, 2011).

[Insert Table 5 around here]

In addition, financial reporting standards are designed to support a short-term perspective on profit management, rendering things and people measurable (Nölke and Perry, 2007). Thus, the market is discouraged to adopt long-term strategies in this regard (Nölke and Perry, 2007; O’Dwyer et al., 2011), which must be considered if standards are designed to approach

environmental information. However, challenging the standard-setting process can be problematic, particularly if this rule is created by experts in a non-participative manner and with the aim of prioritizing technical knowledge over political and market influence (Malsch, 2013; Martinez-Diaz, 2005). Social and environmental responsibilities can be envisaged by organizations in financial reporting as both risk and opportunities for their survival (Malsch, 2013; Martinez-Diaz, 2005). The market will then naturally tend to select those organizations that can self-govern efficiently, enhancing profits (Malsch, 2013).

Thus, broader engagement during the emergence of a norm can enhance knowledge exchange by including a variety of social groups, developing financial reporting in the direction of social and environmental responsibility and long-term thinking, as a consequence (Martinez-Diaz, 2005). The next section contributes to this debate by identifying the conditions that lead to non-compliance with accounting norms.

4.2 Conditions driving non-compliance in the FAS 8 and IFRIC 3 contexts

There were at least three conditions that explain non-compliance with FAS 8 and IFRIC 3. First, both of these standards/interpretations address fluctuating values. Second, in both cases different methods were adopted in terms of valuation for assets and liabilities. Third, there was also a distinctive recognition of gains or losses related to assets and liabilities.

FAS 8 and IFRIC 3 had to incorporate (i.e., make visible) economic concepts into financial accounts. FAS 8 had to implement a method to translate exchange rates (DeCristofaro, 2008); in a similar vein, IFRIC 3 had to address ‘externalities’ (Ascui and Lovell, 2011; Bebbington and Larrinaga-González, 2008). Thus, standard setters applied the current knowledge on bookkeeping, accounting equations, and double entry to govern the ‘economic impact’ of these

elements in financial statements.

Both FAS 8 and IFRIC 3 attempted to incorporate elements that were understood to have economic origins (Busch and Hoffmann, 2007; Reizinger-Duscai, 2007; Rodriguez, 1977). In both cases, it appears that there was no coherent accounting framework to govern the changes required. Thus, implementing FAS 8 and IFRIC 3 interfered with accountants' so-called 'economic reality' because these norms led to unbalanced results that were understood as inconsistent with accepted accounting concepts. This fact compromised the legitimacy of accounting norms, making organizations select the most convenient manner to represent their own financial position. Financial reporting guidance cannot accommodate such particular decisions because it is meant to promote comparability and reliability (MacKenzie, 2009).

Moreover, financial reporting standards are framed to represent an 'economic value' in which a balance between liabilities and assets is pursued (Thistlethwaite, 2011). This perspective may not be continued if environmental issues become visible in financial statements (Thistlethwaite, 2011). Currently, organizations are operating under the assumption that natural resources are unlimited and that these resources are thus 'freely' available with no contrary economic impact (Thistlethwaite, 2011). Consequently, imbalances in financial reporting will be inevitable if organizations' environmental inefficiencies become visible in financial statements (Thistlethwaite, 2011). Thus, the IASB recently began to reflect on the possibility that the extant standards might be insufficient to account for emissions allowances.

"The staff consider that the compensatory nature of the allowances allocated free of charge, together with the interaction of the allowances and the participants' obligation to remit to the government allowances equal to the volume of their pollutant emissions, create a unique economic effect. This economic effect cannot, in the staff's view, be readily addressed using existing Standards." (IFRS, 2015a)

Compared to FAS 8, a norm on emissions rights will apparently find it more difficult to achieve the *'tipping point'* because there is a dearth of technical knowledge and recognition regarding the differential nature of financial and environmental information (O'Dwyer et al., 2011). Environmental concepts are socially embedded, whereas economic concepts focus on addressing capital market needs. Thus, engagement with society is essential, and accountants must investigate what is actually material to the public and not limit their investigations exclusively to the capital markets (O'Dwyer et al., 2011). Identifying and understanding these technical challenges is crucial to setting the correct educational mechanisms in the early stages of the norm life cycle, creating the appropriate technical knowledge to design a new approach to financial accounting standards.

The next section provides a reflection on possible alternatives to approaching accounting for emissions allowances.

4.3 Identification of conditions that may drive compliance with the norm

One possible method of finding a common accounting approach to emissions allowances is to redefine the nature of emissions allowances in financial statements. Perhaps there is a need to set new ways of interpreting emissions allowances, exploring the characteristics of such allowances over an entire emission's life cycle, including – for example – its creation, allocation, trading and offsetting obligations (Ascui and Lovell, 2011; Lovell, 2014). To achieve this objective, the physical, social and environmental framework for carbon accounting should overlap with the financial framework (Ascui and Lovell, 2011; Lovell, 2014). However, some financial accounting principles that are considered good practice in this context are likely not to work towards this overlap. Principles of entity, measurement and materiality may in fact work against it (Bebbington and Larrinaga-González, 2008). For example, considering the

physical framework for carbon accounting, an entity should be accountable not only for direct emissions generated by its operations but also for indirect emissions generated by others while using the entity's products or services. In terms of measurement and materiality, emissions trading sets a price for emissions allowances. However, this price is set considering supply and demand of this generation, and the current market dynamics do not represent the correct impact of economic activities, according to the social and environmental framework for carbon accounting (Bebbington and Larrinaga-González, 2008; Lovell et al., 2013). One possible contribution of financial accounting might be to add to financial statements a physical comparable volume of emissions measured over financial periods (Bebbington and Larrinaga-González, 2008; Ascui and Lovell, 2011; Lovell et al., 2013).

Connections between the life cycle of emissions and its accounting approach should not be detached from policy instruments (Ascui and Lovell, 2011). IFRIC 3 was built using a reductionist interpretation because it was constrained by what occurred to emissions allowances under a particular event, i.e. 'cap-and-trade' schemes. Thus, the challenge to account for emissions allowances in financial statements may require the capacity to design a guide that provides a holistic interpretation of emissions (EFRAG, 2013) and may lead to incorporating foundations for policies that influence a globalized approach to emissions markets (Ascui and Lovell, 2011; McGready, 2008; MacKenzie, 2009).

As explained above, the fact that FAS 52 was the standard set to replace FAS 8. One of the innovative aspects that FAS 52 included was the manner in which it perceived the relationship between parent company and subsidiaries in financial statements. A similar predicament is evident while reflecting on a possible guide for emissions allowances because the international political framework on emissions trading recognizes that developed countries have consumed

more natural resources than developing countries over time. Due to this recognized reality, no obligations to reduce emissions are applied to developing countries at the moment. Moreover, developed countries are encouraged to invest in clean projects in developing countries to compensate for emissions generated in developed countries, such as the Certified Emissions Reductions (CERs) produced from Clean Development Mechanism (CDM) projects, which can be used to compensate emissions in the EU ETS (Lovell et al., 2010; McGready, 2008; PWC and IETA, 2007; MacKenzie, 2009).

If this scenario turned to be translated to the financial framework for emissions allowances, it would likely make more inefficiency in the parent company visible (mostly concentrated in developed countries) than in their subsidiaries (mostly located in developing countries). This translation to the financial perspective may be considered incompatible to the 'economic reality' that accounting tries to create to serve financial markets' expectations. It is possible to infer that the sense of responsibility when employing the financial framework for emissions allowances turns the rationale in the political framework inside out as well as flips the social and environmental framework upside down.

5. FINAL COMMENTS

This narrative research provides a comparison between two financial reporting standards (e.g., FAS 8 and IFRIC 3) to understand the roles and challenges of standard setters in the development of a standard on emissions rights. This article confirms the existence and relevance of different frameworks for carbon accounting (Ascui and Lovell, 2011). These frameworks consider different concepts that cannot be analysed separately while developing a standard to account financially for emissions allowances (Lovell, 2014). The results also stress that the authority and legitimacy of standard setters with regard to governing financial

emissions rights are intrinsically related to the political and market contexts. This result calls for a more democratic approach and improvements in research over the life cycle of possible new standards on emissions rights.

This article also highlights the issue that the current accounting framework cannot be sustained if environmental inefficiencies are to become visible in financial statements (Bebbington and Larrinaga-González, 2008). There is a need to take a more critical approach to change the created 'economic reality' upside down as well as inside out. This change would make accounting able to produce a picture of an organization compatible not only with physical, market-based and political frameworks but also with social and environmental frameworks for carbon accounting (Ascui and Lovell, 2011; Lovell, 2014). Thus, the analysis provided in this article is informative for the accounting profession and for policy makers and users of accounting information.

Moreover, it is suggested that the accounting profession should realize that a market-enabling framework is an important phenomenon that compels financial accounting to recognize its limited view of 'economic reality' (Hines, 1988). However, a more complete visualization of an organizations' economic impact on the environment can only be predicted in a cautious manner, by risking the dismissal of possible long-term cost effects. Emissions allowances are changing the current perception in which standard setters have exclusive expertise in the 'language' used to serve the expectations of financial markets. Emissions allowances lead to the notion of an interdisciplinary, globalized economy and unequal use of natural resources, which reflects the need for a radical change in financial accounting not only in terms of disciplinary content but also in the manner in which accounting professionals relate with others.

For future research, it would be interesting to hear the perspective of standard setters regarding their views on different frameworks for emissions allowances. In addition, it would also be useful to map out financial accounting concepts that could help to promote the overlap of different frameworks for emissions allowances. Empirical research could also assist in illuminating these links by putting forward practical ideas for an interrelated accounting framework.

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TABLES

Table 1 – Timetable on transition between FAS 8 and FAS 52

DATE	DEVELOPMENT
December 1974	Exposure draft of FAS 8
October 1975	FAS 8 was issued
April 1976	The FASB withdrawn FAS 8
April 1977	The FASB interest to research foreign currency translation
July 1977	The FASB agreed to research foreign currency translation
November 1977	The FASB proposed changes to FAS 8
June 1978	The FASB required comments on changes proposed to FAS 8
January 1979	The FASB revealed results of research
January 1979	The FASB votes to reconsider FAS 8
August 1980	Exposure draft of FAS 52
December 1981	FAS 52 issued

Source: Ziebart and Kim (1987: 347)

Table 2 – Timetable on the IASB's project on emissions trading scheme

DATE	DEVELOPMENT
December 2004	IFRIC 3 issued
July 2005	The IASB withdraws IFRIC 3
December 2007	Project in partnership with the FASB in the IASB's agenda
November 2010	The IASB and the FASB different joint project
December 2012	The IASB reactivated research project
January 2015	The IASB discuss a project plan for Emissions Trading Schemes
June 2015	<p>Staff paper was set to encourage the IASB members to reflect on economic substance of emissions trading schemes.</p> <p>Must take a ‘fresh start’, considering Pollutant Pricing Mechanisms (PPM)</p>
October 2015	<p>Discussions before decision: Education session.</p> <p>Plan to publish a discussion paper for consultation on Pollutant Pricing Mechanisms (PPM).</p> <p>Collaboration with the International Public Sector Accounting Standards Board (IPSASB), which is investigating accounting by the government and administrators, but it will also consider participants.</p>
April 2016	<p>Assessment stage: Establishing the significance of the problem.</p> <p>Discussions on PPM consultation feedback and future plans.</p> <p>Staff will present to the board a series of papers on:</p> <ul style="list-style-type: none"> • Comparison of types PPM; • Analysis of economic drivers and financial effects of each PPM; • Possible accounting model; • Relation to extant principles and conceptual framework.

Sources: IFRS (2010, 2012, 2014a, b, 2015a, b, c, d, e, f, g, h, i, 2016)

<http://www.iasplus.com/en/projects/research/short-term/emissions-trading>

<http://www.ifrs.org/Current-Projects/IASB-Projects/Emission-Trading-Schemes/Pages/Discussion-and-papers.aspx>

Table 3 – Decision making on emissions allowances

TOPIC	IFRIC 3	THE FASB/THE IASB PROJECT	CONTESTATION BETWEEN THE FASB AND THE IASB
Emissions allowances - Treatment	Intangible assets (IAS 38).	Assets	
Emissions allowances - Measurement	<ul style="list-style-type: none"> • Allowances should be measured initially at their fair value. • The difference between the amount paid and fair value should be identified as a government grant. • The ‘grant’ should initially be classified as deferred income in the balance sheet. • Subsequently recognized as income over the compliance period. 	<ul style="list-style-type: none"> • ‘Purchased allowances should be initially and subsequently measured at fair value.’ • The FASB decided for linked representation⁽ⁱ⁾. 	<ul style="list-style-type: none"> • The IASB preferred gross representation but it would not object linked representation.
Liabilities - Treatment	Provision (IAS 37)	Liability	
Liabilities - Measurement	<ul style="list-style-type: none"> • It should be recognized as the emissions are made. • It should be measured at fair value. (The best estimate of the expenditure required settling the present obligation at the balance sheet date.) 	<ul style="list-style-type: none"> • The FASB decided for linked representation⁽ⁱ⁾. 	<ul style="list-style-type: none"> • Boards asked for stakeholder feedback on the time of recognition and measurement of the quantity of allowances to be returned or submitted. • The IASB preferred gross representation but it would not object linked representation.
Changes in value	<ul style="list-style-type: none"> • Liabilities (Provisions): Income statement (fair value). • Intangible assets (Allowances): Equity (cost or revaluation). 	<ul style="list-style-type: none"> • ‘Purchased allowances should be initially and subsequently measured at fair value.’ 	

Sources: FASB (2010a, b), IASB (2004)

Notes:

(i) ‘A linked presentation would present the assets and liabilities gross, but the amounts would be presented together and total to a net emission asset or net emission liability’.

Table 4 - The IASB developments on emissions trading schemes

FEEDBACK STATEMENT ON THE AGENDA CONSULTATION 2011	RESEARCH PROJECT ON EMISSIONS TRADING SCHEME	RECOMMENDATIONS (STAFF – THE IFRS FOUNDATION)
Produce an inventory of different emissions trading.	Agenda paper 6A/7A concentrated on cap and trade schemes. It was mentioned the existence of other types of schemes, such as: Baseline and credit, Clean Development Mechanism, Carbon-Capture Schemes and Carbon Taxes. The description on cap and trade was focused on the characteristics of the EU ETS.	The IASB must set a broad approach to include variety of schemes that use emissions allowances. Staff also recommended changing the title of the project.
Study characteristics of different emissions trading.	Agenda paper 6A/7A did not study in details alternative types of mechanism to emissions trading, so it was not possible to identify accounting issues related to them.	It was suggested identification of economic effects of different schemes.
Assess the potential reporting solutions.	Agenda paper 6B/7B and 4B provided an example based on cap-and-trade only. The discussion was only based on problems emissions trading participants may face to account for allowance (e.g. brokers were excluded). Agenda paper 7C describes China’s new proposal on accounting for emission trading scheme.	Staff suggested to also include accounting treatment to allowances traders and recipients who receive allowances in exchange for carrying out activities that either reduce emissions or absorb/sequester pollutants.
Explore possible ways to account for allowances awarded by a scheme administrator.	Agenda paper 6B/7B identified that there will be issues on what past events could characterize entities to have control on allowances when awarded for free by the administrator, if allowances were to be recognized as assets and when organizations have control over it.	Agenda paper 6B/7B concluded that allowances awarded and purchased should be accounted equally (as an asset). The recognition of allowances awarded by the administrator at nil cost is accounting differently for similar items.

FEEDBACK STATEMENT ON THE AGENDA CONSULTATION 2011	RESEARCH PROJECT ON EMISSIONS TRADING SCHEME	RECOMMENDATIONS (STAFF – THE IFRS FOUNDATION)
Investigate when and how to account for liabilities associated with emission of greenhouse gases.	Agenda paper 6B/7B mentioned that there are at least 15 different ways to account for allowances. These variations could be categories of four main approaches, which avoid mismatched produced by IFRIC 3. However, the use of different approaches simultaneously reduces comparability.	Agenda paper 6B/7B suggested THE IASB to adopt a “fresh start”. Accounting for assets and liabilities was a source of mismatches and it did not represent reality of emissions trading. The IASB was advised to consider net position of an entity under the scheme, perceiving the scheme as a unity of analysis. There is also a need to focus on rights and obligations created by the scheme.
Study emissions allowances in the context of business combinations under common control (BCUCC) ⁽ⁱ⁾ and push down accounting ⁽ⁱⁱ⁾ .	Not included.	Not included.
Work in collaboration with a network of accounting bodies, preparers and investors.	The IASB project provided a summary of preliminary discussions for consultation to the Global Preparers Forum (GPF), the Accounting Standards Advisory Forum (ASAF) and the Consultation involved Capital Markets Advisory Committee (CMAC). There is also a collaborative work with the International Public Sector Accounting Standards Board (IPSASB), which is studying the accounting implications of emissions trading to administrators.	It was recommended to work collaboratively with other standard setters and to consider that there are countries, which established accounting guidance to address accounting for emissions trading and other emissions management schemes.

Sources: Sources: IFRS (2010, 2012, 2014a, b, 2015a, b, c, d, e, f, g, h, i, 2016)

Notes:

(i)“Group restructurings and reorganisations, including those related to preparations for initial public offerings, are business combinations.”

(ii)“The new values of assets in an acquired subsidiary are ‘pushed down’ to that subsidiary.”

Table 5 – Stakeholder engagement

STAKEHOLDER	RESEARCH PROJECT	PROJECT PLAN	STAFF PAPERS 6A/7A AND 6B/7B	AGENDA PAPER 4A AND 4B – PRACTICAL EXAMPLE	AGENDA PAPER 6/20
ASAF ⁽ⁱ⁾ members (Standard-setter)		X	X		X
IPSASB ⁽ⁱⁱ⁾ (Standard-setter)		X	X		X
GPF members ⁽ⁱⁱⁱ⁾ (Preparers)		X	X	X	X
IASB members		X	X		X
IFRS Foundation	X				
OTHER GROUPS ^(iv)					
• International Public Sector Accounting Standard Board (IPSASB)			X		X
• Capital Markets Advisory Committee (CMAC)			X	X	X
• Court decisions			X		
• Respondent to the 2015 Agenda Consultation ^(v)					X

Sources: Sources: IFRS (2010, 2012, 2014a, b, 2015a, b, c, d, e, f, g, h, i, 2016)

<http://www.ifrs.org/About-us/IASB/Advisory-bodies/GPF/Pages/GPF-members.aspx>

<http://www.ifrs.org/About-us/IASB/Advisory-bodies/ASAF/Pages/Accounting-Standards-Advisory-Forum.aspx>

<http://www.ifac.org/public-sector>

Notes:

- (i) The Accounting Standards Advisory Forum (ASAF) formed by representatives of standard setters community to inform the IASB on regional perspectives.
- (ii) The International Public Sector Accounting Standards (IPSASB) which responsibility is to issue international accounting standards to public sectors.
- (iii) The Global Preparers Forum (GPF) is an independent body formed by members of several industries to provide the IASB with preparers' views. Some members are participating in the EU ETS.
- (iv) For example: audit firms, representative bodies, preparers, standard-setting bodies, etc. There continues to be very few attempts to deeply engage with broad variety of groups.
- (v) A total of 119 comment letters from different groups, such as: standard-setters, accountancy bodies, and securities regulator and investor representative group. In addition, there was an online survey to investors.

NOTES:

ⁱ Financial Accounting Standard (FAS)

ⁱⁱ The IASB is an independent standard-setting body part of the International Financial Reporting Standard (IFRS) Foundation, which aims to establish global accounting standards, helping listed companies around the world to harmonize financial reporting (Barbu et al., 2014).

ⁱⁱⁱ Scientific research included in this article were those that presented an interpretive and/or critical approach (Baker and Bettner, 1997; Czarniawska B, 1997).

^{iv} http://www.ifrs.org/Current-Projects/IASB-Projects/Emission-Trading-Schemes/Documents/Background_historyETS.pdf

^v http://www.FASB.org/jsp/FASB/FASBContent_C/ProjectUpdatePage&cid=900000011097

^{vi} It is difficult to identify more detailed information on motivations that drove the FASB to remove the project from its agenda. The last minutes of the meeting present the summary of the decisions reached and do not show the dialogue between members of the Boards.

^{vii} <http://media.ifrs.org/2015/IASB/January/IASB-Update-January-2015.html#9>