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Standard setting in times of technological change: accounting for cryptocurrency holdings

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Abstract

Purpose – This paper explores how the International Accounting Standards Board (IASB) has dealt with the emerging issue of accounting for cryptocurrencies by investigating its constituents' expectations and the motivations underlying its regulatory response.

Design/methodology/approach – The theoretical lens of regulatory space is used to analyse the four-year debate around cryptocurrency holdings and informs the extensive thematic analysis of public documents, meetings recordings and comment letters on the topic.

Findings – Facing national standard setters' initiatives to regulate accounting for cryptocurrency, the IASB defended its position in the regulatory space through an agenda decision based on ewct 2xisting standards, which was finalised by the International Financial Reporting Standards Interpretation Committee (IFRS IC) despite criticism from constituents and Board members.

Research limitations/implications – The paper provides insights into the IASB approach to a regulatory vacuum regarding a new class of items, which derive from a new and rapidly-evolving technology. Disruptive technology impacts the contested arena of accounting regulation, in which the constituents ask for new solutions and the IASB tries to resist such pressures, while defending its position.

Practical implications – The paper sheds light on the growing importance of agenda decisions in the IFRS environment and on the limits of the IASB long regulatory process in the circumstance of emerging accounting issues deriving from rapidly-evolving technology.

Originality/value – This investigation is timely and relevant as it considers the regulatory issues arising from disruptive technological innovations (i.e. cryptocurrency), shedding light on the limits of regulatory processes in times of technological change.

Keywords Accounting regulation, Cryptocurrency, Blockchain, IFRS, IASB

Paper type Research paper

1. Introduction

Cryptocurrencies are increasingly gaining popularity around the globe and their use is spreading (Hileman and Rauchs, 2017; Ram, 2019). They are virtual currencies supported by decentralised systems that use cryptography and BT for security, which engender trust by making it difficult to counterfeit. They are not issued and backed by any central authority (i.e. mint, central bank, government, etc...), thus lacking the presence of a third party or institution, which usually engenders trust. Cryptocurrencies have progressively developed into a relevant phenomenon, that is impacting financial markets, as well as trades, especially digital ones (Prochazka, 2018; Holub and Johnson, 2018; Tan and Low, 2017).

The first and most renowned example of cryptocurrency is Bitcoin, a digital monetary system based on cryptography and the recent blockchain technology (hereafter BT). From its



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creation in 2008, Bitcoin has revolutionised how monetary systems can be structured and operated, thanks to BT (Nakamoto, 2008), which provides security and verifications via a distributed ledger technology in which transaction records are stored in blocks across a computer network. Bitcoin currently holds the largest market capitalisation among other cryptocurrencies (875 billion USD, as of September 2021) [1] and constitutes a standard example of cryptocurrency (European Central Bank, 2019; Ram, 2019). The unprecedented success of the cryptocurrency model has led to the creation of many other cryptocurrencies and their number is increasing by the day. For instance, when this investigation commenced in August 2019, the total number of traded cryptocurrencies had reached 2,320; at the time of writing traded cryptocurrencies are now 6,463 [2]. This is a consequence of cryptocurrencies being increasingly used by individuals and companies for their online transactions and as a financial investment, as well.

Such an unprecedented explosion of cryptocurrencies has fostered a lively debate within economics, finance and accounting research (Dwyer, 2015; Klein *et al.*, 2018; Li and Wang, 2017; Schmitz and Leoni, 2019; Vincent and Wilkins, 2020; Lombardi *et al.*, 2021; Secinaro *et al.*, 2021), with practitioners and researchers in different disciplines investigating cryptocurrency and BT. Whilst cryptocurrencies themselves challenge the status quo for accounting practice, regulation (Holub and Johnson, 2018; Tan and Low, 2019) and value estimation (Lowe *et al.*, 2020), scant research insights exist about how accounting standard setters and practitioners are coping with the issues raised by the cryptocurrency revolution (Lombardi *et al.*, 2021). Only a few studies in the accounting field have unfolded the technical details of cryptocurrencies and the problematics of accounting for them (Ram, 2019; Tan and Low, 2019; Ram *et al.*, 2016), especially if one cares to consider that a debate has developed among national standard setters and the International Accounting Standards Board (hereafter IASB) on how to treat this reporting item. Such a debate eventually led to controversial guidance in an agenda decision issued by the International Financial Reporting Standards Interpretation Committee (hereafter IFRS IC) under the request of the IASB.

We explore such a debate and analyse the constituents' expectations around accounting for cryptocurrency holdings and the motivations underpinning the regulatory response provided by the IASB. This is of particular interest for three main reasons. First, cryptocurrency is one of the first and most popular applications of BT, which is rapidly evolving and spreading across many business areas and will have a relevant impact on traditional accounting and auditing (Schmitz and Leoni, 2019). Second, the spreading of such assets (and liabilities) and their continuous development in new forms are pushing financial reporting preparers to call for more guidance and even new standard settings, thereby challenging international standard setters and their domain. Finally, the diffusion of cryptocurrency, local standards and accounting practices can diverge considerably among the jurisdictions adopting IFRS, thereby increasing the complexity of the dialogue between the global standard setter and jurisdictions (Botzem, 2014; Camfferman and Zeff, 2018; Zeff, 2012).

Previous research on accounting regulation has shown that the IFRS standard setting is a political process (Zeff, 2002), where industry and other affected parties exert aggressive lobbying efforts to prevent accounting standard setters from imposing objectionable requirements and thereby defend their self-interests (Chapple *et al.*, 2010; Georgiou, 2004, 2010; Giner and Arce, 2012; Hansen, 2011). The debate between the IASB and its constituents is particularly complex as the global standard setter is a private organisation and cannot mandate the adoption of its standards, which is dependent on the choices of single jurisdictions. For this reason, the IASB uses legitimation strategies to defend its position as a transnational standard setter, placing strong reliance on its due process and consultation procedures (Botzem, 2014). Among other practices, the IASB agenda formation represents a key moment where legitimation is sought through various consultation stages and the constituents' engagement (Pelger and Spieß, 2017).

In such a context, this paper aims to explore how the IASB has dealt with the emerging issue of accounting for cryptocurrencies by responding to the following research questions:

What are the regulatory approach adopted by the IASB to deal with the emerging issue of accounting for cryptocurrency and its underlying motivations?

How and to what extent has the IASB regulatory response met its constituents' expectations on this issue?

To respond to these questions we performed an extensive thematic analysis on several written documents, comment letters and meeting recordings as held by the IASB, the IFRS IC and other accounting groups to identify the various constituents' expectations that were raised around such topic and the motivations underpinning the IASB final decision to issue an agenda decision containing controversial guidance (*Holding of cryptocurrencies*, *June 2019*). Indeed, such agenda decision has received strong criticism even by several Board members themselves who did not agree with applying existing standards to cryptocurrency holdings. To interpret the results from our analysis, we use the theoretical lens of regulatory space (Hancher and Moran, 1989; Young, 1994), which states that standard setting takes place in contested arenas whose participants construct accounting problems and are involved in quests to mark the field and to maintain their dominance within such field (Malsch and Gendron, 2011).

The analysis shows how the IASB initially resisted the pressures of some national standard setters requesting a cryptocurrency project, in consideration of the uncertain developments of the use of cryptocurrencies and their related impact on accounting practice. However, facing the proliferation of national projects on accounting for cryptocurrencies, the IASB requested the IFRS IC to issue an agenda decision based on existing standards, thereby defending its position in the regulatory space, which was threatened by national standard setters' initiatives. While this regulatory response is in line with the IASB view that cryptocurrency is just a passing trend, the analysis reveals the limits of the guidance included in such agenda decision, not only in relation to the constituents' expectations but also according to some IASB members themselves.

The paper contributes to accounting regulation and standard setting research by providing insights into the IASB approach in facing a regulatory vacuum regarding a new class of items, which has distinctive, rapidly evolving, but uncertain features. The analysis of the debate between the IASB and constituents also responds to the call for more research on the dialogue between the global standard setter and local jurisdictions (Camfferman and Zeff, 2018). It is found that the pressures to regulate disruptive innovation have reversed traditional roles within the contested regulatory arena, resulting in constituents asking for an accounting change and the standard setter trying to resist and defend its position.

This study also has some policy implications as it provides insights on the limits of the IASB regulatory process by highlighting the contrast between the rapid pace of technological innovation and the length of the IFRS due process. This is especially true in the circumstance of emerging and urgent accounting issues deriving from rapidly-evolving technology, which are expected to grow in the next future and may be better tackled with a specific procedure to respond to urgent matters. It also reveals the growing importance of the agenda decisions which are now explicitly mandatory after the review of the Due Process Handbook (IFRS Foundation, 2020).

The remainder of the paper is structured as follows. The next section introduces the technical details of cryptocurrency and reviews the literature on accounting for cryptocurrency. The third section provides an overview of the IASB due process followed by a review of the accounting studies that have investigated IFRS standard setting. The research design of the paper is presented in the fourth section. The fifth section presents the

cryptocurrency

2. The phenomenon of cryptocurrency and its accounting regulation

Cryptocurrencies such as Bitcoin, Etherium and the like, are virtual money whose unit of account is no longer a "physical" currency unit; rather it is expressed in an independent digital form (Bal, 2013). They rely on cryptography to secure the transactions and are decentralised, because they are not governed, controlled, or produced by any central authority. Rather, they are controlled by a peer-to-peer network of nodes (i.e. computer) that shares all the transaction records via a public ledger, also known as blockchain (Ram, 2019).

The first and most renowned cryptocurrency is Bitcoin, whose technology was introduced in 2008 with a white paper by Satoshi Nakamoto, whose identity is still unknown. The first Bitcoins were digitally issued in January 2009 with a value of 1 USD each. Fast forward to today and bitcoins are now valued at more than 46,000 USD each, despite their volatility, reaching a market capitalisation of 875 billion USD [3]. Such success has led to the creation of many other cryptocurrencies, such as Ethereum or Thether, and their number is increasing by the day, passing from 2,320 traded cryptocurrencies when this investigation commenced in August 2019, to 6,463 at the time of finalising this article for publication. Consequently, cryptocurrencies have developed into a relevant phenomenon, that is impacting financial markets, as well as trades, especially digital ones (Prochazka, 2018; Holub and Johnson, 2018; Tan and Low, 2017).

Although not tangible as commodities and notes, cryptocurrencies are created as an alternative form of currency, having all the desirable characteristics of money, and offering the three money functions, as a medium of exchange, a unit of account and a store of value (Radford, 1945). However, from a technical point of view, a cryptocurrency differs from *fiat* currency because it is not controlled by a central authority or institution to engender trust in the exchange system; rather it creates a new system based on decentralised trusted relations among peers, thanks to the BT (Tan and Low, 2017). Further, cryptocurrency can be considered a sub-class of crypto-assets, which have been defined by EFRAG as "digital representations of value or contractual rights created, transferred and stored on some type of distributed ledger technology (DTL) network (e.g. Blockchain). Indeed, after the creation of the Bitcoins, many other digital representations have been created that are not strictly cryptocurrency, but represent other values or contractual rights.

Bitcoin is a significant example to understand how a cryptocurrency works. It constitutes an online peer-to-peer payment system that is accessible and useable via the Internet and a free Bitcoin account. Every Bitcoin user is provided with a wallet, which has a unique private key and produces public keys at every transaction. The private key is necessary to sign the transaction, which then needs to be confirmed by writing the transaction into the shared public ledger where all the other Bitcoin transactions are recorded. The writing of the transaction only happens via mining, which requires that a "miner" solve a cryptographic problem. When the problem is solved, the miner is rewarded with 25 bitcoins and the transaction is confirmed. The transactions are not reversible, and the confirmation protocol grants high security. This mechanism is also known as Proof of Work (PoW).

The system provides several advantages. First, it engenders trust via this sequence of verification and confirmation and through the transparency that is offered by the public ledger, which is shared among all the nodes of the network. Second, it may provide a valid alternative to exchange goods and services in jurisdictions where central banks and institutions are not trustworthy. Third, transactions costs are reduced to a minimum, because there is no need for a third party to confirm the transaction and there are no fixed costs related

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to the software purchase or system access (Ram *et al.*, 2016; Tan and Low, 2017). However, there are also significant shortcomings to Bitcoins and the like. Among other, first, there is pseudo-anonymity of the network participants: while the transactions are transparent within the network, it is difficult to trace the identity of the users, making cryptocurrencies a potential tool for illegal activities, such as money laundering or black-market purchases. Second, there are significant doubts related to the intrinsic value of the currency, due to its high volatility and intangible nature, although it is less exposed to risk and not at all to inflation. Third, cryptocurrencies as just starting to become an accepted payment method, because of their technical complexity and their volatility (Ram *et al.*, 2016; Tan and Low, 2017), but they are largely considered a financial investment, thanks to their increasing market capitalisation. Indeed, if at the very beginning they were understood and purchased by mainly IT and digital finance experts, nowadays they are acquired, traded and (although limitedly yet) used by a larger public, including firms, private equity funds and not-for-profit organisations (Raiborn and Sivitanides, 2015).

As a result, it is not surprising that Bitcoins and the like have been under the radar of governments, central banks and financial markets in the past ten years. Indeed, the number of individuals investing in cryptocurrencies is rapidly increasing, especially in India with around 100 million owners, the US with 27 million and Russia with 13 million [4]. But the businesses involved in offering, trading and using as payment cryptocurrencies are on the rise. A 2019 report by the European Banking Authority (EBA) indicated that in at least seven EU jurisdictions credit institutions, investment firms, electronic money institutions and payment service firms were conducting activities related to crypto-assets, such as owning crypto-assets; lending against crypto-asset collateral; clearing or trading with derivatives with crypto-asset underlying; investing in products with crypto-assets' underlyings [5]. Moreover, various institutions have started to use BT technology to directly issue security tokens offerings, as a replacement for bond issuance. These are major banking institutions, such as Bank Santander, Bank of China, Deutsche Bank, Société Générale, BBVA, The World Bank, but also manufacturing companies, like Daimler, and even governments, such as the Austrian one [6]. In such a scenario, it is evident that cryptocurrency holdings as managed by entities required to prepare financial reports may become a material item that poses serious questions regarding their accounting and accountability. Furthermore, the absence of specific accounting standards and the volatile value of cryptocurrency also impact the audit profession, if one cares to consider that there is no basis to assess the audit risks of entities holding cryptocurrencies (Vincent and Wilkins, 2020).

In response to such a knowledge vacuum, accounting scholars have started to investigate the crypto-phenomenon in different jurisdictions, discussing alternative accounting treatments and diverse interpretations of the nature of cryptocurrency holdings (Raiborn and Sivitanides, 2015; Ram et al., 2016; Tan and Low, 2017; Prochazka, 2018; Ram, 2019) in an attempt to call for more guidance by accounting standard setters and to help accountancy professional. More recently, the European Financial Reporting Advisory Group (EFRAG) has initiated a research project (2019) on crypto-assets (liabilities), which include, but are not limited to, crytpocurrencies. This report provides a comprehensive overview of crypto-assets (liabilities), how they work and how they have spread globally (EFRAG, 2020). However, the research is still limited, but fast-growing (Schmitz and Leoni, 2019), especially if one cares to consider that accounting practitioners will play a pivotal role in advising clients on the opportunities and the financial representation of cryptocurrency (Marrone and Hazelton, 2019; McGuigan and Ghio, 2019).

The extant accounting research on the topic provides different views on the need to regulate the representation of cryptocurrencies in financial reporting. Some scholars have raised concerns on the absence of a specific provision within the current accounting standards (Ram et al., 2016; Prochazka, 2018) and even called for a specific standard issuance

by the competent accounting standard setter (Raiborn and Sivitanides, 2015). In this vein, cryptocurrency holdings are suggested to be a brand-new asset class, with unique characteristics that make them a different financial investment, thus requiring a new and specific regulatory provision (Ram, 2019). As opposed, other scholars consider cryptocurrency holdings aligned with the current definitions of assets and liabilities in the IASB Financial Reporting Framework and neglect any need for *ad-hoc* accounting regulation (Tan and Low, 2017). However, while scholars appear in disagreement with the treatment of such new items, they all agree that guidance on how to account for such items is to be provided by the relevant accounting standard setters (Lowe *et al.*, 2020; Ram, 2019; Tan and Low, 2017).

As the data on the diffusion of Bitcoins and other cryptocurrencies shows that they may become material items in several organisations' financial reports, a "true and fair" financial representation of such items in annual reports is needed. Indeed, some respondents to the IASB Agenda Consultation had already identified digital currencies as a potential new regulatory project since 2015. At the end of 2016, the issue of accounting for cryptocurrency has been the subject of several discussions and presentations by IASB constituents at Accounting Standards Advisory Forum (ASAF) as well as at IASB meetings. Later in 2019, the International Monetary Fund has provided an insightful report on the development of *ad-hoc* regulation of crypto assets worldwide. It is found that various countries have banned the trading of crypto assets, such as Algeria, Bahrain, Bangladesh, Bolivia, China, Colombia, Indonesia, Iran, Iraq, Morocco, Nepal, Kuwait, Kyrgyzstan, Macao SAR, Maldives and Qatar (Cuervo *et al.*, 2019). Several other jurisdictions, such as the UK, Switzerland and Germany have provided guidance on the treatment of crypto assets, while Malta and Thailand are creating tailored regulations on crypto assets.

However, while accounting scholarship has largely investigated the standard setters' regulatory responses about accounting items or standards that were already existing and codified, it has not yet considered the standard setters' reactions and their regulatory response (or not) about cryptocurrency holdings. This is quite surprising if one cares to consider that cryptocurrency provides a unique context of regulatory and knowledge vacuum, due to the novelty of the virtual currency and its highly complicated technical content. Second, cryptocurrency is just one example of digital assets and liabilities that are developing and due to impact on financial markets, firms and the global economy, thereby extending the knowledge and regulatory vacuum as well as the need for shared guidance. Third, as standard setters have established themselves as those reporting entities turn to when seeking accounting and accountability guidance, their response to such phenomenon can provide insights into their ability to respond to new accounting challenges and to maintain their guidance role at a global level.

As a result, this investigation explores how the IASB has dealt with the emerging issue of accounting for cryptocurrencies by investigating its constituents' expectations and the motivations underlying its regulatory response.

3. Accounting standards setting: context and previous literature

3.1 The IFRS due process: an overview

The analysis of IASB's approach and motivations in addressing the accounting for cryptocurrency holdings must be contextualised in the IFRS due process, which is a key element for the acceptance of standards issued by a private standard setter on a global scale. This process – outlined in the Due Process Handbook (IFRS Foundation, 2020) – encompasses four main steps: (1) *agenda consultation*; (2) *research programme*; (3) *standard-setting programme*; and (4) *maintenance programme*.

The agenda consultation takes place every five years to define the IASB's standard-setting priorities, thus supporting the IASB in developing its project work plan. If necessary, the

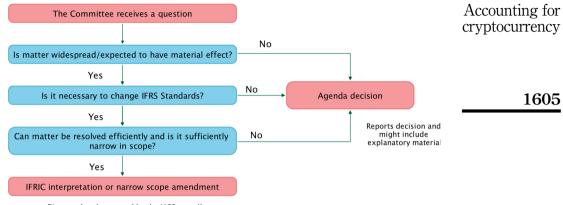
IASB can also add topics to its work plan between agenda consultations, for instance following post-implementation reviews or requests from the IFRS IC. Once the agenda consultation is compiled, the *research programme* commences, which entails exploring the issues and deciding whether standard setting is required, often leading to an IASB discussion paper open to public comments. Once the consultation is concluded, the IASB begins the *standard-setting* phase by proposing amendments to an existing standard or a brand-new standard to solve the issues raised through research and consultation. Once the standard is prepared, another round of consultations commences to obtain comments from constituents from different jurisdictions and publish an exposure draft. The IASB takes into consideration the comments received and finally issues the definitive new standard, which is subject to *maintenance* through interpretation requests to the IFRS IC and post-implementation reviews.

The complexity and consultative nature of this process is the consequence of the IASB effort to enhance the IFRS quality and global acceptance. Indeed, the various phases grant transparency, full and fair consultation and accountability (IFRS Foundation, 2016, para 3.1) and involve the IASB and IFRS IC as well as a wide range of interested and affected constituents (e.g. investors, national standard setters, securities regulators). In particular, the standard-setting process is constructed to receive inputs from various advisory and consultative bodies of the IASB and the IFRS Foundation, such as the IFRS Advisory Council, the Capital Market Advisory Committee, the Emerging Economies Group (EEG). Among them, a relevant role is played by the ASAF, which is a network of national accounting standard setters and regional bodies involved with standard setting [7].

Two phases are of particular interest for this investigation, as they foster the dialogue between the standard setter and constituents. These are the agenda setting and the interpretation requests. The *agenda setting* currently receives formal public input on the strategic direction and balance of the IASB's work plan through a five-year consultation, which also seeks constituents' views on financial reporting matters that should be given priority. Additionally, the IASB can add other projects in response to changing circumstances, after consulting the Advisory Council and the ASAF in case of major projects. Whilst the introduction of this public agenda consultation from 2010 (IASC Foundation, 2010) reflects the full and fair consultation principle of the IASB, it has inevitably extended the length of the process, which poses some obstacles when facing emerging issues that require a timely response, especially in consideration of the lack of an IFRS technical body specifically devoted to urgent issues (e.g. the US Emerging Issues Task Force).

The *interpretation requests* can be submitted by any constituent to the IFRS IC, which is in charge to address questions about the application of the IFRS and provide other services at the request of the IASB. The IFRS IC can add the interpretation request to its agenda to develop narrow-scope amendments or a new IFRIC interpretation only when the agenda criteria are met (Figure 1). Otherwise, it issues a tentative agenda decision with explanatory material that is open to public comments for 60 days before being finalised by the IFRS IC (without any vote by the IASB until 2020).

The consequences of including explanatory material in the agenda decisions have been at the centre of lively debate for quite a long time. Until 2020, practitioners considered agenda decisions as in-substance mandatory (IFRS Foundation, 2012; Kenny and Larson, 2009), while the Due Process Handbook (IFRS Foundation, 2016) depicted them as helpful, informative and persuasive, thereby non-mandatory. Eventually, the current Due Process Handbook (IFRS Foundation, 2020) has stated that agenda decisions are mandatory because they derive their authority from the standards themselves. As a result, the IFRS IC has several ways to address interpretation requests: (1) to develop a new IFRIC interpretation; (2) to propose a narrow-scope amendment to an existing IFRS; (3) to provide explanatory



Discussed and approved by the IASB as well

Source(s): Webcast "Agenda Decisions and the proposed amendments to the Due Process Handbook" (2 July, 2019), available at: https://www.ifrs.org/news-and events/2019/07/due-process-handbook-amendments-and-agenda-decisions/

Figure 1.
The IFRS interpretative process

material in an agenda decision; and (4) to issue an agenda decision without explanatory material, possibly referring the issue to the IASB for standard setting.

3.2 Previous studies on the regulatory process and accounting standard setting

The theoretical perspectives traditionally used to explore accounting regulation include public interest and private interest theories (Baudot, 2014). The public interest view (Pigou, 1932) promotes regulation as being – at least initially – designed to serve the public interest, while the private interest view (Stigler, 1971) posits that regulators respond to economic incentives in their best self-interest, thus reacting to constituents' pressures to increase their personal utility. The regulatory capture view shares with the public interest view the premise that regulatory bodies are initially established to protect the public interest but it relaxes the assumption that regulators are neutral (Bernstein, 1955). Under this view, regulatory mechanisms are ultimately controlled by the regulated parties, as regulators adopt a lower profile and become more inclined to defer their attention from public to private interests after the initial phase.

Accounting studies draw from these perspectives to explore accounting standard setting, producing extensive research on IFRS and the specific features of the IASB as a global standard setter. Due to its private nature, the IASB cannot mandate the adoption of its standards but has to rely on the willingness of national jurisdictions to adopt them. Thereby, it is fundamental for the IASB to gain and maintain legitimacy, as identified in the investigations on its historical development (Botzem, 2012; Botzem and Dobush, 2012; Camfferman and Zeff, 2018; Sacho and Oberholster, 2008) as well as on the creation of the IASB due process policies (Botzem, 2014; Richardson and Eberlein, 2011).

IASB is found to use legitimation strategies to defend its position as a transnational standard setter, placing strong reliance on its consultation procedures (Botzem, 2014). Such procedures respond to the concerns about the dominant role of preparers and professional accounting firms (Botzem and Quack, 2009; Camfferman and Zeff, 2007) and internal lobbying within the IASB (Erb and Pelger, 2015; Jorissen *et al.*, 2013; Morley, 2016; Pelger, 2016). Even if users are often described as the main recipients of the general-purpose financial reports (IASB, 2018, para.1.5), they generally show a lower engagement compared to other constituents (Durocher *et al.*, 2007; Jorissen *et al.*, 2013; Georgiou, 2010). Indeed, while the IFRS

due process provides opportunities for everyone's participation, it mainly sees the participation of well-resourced national standard-setters, major international companies, international accounting firms and educational institutions (Wingard *et al.*, 2016). In such a scenario, the IASB is devoting increasing efforts to outreach and capture the views of (other) users – for instance by appointing board members with regulatory and academic background – and to maintain a sufficient technical rigour by achieving a balance among different interest groups (Bhimani *et al.*, 2019).

Pelger and Spieß (2017) draw on legitimacy theory to analyse how the IASB interacted with its constituents in the first public agenda consultation in 2011/2012. Their study is of particular interest given the relevance of agenda formation for standard setting (Fogarty, 1992) and the scant literature investigating this initial phase (Young, 1994). In fact, the agenda shapes "the list of the accounting problems or issues that the standard setter has formally acknowledged as those topics that it is actively considering for the promulgation of accounting standards or other authoritative pronouncements" (Howieson, 2009, pp. 580–581). Their comprehensive analysis shows that the IASB constructed legitimacy by soliciting views from its target groups (i.e. users of financial statements) and by increasingly formalising standard setting with further consultation stages. While these developments resonate with the expectations of constituents, the divergent views from the growing number of consultations could also lead to more discretion exercised by the IASB itself and an inner circle of constituents. Indeed, loyal contributors are likely to remain dominant if consultation increases, while new and diverse constituents may find it difficult to identify the relevant project to contribute to.

The IASB's search for legitimacy emerges also in the IFRS interpretation process, which is part of the maintenance phase of standard setting and was openly criticised over the years about its ability to produce interpretations. The activity of the first interpretative bodies (i.e. SIC and IFRIC) faced legitimacy issues due to the considerable absence of corporate involvement (Larson, 2002), which remained substantially low even after an increase in constituents' participation (Larson, 2007). Studies on the output of the IFRIC and the IFRS IC also show an increasing number of agenda decisions (formerly known as rejection notices) and considerable efforts to address the issues raised during the review of the IFRS Constitution (Bradbury, 2007), Recent evidence confirms that agenda decisions are by far the most frequent output of the IFRS IC activity, showing that they increasingly include explanatory material to support standard application (Ramassa and Quagli, 2021). This trend represents a relevant change compared to the initial position of the IASC (and IASB) against the provision of guidance motivated by the desire to preserve the principlesbased nature of IFRS (Camfferman and Zeff, 2015). This change suggests growing attention to cope with constituents' needs as well as to enhance legitimacy in the interpretation domain.

However, studies on the "practice of standard-setting" (Pelger, 2016) also stress the importance of a final "hidden phase" in the decision making of the IASB, in which the staff plays a major role. Indeed, the final outcome of such a process might diverge from the consensus reached during the consultations with constituents, due to the authority of the staff to draft agenda papers and propose drafts and final standards (Pelger, 2016; Klein and Fülbier, 2019). Similar considerations apply to board members as well, who can contribute to making projects vulnerable to external lobbying with their "internal lobbying" (Morley, 2016). These analyses provide insights into the actions and behaviours of the Board and staff members, shedding light on the IASB as a social entity and the influence of its organisational character on the outcomes of its projects. Overall, the literature on IFRS standard setting depicts an evolving scenario characterised by relevant efforts of the IASB to meet constituents' demand for accountability, thereby legitimising its complex role as private global standard setter. However, evidence also suggests that the formal respect of the full and

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fair consultation principle does not necessarily lead to substantial effects in terms of standard setting decisions, while inevitably lengthening the standard-setting process.

Our paper contributes to the literature on this under-researched area by exploring how the IASB has dealt with the emerging issue of accounting for cryptocurrencies, with a particular focus on constituents' expectations and the motivations underlying its regulatory response.

4. Research design

4.1 Aim and theoretical approach

Our analysis aims at interpreting how the IASB has dealt with the emerging issue of accounting for cryptocurrencies by responding to the following research questions:

What are the regulatory approach adopted by the IASB to deal with the emerging issue of accounting for cryptocurrency and its underlying motivations?

How and to what extent has the IASB regulatory response met its constituents' expectations on this issue?

To answer these questions, we investigate the path that led the IASB to issue an agenda decision, its motivations and the IFRS constituents' expectations by mobilising the regulatory space as a method theory (Lukka and Vinnari, 2014). Hence, in our study, the regulatory space plays the role of a meta-level conceptual system, which originates from another field (e.g. political studies) and offers a vocabulary and syntax that are applicable to another disciplinary domain (i.e. accounting standard setting). In doing so, we consider that the formation of theories can occur at various levels through the theorisation of metaphors, differentiation, or concepts (Llewellyn, 2003) and use the theoretical concept of regulatory space to offer an alternative perspective and gain new insights into accounting standard setting (Lukka and Vinnari, 2014).

Accounting studies have fruitfully used this theoretical lens, which is particularly pertinent to our analysis since accounting standard setting is a political process, and as such, it involves the contest for power between actors in a notional regulatory space that is available for occupation. Regulatory spaces are contested arenas and their occupants are continually involved in quests to mark the field with their own imprimatur (Malsch and Gendron, 2011). The shape of the space and the distribution of power between the actors can be better understood by looking at how organisations enter the regulatory space and defend their position within it (Hancher and Moran, 1989). In doing so, organisations can adopt strategic responses (Oliver, 1991), which can alter over time in response to, or in anticipation of, the strategic actions of the other actors (Canning and O'Dwyer, 2013). Regulators largely adopt compromise or acquiescence strategies in case of aggressive regulatees' resistance (Shapiro and Matson, 2008) but can also enrol defiance strategies to repel such resistance (Canning and O'Dwyer, 2013).

In such a dynamic arena, the contest for power is a key element (Hancher and Moran, 1989) and its analysis requires particular attention to (1) the actors involved in open conflicts; (2) the issues they mobilise and those they avoid; and (3) the discursive context (Malsch and Gendron, 2011). Against such a contested background, the shape and outputs of the regulatory space are influenced by five dimensions and their interactions: (1) the national peculiarities in terms of legal and political culture; (2) the historical moment; (3) the dominant organisational forms in the regulatory arena; (4) inter-organisational linkages; and (5) the nature of the issues which are negotiated (Hancher and Moran, 1989; Gatti and Poli, 2018). In our study, the peculiarities of the legal and political cultures are a relevant factor for the IASB as a private global standard setter that is confronted with demands from various constituents and jurisdictions. Additionally, the nature of the issue negotiated (i.e. accounting for cryptocurrency holdings) and the historical moment (i.e. the early stage of cryptocurrency

development) are important aspects for our investigation of accounting standard setting in times of technological change.

The theoretical lens of regulatory space has also been applied to explore the standard setter's agenda formation, which is particularly relevant for our study (Young, 1994). This analysis focuses on the Financial Accounting Standards Board (FASB) in the US context and reveals that the agenda formation is a complex part of standard setting rather than a yes/no action. In other words, accounting problems do not arise naturally but need to be constructed as problems by the members of the regulatory space. In such a perspective, agenda formation is a key part of the process of accounting change, which requires that (1) accounting issues are constructed as accounting problems, (2) accounting problems are constructed as appropriate for standard setting and (3) solutions are constructed as appropriate resolutions to the specific accounting problem. The agenda formation generates competition between rival regulators for the control of the regulatory space (Walker and Robinson, 1994). Both individuals, such as standard board members and technical staff and political institutions are found to exert a considerable influence on the agenda formation (Howieson, 2009), consistent with the idea that people, organisations and events that act upon accounting and accounting practices construct the regulatory space (Young, 1994).

In such a perspective, an understanding of accounting standard setting cannot be isolated from the analysis of the accounting claims and expectations of constituents about standard setters' responses, that construct a regulatory space for an accounting change. Additionally, regulators set their agenda interpreting the expectations about their role and purpose rather than simply responding to pressures from other actors in the space. In this regulatory arena, the desire of standard setters to construct or maintain legitimacy (Artiach *et al.*, 2016; Gillis *et al.*, 2014; Pelger and Spieß, 2017) can heavily affect their responses to constituents' expectations. However, the output of the regulatory space depends on several factors, including how the dialogue between the space occupants unfolds. Constructing accounting issues as accounting problems is not enough to obtain the desired standard setter response, as accounting problems must also be constructed as appropriate for standard-setting activity through accounting claims (e.g. reliability, relevance, etc.) (Young, 1994).

Drawing on this theoretical approach, we examine the debate between the IFRS bodies and their constituents to reveal the construction of the accounting problem by the occupants of regulatory space and to discuss the final decision of the IASB with respect to its constituents' expectations.

4.2 Methodology

To achieve its aims, the investigation makes use of an extensive thematic analysis performed on public written documents, meetings audio-recordings and 23 comment letters regarding the discussion on accounting for cryptocurrency holdings within the IASB, its various bodies and its constituents. The documents and recordings are gathered from the IASB official website (www.ifrs.com) and cover the period from the first request for guidance on accounting for cryptocurrency to the IASB in 2015 up to June 2019, when the IFRS bodies took their first official position on cryptocurrency holdings with an agenda decision by the IFRS IC. The written documents include the IFRS IC tentative and final agenda decisions; the summaries of meetings held by the IASF, the IFRS IC, the ASAF and the EEG, including the agenda papers and any presentation by national standard setters at the meetings. The audio-recordings include the IASB and IFRS IC public meetings held from January 2016 to June 2019 and were all transcribed for the analysis (Table 1). Finally, the 23 comment letters in response to the tentative agenda decision, as sent by various constituents (Table 2), were also included in the analysis.

Thematic analysis is the analytical approach chosen to explore the various written documents, letters and transcribed meetings recordings as it provides a means to closely

Source	Details	Accounting for
IASB's standards and framework cited in the debate on cryptocurrency holdings	Conceptual framework, IAS 2, IAS 8, IAS 25, IAS 38, IFRS 9	cryptocurrency
IFRS IC agenda decisions	Tentative and final agenda decisions on cryptocurrency holdings	
Comment letters	Comment letters following the IFRS IC tentative agenda decision (see Table 2)	1609
Public documents of IASB meetings Public documents of IFRS IC meetings Public documents on ASAF meetings	Agenda papers, meeting summaries and IASB updates* Agenda papers, meeting summaries and IFRIC updates* Agenda papers (including documents issued by national standard setters and accounting profession) and meeting summaries*	
Public documents of EEG meetings	Agenda papers (including documents issued by national standard setters and accounting profession) and meeting summaries*	
Public documents of the 2015 IASB agenda consultation	Request for views and feedback statement*	
Audio recordings of IASB and IFRS IC	Audio recordings of public meetings from 2016 to 2019*	
meetings Note(s): * Meeting dates are reported in Table	3	Table 1. Summary of sources

inspect texts to highlight recurrent themes pertinent to the phenomenon under study (Bowen, 2008; Boyatzis, 1998; Fereday and Muir-Cochrane, 2006). To such end, the analytical approach entails the coding of the texts to label recurring themes and highlight their relationships. An initial list of coding based on theory-derived categories can be prepared before approaching the texts. In this investigation, the coding is informed on the triptych "issue-problem-solution" from regulatory space theory. As a result, the texts were coded to identify emerging themes that can be related to the issue of accounting for cryptocurrency, its translation (or not) into an accounting problem and the solution offered by the IASB to respond to its constituents' expectations. The coding has focused on cryptocurrency, rather than crypto-assets, being the former the object of the debate within the IASB and its constituents. Indeed, the accounting for crypto-assets pertains to a more recent – and still open – debate among accounting academics and practitioners (see EFRAG Discussion paper, 2019), it also involves the consideration of crypto-liabilities and entails different entries and valuation practices.

Codes emerged from the initial reading of the entire set of documents and focussed on identifying and categorising key themes emerging from the debate within IASB, IFRS IC and constituents regarding the construction of the cryptocurrency accounting problem and the IASB response to constituents' expectations. Whenever new codes suggested new themes during the analytical process, all previously scrutinised sources were re-assessed (Bowen, 2008). The two authors performed the coding process separately and subsequently compared their theme lists to identify common themes, discuss differences and reach a consensus on the main themes (Parker and Roffey, 1997). The discussion and comparison of themes have demonstrated that the coding process culminated in a saturation point, where more and new data did not provide new information but ensured replication of identified themes (Bowen, 2008).

5. Insights from the debate on accounting for cryptocurrency

The analysis of the development of the IFRS cryptocurrency project, from the initial demand for standard setting to the finalisation of the IFRS IC agenda decision, has shed light on the IASB's response to the accounting problem of cryptocurrency holdings constructed by

1610

Table 2.
Comment letters

Respondent	Category	Country	Date
Accounting standards board of Japan (ASBJ)	National standard setter	Japan	29/04/19
Canadian securities administrators (CSA) - chief accountants committee	Securities commission	Canada	02/05/19
David hardidge	Accounting	Australia	08/05/19
 International organization of securities commissions (IOSCO) 	Securities commission	International	09/05/19
Accounting standards board (AcSB)	National standard setter	Canada	08/05/19
International air transport association (IATA) Accounting research and development foundation (ARDF)	Industry association National standard	International Taiwan	10/05/19 13/05/19
	setter		
The institute of chartered accountants of India (ICAI)	Professional association	India	10/05/19
Korea accounting standards board (KASB)	National standard setter	Korea	14/05/19
Deloitte touche tohmatsu limited (DTTL)	Accounting firm	UK-international	
Comitê técnico IFRS universidad de Chile	Academic institution	Chile	14/05/19
Malaysian accounting standards board (MASB)	National standard setter	Malaysia	15/05/19
Accounting standards committee of Germany (ASCG)	National standard setter	Germany	15/05/19
Grant thornton international	Accounting firm	UK-international	15/05/19
National board of accountants and auditors (NBAA)	Professional association	Tanzania	15/05/19
Comissão de valores mobiliários (CVM)	Securities commission	Brazil	15/05/19
Brane inc	Preparer	Canada	15/05/19
Chamber of digital commerce	Industry association		15/05/19
Mexican financial reporting standards board	National standard setter	Mexico	15/05/19
The Indonesian FASB	National standard setter	Indonesia	14/05/19
Mazars [late comment letter]	Accounting firm	France- international	15/05/19
The Italian standard setter (OIC)] [late comment letter]	National standard setter	Italy	30/05/19
Hong Kong institute of certified public accountants (HKICPA) [late comment letter]	Professional association	Hong Kong (China)	30/05/19

constituents. The analysis has identified two different phases. The first phase entailed raising the issue and constructing the accounting problem, from the first discussion on cryptocurrency between the IASB and its constituents up to the decision of the IASB to ask the IFRS IC for an agenda decision on the matter. The second phase covers the solution offered by the IASB to respond to its constituents' expectations, encompassing the issuance of the tentative agenda decision by the IFRS IC, the consultation period and the finalisation of the agenda decision.

5.1 The cryptocurrency holdings accounting problem

Accounting for cryptocurrency holdings under IFRS has been the topic of several discussions and consultations between IFRS bodies and constituents in the last few years (Table 3).

Date	Event	Accounting for cryptocurrency
2015	Some national standard setters respond to the IASB agenda consultation raising the issue of	cryptocurrency
10 4 1 0010	accounting for cryptocurrency holdings	
19 April 2016 18 May 2016	IASB meeting: The IASB asks the issue to be brought back for further consideration IASB meeting: The staff proposes the IASB to ask further information to national standard	
10 May 2010	setters raising the issue to decide whether carrying out research on the topic	
8–9 Dec 2016	Meeting of the ASAF: AASB introduces a paper on cryptocurrency asking members for their	1611
	views on whether and how the board should address digital currency issues. It recommends only monitoring the issue	
23–24 Jan 2018	IASB Meeting: The board discusses whether adding a project on commodity loans and	
N. 1 0010	related transactions, including digital currencies	
March 2018	ASBJ issued a standard on digital currencies	
16–17 April 2018	Meeting of the ASAF	
16 May 2018	Meeting of the IASB EEG	
17 July 2018	IASB meeting: The board decided to ask the committee to provide further information about	
11 July 2010	how an entity might apply existing IFRS standards in determining its accounting for	
	holdings of cryptocurrencies and initial coin offerings	
11-12 sept	IFRS IC meeting: The IFRS IC discusses how an entity might apply existing IFRS standards	
2018	to account for holdings of cryptocurrencies and initial coin offerings	
	It also suggests the board that standard-setting is necessary for holdings of	
14–15 Nov	cryptocurrencies IASB meeting: The board decided not to add to its work plan a project. It decided to ask the	
2018	committee to consider publishing an agenda decision (eight-seven in favour of the decision)	
5–6 Mar 2019	IFRS IC meeting	
15 Mar 2019	IFRS IC publishes a tentative agenda decision "holdings of cryptocurrencies"	
15 May 2019	Deadline for submitting comment letters in response to the tentative agenda decision	
11–12 June	IFRS IC meeting: The committee finalises the publication of its agenda decision "holdings of	Table 3.
2019	cryptocurrencies"	Debate timeline

In these consultations, national standard setters construct the accounting issue of cryptocurrency holdings as an accounting problem, progressively forming an expectation of specific IFRS requirements for this emerging and peculiar class of assets.

The issue of accounting for holdings of cryptocurrencies emerged for the first time during the 2015 IASB agenda consultation, as suggested by the Canadian Accounting Standards Board, the New Zealand Accounting Standards Board, and the Asia-Oceania Standard-Setters Group. In April 2016, the IASB discussed the possibility to add a cryptocurrency project to its agenda and asked constituents to provide insights on accounting-related issues of cryptocurrency holdings. This way, the Board gathered the main items in need of research, which is usually the first stage of standard setting.

In response to the call, in December 2016, the Australian Accounting Standards Board (AASB) [8] presented its view on cryptocurrency holdings at the ASAF. The AASB confirmed that cryptocurrencies do not meet the definition of cash or financial asset under existing IFRS, rather they can be classified as intangible assets, as per IAS 38 definition or, inventory, if held for sale, as per IAS 2 definition. However, the AASB called for standard setting activity for cryptocurrency assets due to the inappropriateness of using IAS 38 as it does not allow measurement at fair value through profit and loss (FVTPL). Most of the ASAF members agreed that a standard-setting project was inappropriate due to cryptocurrency being in its infancy but asked the Board to keep monitoring the phenomenon. The discussion re-opened in January 2018 due to some developments in the Bitcoin market and new regulatory activities by national standard setters. Indeed, the Japanese standard setter had issued an exposure draft on accounting for cryptocurrencies and the US FASB had undertaken research on the topic.

The ASAF meeting of April 2018 discussed the insights from national standard setters about their guidance on cryptocurrency holdings. The Japanese standard setter (ASBJ) reported its recommendation to measure digital currencies at FVTPL with an active market, or at cost (or at disposal value if lower) otherwise; and highlighted the diversity in practice among Japanese IFRS adopters. A similar approach was adopted by the Korean Accounting Standards Board. However, the diffusion of digital currencies among ASAF members' jurisdictions was mixed, with larger holdings in Canada than in Asia, Oceania and France. France, in particular, asked the IASB for some immediate guidelines based on existing requirements but with a project for a new standard in the long term.

The IASB response, in May 2018, was to question the IFRS IC about the adequacy of existing IFRS standards to provide a faithful representation of cryptocurrency holdings. By checking existing accounting standards for a solution, the Board aimed at verifying whether accounting for cryptocurrencies was an accounting problem appropriate for standard setting, thus deserving specific IFRS requirements. Indeed, the indication of an accounting problem is not sufficient to add such item to the standard setters' agenda, rather the problem must be found appropriate for standard setting (Young, 1994).

The IFRS IC in September 2018 concluded that cryptocurrency holdings are not financial assets under the existing IFRS 9, nor equity instruments, as they do not give rise to a contractual right for the holder and they are not a contract that will or may be settled in the holder's own equity instruments. Accordingly, the applicable standard for cryptocurrency holdings was indicated in IAS 2 *Inventories* if they are held for sale in the ordinary course of business, and in IAS 38 *Intangible Assets* in all the other cases [9]. In the meetings, several IFRS IC's members recognised the limits of applying IAS 38 to cryptocurrency holdings due to the lack of an appropriate FVTPL measurement, thus the IFRS IC outlined some standard setting options for the future. Such options included: (1) removing cryptocurrencies from the scope of IAS 38 and requiring entities to apply IAS 8 *Accounting Policies, Changes in Accounting Estimates, Errors*; (2) amending IFRS 9 to include cryptocurrencies; (3) developing an investments Standard based on IAS 25 *Accounting for Investments*; or (4) providing a more specific definition of cash.

As a result, the IASB agreed on the IFRS IC's feedback and confirmed to monitor the development of cryptoassets, without adding any cryptocurrencies project to its work plan. To confirm this line of action, the IASB also required the IFRS IC to publish an agenda decision to provide guidance on the application of the existing IFRS to account for cryptocurrencies holdings. Such a decision was the outcome of a fierce debate within the Board, in which the Chair had to use his casting vote to get it approved with a simple majority (eight out of fourteen Board members). Thus, the Board tentatively concluded that the cryptocurrency issue was not an appropriate accounting problem for new standard setting, deciding to take a position and address it by resorting to existing IFRS requirements.

5.2 The IFRS IC agenda decision: a response to constituents' expectations?

The IFRS IC responded to the IASB request by issuing a tentative agenda decision in March 2019 (with twelve out of fourteen members in favour), substantially confirming its previous opinion on how to apply existing IFRS to cryptocurrency holdings. In the tentative agenda, the IFRS IC describes the cryptocurrencies as assets that meet the definition of assets from existing IFRS, in contrast with the prevalent position in the accounting literature that cryptocurrency is a new class of assets (Ram, 2019). However, this view is in line with the Board's intent to maintain the reporting of cryptocurrency holdings under the existing IFRS and contain their specific features within the scope of its standards, even if they were developed before this type of assets even existed.

As required by the due process, the tentative agenda decision was open for comments during a 60-day consultation period, in line with the principle of full and fair consultation.

The analysis of the 23 comment letters (CL) [10] in response to the IFRS IC's tentative agenda decision provides evidence on the reactions of several classes of constituents to the approach of the IASB to the accounting for cryptocurrency holdings. The participation in the public consultation (Table 2) highlights a significant interest by national standard setters (9 CL), followed by securities commissions (3 CL), professional associations (3 CL), and accounting firms (3 CL). More attention for this topic is gained in Asia-Oceania (8 CL) and North America (4 CL), where cryptocurrencies were more diffused. Such responses reflect the traditionally modest participation of preparers and users in IFRS consultations (Durocher *et al.*, 2007; Jorissen *et al.*, 2013; Georgiou, 2010). Indeed, only two comment letters conveyed the views of companies and professionals directly involved in the crytpocurrency industry: the Chamber of Digital Commerce and Brane Inc. However, these constituents tend to be represented by their national jurisdictions or by professional associations, as it happens in the case of the Chamber of Digital Commerce, which is the world's leading trade association representing more than 200 organisations in the digital asset and blockchain industry.

Three main themes arise from the constituents' letters and provide insights on the different views about the proposed "solution" of the tentative agenda decision: (1) technical analysis of the tentative agenda decision; (2) appropriateness of the accounting guidance in the agenda decision; and (3) proposals for future standard setting on the topic. Most respondents consider the technical analysis of the IFRS IC formally correct, but they also raise major concerns about the content of the agenda decision, mainly due to its reporting outcomes. A clear example of this position is expressed in the CL from the Japanese standard setter:

We agree with the interpretation provided in the tentative agenda decision regarding the application of existing IFRS Standards. However, we believe that the application of existing IFRS Standards, as stated, may result in inappropriate outcomes which do not provide the most relevant information, from the viewpoint of relevant financial reporting. Accordingly, considering the social impact of cryptocurrencies and the priority within the IASB's standard-setting projects, we believe that IFRS Standards need to be amended in a timely manner. (CL 1, p. 1)

This concern was also exacerbated because some respondents noticed that it was already expressed in public meetings by IASB and IFRS IC members, thereby questioning the actual position of the Board. As clearly shown by one respondent:

We note that several IFRS IC members and IASB Board members have expressed significant concern in public meetings about whether IAS 38 provides the most useful information, if applied to holdings of cryptocurrencies. We share these concerns. If the IFRS IC ultimately believes that IAS 38 is not an appropriate standard, then in our view, the IFRS IC should not issue the TAD. (CL 2, p. 2)

While it is not always clear whether these letters were in full disagreement with the agenda decision, the IFRS IC analysis on the letters states that seven respondents gave a positive opinion both on the technical analysis and the choice of finalising the agenda decision. However, some of those letters show substantial criticism to the soundness of the agenda decision. For instance, one of those states:

Whilst we can understand where the IFRS IC landed and why and how it landed there, we feel uncomfortable with the robustness and the relevance of that agenda decision. [...] We completely understand the limited mandate of the IFRS IC in this regard, but we believe that starting and ending a debate on something that is just evolving in different shape and form does unduly narrow the discussion. This all seems to suggest that the subject is sitting better with the Board who can apply a fresh look into this (CL 13, p. 3)

Only four letters (CL 8, CL 10, CL 12 and CL 15) out of the 23 explicitly express a full agreement with the agenda decision without advancing any proposals for the future. 17 respondents explicitly recommend a future inclusion of accounting for cryptocurrency in the

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agenda consultation, lamenting the inappropriateness of the IFRS IC solution using IAS 38. Indeed, the letters underline that IAS 38 fails in fairly representing cryptocurrencies as it does not to allow FVTPL measurement, which instead is depicted as the most informative approach. As a consequence, respondents suggest alternative solutions such as new standard setting (10 constituents) or other less radical (and time consuming) options. These alternatives include narrow-scope amendments of existing IFRS, such as removal of cryptocurrency holdings from the scope of IAS 38 due to cryptocurrencies being a new kind of asset (four constituents), as shown in the following example:

In relation to content, we understand that the TAD [tentative agenda decision] portraits a narrow and ultra-positivistic interpretation of IAS 38 by focusing only on the definitional elements of IAS 38 (identifiable, non-monetary and without physical substance) and disregarding its initial purpose when determining its applicability to cryptocurrencies (teleological approach). [...] In conclusion, the tentative of using the current Standards for framing a new type of assets they were not designed for creates technical inconsistencies only resolvable through a comprehensive standard-setting process conducted by the IASB Board. (CL 16, pp. 2–3).

Some respondents explicitly acknowledge the need for time to monitor the evolution of cryptocurrencies by suggesting alternative solutions for the short term, in view of a wider standard-setting project in the long term. They urge the IFRS IC to take into consideration the distinctive features of cryptocurrencies and to provide guidance paying attention to the economic substance of operations rather than to how they fit into standards developed for other classes of assets. To this end, they recommend using the flexibility offered by the IFRS by relying more on the Conceptual Framework (IASB, 2018) (CL 7) or allowing preparers to exercise discretion following IAS 8 (para 10–11) in view of a future standard-setting project by the Board (CL 9).

Overall, most respondents seem to share the view that accounting for cryptocurrency holdings is not properly addressed by this agenda decision, even if they have different positions about the appropriateness of this intermediate solution and other alternatives looking forward to a more long-term project. The need for monitoring cryptocurrency evolution to develop a better understanding of this multifaceted phenomenon emerges in many CL, especially in consideration of the future decisions on the matter by central banks and fiscal authorities (CL 13), as well as the constant change of cryptocurrencies features, that may affect their nature as assets (CL 10, CL 13). The variety of options proposed by respondents show that the IASB could address the issue in the short term – without a new standard – using different approaches, by intervening on existing IFRS (e.g. a narrow-scope amendment of IAS 38) and/or referring to the principles included in the Conceptual Framework and in IAS 8.

Despite the constituents' criticism, the IFRS IC finalised the agenda decision in June 2019, with 13 out of 14 votes in favour. At that meeting, several members of the IFRS IC stressed that this choice followed the IASB's decision not to add a standard-setting project to its agenda and that it addressed the need to pursue comparability in a non-regulated area. Furthermore, it was consistent with the recommendation of the IFRS IC's staff, whose analysis focused mainly on the technical analysis and summarised other feedback as "Other matters outside the scope of the IFRS IC's activity in issuing an agenda decision, limited to the correctness of how existing IFRS must be applied in the case under consideration. From this perspective, the IFRS IC had to provide guidance in line with existing IFRS, regardless of the fact that many respondents showed criticism on this approach.

In summary, the IFRS IC agenda decision is currently the official IASB's position on the accounting for cryptocurrency holdings, issued four years after the first time the issue was raised in the IASB agenda consultation. This is not the outcome of standard-setting activity in

Accounting for

cryptocurrency

a strict sense but constitutes guidance to apply existing IFRS to account for a new and rapidly evolving class of assets. Additionally, the revised Due Process Handbook has later specified that entities are required to apply agenda decisions as they derive their authority from the standards themselves (IFRS Foundation, 2020, par.8.5). As a result, it is now clearer that the controversial guidance of the IFRS IC agenda decision is not simply explanatory material but is mandatory for IFRS adopters.

6. IASB response to constituents' expectations: a matter of regulatory space

The analysis of the debate on accounting for cryptocurrencies within the IASB has shed light on how the IASB has dealt with this emerging issue, by identifying its constituents' expectations and the limits of its regulatory response. The theoretical lens of regulatory space is used to interpret the path that led to the agenda decision by the IFRS IC.

The first phase of the analysis shows how the constituents provide their views and expectations in an effort to raise the accounting issue of cryptocurrency holdings within the regulatory space and to construct it as an accounting problem. Initial signs of an accounting issue appeared in the aftermath of the 2015 IASB Agenda consultation, when ASAF members responded to the IASB with mixed opinions on the topic, due to the rapid evolution of cryptocurrencies and the different diffusion of this phenomenon among jurisdictions. As a result, some standard setters (mainly from Asia and Australia) started constructing the cryptocurrency accounting problem, by arguing that literally applying existing IFRS results in an inappropriate reporting outcome due to the lack of FVTPL as a measurement option. Facing the vacuum left by the IFRS on this specific accounting issue, national standard setters autonomously issued local recommendations and requirements as appropriate solutions for accounting for cryptocurrency holdings, thereby attempting to occupy a part of the regulatory space that was not yet occupied by the IASB (Malsch and Gendron, 2011).

In response to these various claims, and pressured by the national initiatives, the Board solicited the views of the constituents who had raised questions regarding a cryptocurrency project in the IASB meetings following the comments to the agenda consultation. By calling for its constituents' contribution, the IASB followed the full and fair consultation principle, thereby preserving its legitimacy by allowing further consultation (Pelger and Spieß, 2017). However, further pressures from other constituents exacerbated by the issuance of Japanese standards for accounting for digital currencies in March 2018, led the IASB to seek the advice of the IFRS IC about the application of existing IFRS and whether it would provide useful information to investors for decision-making. The outcome of the initial IFRS IC analysis was coherent with the views expressed by the Australian standard setter in December 2016 on how to apply existing IFRS. Several Committee members also shared the national standard setters' criticism on the appropriateness of applying IAS 38 to cryptocurrency holding, as clearly shown in the following agenda paper:

Several Committee members said that applying IAS 38 to holdings of cryptocurrencies would not provide useful information to users of financial statements. Those Committee members expressed concerns about particular aspects of the measurement requirements of IAS 38 if applied to holdings of cryptocurrencies. (Agenda paper 12D, IASB meeting, November 2018).

While in the above comment the IASB recognised cryptocurrency holdings as an accounting issue, the criticism regarding the use of existing IFRS to address it paved the way for further quests in the regulatory space since the IASB did not offer a solution and further increased the uncertainty.

Despite the alternative standard setting options outlined by the IFRS IC, the IASB decided not to add any project to its work plan and asked the IFRS IC for an agenda decision explicitly stating that cryptocurrency holdings must be reported by applying existing IFRS. With this

decision, the IASB provided a much-expected response that was aimed more at confirming its dominant role in the regulatory space, rather than addressing the several constituents' expectations. Indeed, the whole agenda decision path raised sound criticism, by both the various constituents' comments to the tentative agenda decision and several Board members themselves.

With regards to constituents' (disappointed) expectations and criticism, a clear picture emerges from the public consultation on the tentative agenda decision, which includes explanatory material clarifying how to apply existing IFRS to cryptocurrency holdings. The analysis of comment letters sheds light on constituents' expectations in terms of the form and the substance of an appropriate accounting solution, which might be different in the short and the long term. In fact, many respondents acknowledged that developing an appropriate solution for a rapidly evolving phenomenon might require some time, which is also needed to take into adequate consideration the regulatory responses of supervisory authorities (e.g. central banks). However, constituents expected a short-term solution from the IASB to ensure consistent and appropriate accounting for IFRS adopters holding cryptocurrencies, based on the idea that existing IFRS requirements did not result in relevant reporting outcomes.

The analysis of comment letters reveals the themes of responses to the IFRS IC tentative agenda decision and highlights some of the criticism to the suggested treatment as well as a clear expectation for standard setting by the IASB. In the comment letters, there is a general agreement to the technical analysis supporting IFRS IC's guidance about the cryptocurrency holdings been assets, but not financial assets. This is in contrast with some accounting research that suggests that cryptocurrency is a new asset (Ram, 2019) and might be a financial asset when held for investment (Tan and Low, 2017). Some letters reveal criticism towards the use of IAS 38 for reporting the cryptocurrency holdings, thus criticising the solution of applying existing standards as not appropriate to the accounting problem raised during consultations. Such substantial disagreement is based on the accounting claims of relevance, usefulness and fair representation, which are claimed to be the tenets of the IASB's activity in developing high-quality global standards (IFRS Foundation, 2018, 2020). The forms suggested to the IASB to achieve the expected solution of a different accounting treatment (i.e. allowing FVTPL) vary, ranging from the application of IAS 8 to narrow-scope amendments and a new IFRS of IFRIC project. This variety shows that constituents' expectations were not confined to a new standard or IFRIC interpretation and also that the IASB had different available options to address this accounting issue in the short term.

With regards to the criticism raised by some Board members, the audio recordings reveal that the IASB meeting on the agenda decision was tense because several members argued that existing IFRS were not the appropriate response to the cryptocurrency accounting problem. These members based their opinions on the accounting claim of relevance, which was also present in the constituents' construction of the accounting problem. The disagreement within the Board is evident considering the approval of this resolution by a simple majority, which was achieved only by using the Chair's casting vote, an additional vote that the Chair exceptionally uses in the event of a tied vote (IFRS Foundation, 2018, para 34).

Further, the analysis of the tensions and claims along the four-year cryptocurrency debate provides insights into the motivations underlying the IASB regulatory response to the issue. First, as gathered from the IASB meetings recording, the IASB regulatory response is motivated by cryptocurrency being a too complex and uncertain matter to undertake a time-consuming project immediately. Indeed, according to Mr. Hoogervorst (AICPA Conference, 2018), by the time – usually five years – a new accounting standard is developed, cryptocurrencies will have disappeared, being just a passing trend. However, the initial choice of not addressing this issue exposed the IASB to the risk of leaving the regulatory space available to other members (Canning and O'Dwyer, 2013). As a consequence, the

agenda decision can be interpreted as a strategic response to maintain a dominant position in the regulatory space (Oliver, 1991; Malsch and Gendron, 2011), while also formally respond to constituents' expectations within a consultative environment. The issuance of the agenda decision including explanatory material is compliant with the Due Process Handbook, as it satisfies the request for guidance, as manifested by IASB constituents. Indeed, by prioritising the agreement with the technical analysis over other (more critical and substantial) comments, the Board could formally state to have addressed the accounting problem, by preserving the inclusive participation and full and fair consultation, and in so doing, maintaining (at least formally) its legitimacy (Artiach et al., 2016; Gillis et al., 2014; Pelger and Spieß, 2017). As a result, by labelling the criticism raised by constituents as 'Other matters outside the scope of the agenda decision' and focussing on the technical analysis, the IASB satisfied its constituents' expectations only formally, while marking the field establishing its view on the accounting treatment of cryptocurrencies (Malsh and Gendron, 2011; Young, 1994).

However, having demonstrated that the current accounting solution is deemed inappropriate by several Board members and constituents, we argue that there were other potential solutions – suggested by respondents – the IASB could have adopted and still avoid undertaking a long standard-setting project on such a complex area. For instance, an alternative solution was a rapid narrow-scope amendment to the IAS 38 recommending preparers to adopt the IAS 8, which was also one of the alternatives proposed by the IFRS IC. This would have been consistent with the principles-based nature of the standards, at heart to all IFRS bodies (Camfferman and Zeff, 2015), which inherently involve the use of professional judgement (Bradbury and Schröder, 2012). Also, such an alternative would have been in substantial accordance with constituents' expectations (i.e. allowing FVTPL), prevalent practice and guidance issued by some jurisdictions in the meanwhile. As a consequence, the agenda decision can be interpreted as a reaction of the IASB to the moves made by national standard setters that had filled the regulatory vacuum, initially left by the IASB. In so doing, the IASB marked the field with its imprimatur and defended its role in the regulatory space (Malsh and Gendron, 2011).

In brief, the final response by the IFRS bodies to the cryptocurrency accounting problem has granted the standard setter to maintain its dominant role in the regulatory space and hinder national regulatory initiatives from local jurisdictions. However, the content of the decision seems unsatisfactory as it diverges from prevalent accounting practice as well as from the specific guidance issued by national standard setters. Moreover, such decision contrasts with the usefulness and fair representation of accounting information by Board members' own admission. In this circumstance, the need to occupy the regulatory space appears to have prevailed over the desire to provide an appropriate response to constituents' expectations, thereby signalling an issue for a private standard setter aiming at developing high-quality and globally accepted accounting standards.

7. Conclusions

The present paper has intended to explore how the IASB has dealt with the emerging issue of accounting for cryptocurrencies by examining the four-year debate around accounting for cryptocurrency that developed between the IASB, the IFRS IC and their constituents. In so doing, the paper reveals the constituents' expectations and the motivations that surround the regulatory response offered by the IASB on the matter. The paper analyses how the accounting problem of cryptocurrency holdings is constructed among the IASB and its constituents and discussed the solution offered by the IASB in light of its constituents' expectations and its motivations. The theoretical lens of regulatory space is used to analyse and interpret the four-year debate and informs the extensive thematic analysis on a variety of

public documents issued by the IFRS bodies, audio recordings transcripts of IASB, ASAF, IFRS IC and IASB EEG meetings, as well as 23 comment letters that were submitted in response to the tentative agenda decision issued by IFRS IC in March 2019.

The analysis has shown that the IASB formally responded to constituents' expectations, respecting the full and fair consultation principle, thus preserving its legitimacy. However, the constituents' criticisms as well as the dissatisfaction expressed by some IASB members to the content of the agenda decision, show that in substance the IASB did not satisfy constituents' expectations to address the accounting problem arising from cryptocurrencies. First, the global standard setter showed resistance to the requests from national standard setters that were constructing the accounting problem of cryptocurrency holdings based on the claim that existing standards provided an inappropriate basis for their reporting. Only when national standard setters started issuing national guidance – thus occupying the regulatory space – the IASB acted to defend its position in the space by requesting its interpretative body (i.e. IFRS) IC) to provide guidance via an agenda decision. Such agenda decision resulted in the application of existing standards to account for an item that did not even exist when those standards were developed. This controversial decision attracted strong criticism not only by IASB constituents but also by several Board members; both were making accounting claims regarding the usefulness and fair representation of the reporting outcome descending from such guidance. While the Board's choice of avoiding the standard setting was appropriately motivated by the long IFRS due process and the uncertainty surrounding cryptocurrencies, alternative interpretations more in line with constituents' expectations and the principle-based nature of IFRS were available. As a consequence, we argue that such a decision was motivated more by the IASB's need to defend its dominant position in the regulatory space rather than appropriately respond to its constituents' expectations.

With its results, the paper contributes to the accounting regulation and standard setting research by providing insights into the IASB response to a regulatory vacuum regarding a new class of items, which can be better understood through the theoretical lens of regulatory space. In so doing, it also responds to the call for more research on the dialogue between the global standard setter and local jurisdictions (Camfferman and Zeff, 2018), by shedding light on the pressures exerted by the IASB constituents and their impacts on IASB decisions. Indeed, accounting issues arising in national jurisdictions generate expectations on the global standard setter's activity, which in this case seems aimed at defending its position in the regulatory space rather than providing an appropriate accounting solution. The emergence of disruptive technology has been shown to impact the contested arena of accounting regulation, by reversing the participants' roles: the constituents asking for accounting change and the standard setter trying to resist such pressures while defending its position.

This study has also some policy implications. First, it provides insights on the limits of the IASB long regulatory process in the circumstance of emerging accounting issues deriving from rapidly-evolving technology, which are expected to grow in the next future and might be better tackled with a specific task force. In particular, it highlights the contrast between the rapid pace of technological innovation and the time and information required for a due process aimed at developing high-quality accounting standards. Our analysis has shown that the length of the due process may represent a constraint to undertake standard setting, suggesting that a faster IFRS due process for emergent and urgent issues could be useful to address the challenges posed by the new digital era. Secondly, it provides insights on the role of the agenda decision showing its growing importance in the IFRS environment as well as its limits when used in the context of a regulatory vacuum. The guidance provided in the agenda decisions is now explicitly mandatory (IFRS Foundation, 2020), even if it contrasts with prevailing practice and is not subject – at least so far – to any endorsement process in several jurisdictions. The IASB also tried to introduce the agenda decisions in its own due process but was heavily contrasted by constituents in the recent review of the Due Process Handbook,

thus confirming the controversial role of this tool in the IFRS regulatory space. The growing Accounting for importance of agenda decisions as well as the variety of alternatives proposed in comment letters (e.g. narrow-scope amendments) highlight the number of tools the IASB is using (or can use) for IFRS interpretation and maintenance, which may constitute a promising area for future research. The study has also some limitations, as it has considered only public documents, due to the novelty of such a topic. Further research may include interviews with IASB and IFRS IC representatives as well as IASB constituents, such as prepares and users. It may also benefit from the analysis of financial reports of companies that will report. cryptocurrency holdings.

Notes

- 1. https://coinmarketcap.com/, accessed on 07 September 2021.
- 2. https://coinmarketcap.com/, accessed on 07 September 2021; at the date of our previous access (June 2021) the number of cryptocurrencies available on https://coinmarketcap.com/was 5601 in total, including Bitcoin, Etherum, and Tether as the top three on the list, detaining a total of 856 billion USD of market capitalisation. In our initial access (October 2020), they were 3610 in total, including Bitcoin; Etherum and Tether as the top three on the list, detaining a total of 267 billion USD of market capitalisation.
- 3. https://coinmarketcap.com/, accessed on 07 September 2021.
- 4. Data gathered from TripleA (https://triple-a.jo/crypto-ownership/#) accessed on 10 June 2021
- 5. For further evidence on the diffusion of crypto-assets in Europe, see the EBA Report as of January 2019 titled "Report with advice for the European Commission on crypto-assets" on https://www.eba. europa.eu/sites/default/documents/files/documents/10180/2545547/67493daa-85a8-4429-aa91e9a5ed880684/EBA%20Report%20on%20crypto%20assets.pdf?retry=1 (accessed on 12 June 2021)
- 6. Data reported by Price WaterHouse Coopers in its "6th ICO/STO report" published in 2020 and accessed on 10 June 2021 https://www.pwc.ch/en/publications/2020/Strategy&_ICO_STO_Study_ Version_Spring_2020.pdf.
- 7. In addition to their mandate, its members can undertake research, provide guidance on the IASB's priorities, cooperate on outreach, encourage stakeholders' inputs and identify emerging issues (IFRS Foundation, 2016, para 3.49). The IASB shares information and consults with the ASAF, which meets in London four times a year, and also with regional bodies such as the International Forum of Accounting Standard Setters (IFASS), the Asian-Oceanian Standard-Setters Group (AOSSG), the Group of Latin American Standard Setters (GLASS), and the European Financial Reporting Advisory Group (EFRAG).
- 8. The Australian Accounting Standards Board (AASB) is included in the Asia-Oceania Standard-Setters Group.
- 9. According to the IFRS IC interpretation, a holding of cryptocurrency meets the definition of an intangible asset under IAS 38 because (1) it is capable of being separated from the holder and sold or transferred individually; and (2) it does not give the holder a right to receive a fixed or determinable number of units of currency.
- 10. Our analysis encompasses all the twenty-three comment letters received by the IFRS IC and published on the IFRS official website, including three late letters received up to two weeks after the deadline of the public consultation. It also takes into consideration the IFRS IC's staff analysis of the feedback received in the public consultation.

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