



Disclosure under pandemic pressure: a vantage point of COVID-19 through the Integrated Reporting perspective

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Abstract: The COVID-19 pandemic revealed many vulnerabilities in the socio-economic systems around the world. Authorities continuously battled with the coronavirus, issuing restrictive measures and aids to maintain the balance on all dimensions. In this context, we observe a growing importance attributed to the level of disclosure concerning the impact of the pandemic. This research aims to provide an input on assessing the formerly mentioned impact, through the lens of integrated reporting, with the aid of multiple official documents issued by professional organizations and standard setters, using content analysis and delineating disclosure proxies. The research outcome is a disclosure checklist which allows analytical tracking of specific pandemic-related information within the standard integrated reporting architecture, embedded in the reporting frame consisting of fundamental concepts, guiding principles and content elements.

Keywords: integrated reporting; value creation; capitals; pandemic; disclosure.

1 Introduction

In 2020, a major event unfolded and changed our way of living. The onset of the coronavirus pandemic (also known as COVID-19 or SARS-COV-2) brought immense challenges to communities worldwide in terms of public health, as well as financial and economic volatility. The general perception was that the spread of the virus was extremely

alert in the past years in the context of globalization and easy mobility between geographic regions, leading to an exponential increase in the number of infections and deaths and generating the need for severe restrictive measure from public authorities in the attempt to reduce the negative impact on public health.

Alongside the social impact, we observe that the COVID-10 pandemic manifests an emphatic economic impact, incurring its downsides on multiple sectors (such as: transportation, food service or tourism). Therefore, the significant impact on communities induces a change in basic assumptions for several functioning parameters for the mentioned activities, to which most of the actors adapted (a so-called “new normal” with necessary measures – such as: work-from-home, social distancing, the predominant use of innovative technologies and online means).

Considering the new context, we delineate the assumption that the reporting component acquires an increased level of attention, supporting the accountable institutions and organizations involved in fighting against the pandemic. Within the integrated reporting system – according to its definition issued through the Conceptual Framework by the Value Reporting Foundation (VRF) – two fundamental concepts are highlighted, respectively: value creation and the six capitals (VRF, 2021a). These concepts pinpoint the essence of the activity model for all reporting entities and encompass every layer of the reporting entity (both on a static view – when addressing resource allocation and on a dynamic view – when discussing value creation). In this sense, the breakdown in content carried by the integrated reporting system is favorable to supplying an analytical view of the COVID-19 pandemic impact on different levels of activity for the reporting entities.

The contribution of this research to the field is encompassed by addressing the impact of the COVID-19 pandemic in organizational disclosure, so that information users can better understand how this major event affected the dimensions of reporting entities’ activities. This aim can be achieved through the lens of integrated reporting, which ensures a holistic level of presentation and allows analytical tracking of the impact through a disclosure checklist in close connection to the core architecture of this reporting system.

Aside from the introduction, this research progression unfolds into several interconnected parts. The second section consists of the statement of the research objective (and the subsequent question), methodological aspects concerning the drafting of the main disclosure template, as well as a theoretical frame. The third section outlines evidence from previous research, by analyzing the literature concerning lessons from past (pandemic or other major impact) events on society and synthesizing society’s approach and reaction to COVID-19. The fourth – and most important – part of this research involves the content analysis of the official guidelines’ documents issued by relevant professional organization connected to integrated reporting in the context of the COVID-19 pandemic, producing a research output in the shape of a disclosure checklist (which emphasizes the pandemic driver overlapped on the constituent elements and disclosure items specific to integrated reporting). The last two sections of the study provide a discussion of the usefulness and applicability of this disclosure checklist, as well as conclusions, hindrances (or limitations) and perspective of development within future studies.

2 Research Objective and Methodology

Humanity did not see its first pandemic. Our world has been shaken before by such major events, each time responding swiftly, with the means at hand. Within the literature, the niche dedicated to the impact of major events on reporting systems (or on capitals) requires a specific level of attention in the context of COVID-19. We can observe a pattern in drafting comparative analyses and pointing similarities with previous pandemic events – such as the flu pandemic from 1918 (Beach et al, 2020), synthesizing lessons and sets of measures which are due in case of new major events. Some aspects are comparable, whereas others differ significantly (keeping in mind that our world is in a constant dynamic). From the measures of authorities in the context of the COVID-19 pandemic, the predominant impact was on human capital (as projected by World Bank 2020a, 2020b; Deloitte, 2020), as well as financial capital (Yarovaya, 2020). However, other studies and measures show an increasing interest for intellectual capital (considering the research and development component of various entities involved in fighting the negative effects of the pandemic – such as: the development of vaccines and medicine).

Acknowledging the structure and standard model of integrated reporting, we delineate the assumptions through which this reporting outlet can emphasize key developments concerning specific capitals, with the aim to contribute to the diminishing of pandemic negative effects (ACCA, 2020; VRF, 2021c; IR South Africa, 2020; Garcia-Sanchez et al, 2020). Arguing with this logic, critical voices reveal certain flaws and shortcomings of integrated reporting (Biondi et al, 2020), once again proving the necessity of further investigations of the reporting dynamics in pandemic context. Moreover, the research dimension connected to integrated reporting was prone to an increased inters in the past years, having an innovative trait, with a holistic approach, giving a balanced view on financial and non-financial components. By using this system, reporting entities can create a synergy effect with the measures of the authorities for fighting against the pandemic (although the real effect is more likely of mutual influence), thus creating a reactive frame for potential future major events. In this respect, the main objective of this research is to show whether the integrated reporting system can disclose specific information concerning the impact of the COVID-19 pandemic on reporting entities, using an assessment tool including disclosure proxies and markers from official documents issued by professional organizations and standard setters.

Using information from official sources (issued by recognized organizations, constantly involved in the development of financial and non-financial reporting frameworks) offers a reliable level of validity in the drafting process for the disclosure checklist. Considering the parameters and assumptions from which we initiate this study, our main research question is the following:

To what extent does integrated reporting offer the frame for assessing the impact of the COVID-19 pandemic on the activity of reporting entities?

Passing from the borderline of the theoretical framework inbound, we require a setting in which the integrated reporting system would operate in an interconnected

environment (as the COVID-19 pandemic revealed that interactions are vital to the good functioning of most activities). The context also needs to consider the pressure points which impact the integrated reporting model. In this respect, the actor network theory (ANT) would provide a suitable setting to describe the activities and content elements encompassed in the integrated system.

This theory originated from social sciences (Callon, 1986), being characterized by a descriptive trait rather than an explanatory one. Steadily, the theory was adopted by accounting researchers in the context of sociological influences in the field (Justesen & Mouritsen, 2011). In a nutshell, the actor network works by balancing the importance of the factors in a social situation (putting them on the same level), thus diminishing the impact of social forces (Latour, 1996). The argumentative structure which we use within this research aligns to the constructivist approach of ANT (focused on understanding the connections and interactions between elements).

Another delineation of ANT further elaborates on the enactment of relations that produce and reshuffle all sorts of actors (both human and nonhuman) (Law, 2009). In the context of integrated reporting, a system which revolves around the six capitals model and has in its focus the restructuring of financial and non-financial information in a holistic output, the usefulness of an actor network to describe these interactions is high. Evidence shows that this assumption has already been in focus within studies concerning framework development around ANT (Vinnari & Dillard, 2016).

Starting from the documentary dimension, we perform an overview on the responsiveness to past major events (e.g., pandemics and epidemics) to verify how certain measures were enforced and how the paradigm shifted or not (as an externality of the pandemic or epidemic). Furthermore, we analyze whether certain instruments of financial and non-financial disclosure (or certain indicators) were impacted by these events. Afterwards, we address the key developments and issued documents (guidelines, press releases and clarification) from professional organizations and standard setters, analyzing how certain elements from the integrated reporting system are morphing in the context of the COVID-19 pandemic. Moreover, we analyze whether specific information can be connected to established reporting components (as delineated by the Integrated Reporting Conceptual Framework) and can be used to triangulate specific pandemic-related information in the standard integrated reporting architecture. Last, but not least, we construct a disclosure checklist to provide an assessment instrument for information related to the pandemic within the integrated reporting architecture. The main research method employed is content analysis – on the official documents issued by professional organizations and standard setters. Content analysis is frequently used within studies from the literature, emphasizing the influence manifested by certain documents (or commentaries) within standard setting (and the issuance and developments of regulatory documents). The broad definition of content analysis consists of it being considered “a research method that uses a set of procedures to make inferences from text” (Weber, 1990: 9). From another point of view, content analysis is perceived as “a method of codifying text into various categories and can be used where a great amount of qualitative information

needs to be analyzed” (Linsley & Shrives, 2006). Nevertheless, the disclosure checklist can be used as a ground for calculating a disclosure index which would measure the pandemic-related disclosure level within integrated reports.

3 Learning to report in pandemic times: lessons from past events

The fast spread of the COVID-19 pandemic worldwide surfaced a significant number of vulnerabilities in social and economic systems, as well as the exponential increase in contagion risk in the context of globalization (keeping account of the ease of mobility between different regions). However, the lessons from past pandemics are a good marker for the way in which people should respond to severe epidemiological situations – such as the 1918 flu – also known as the “Spanish flu”. Arthi & Parman (2020) reveal a series of similarities between the Spanish flu and COVID-19 concerning the transmission rate, the global widespread, as well as death tolls. The study also reveals similar traits between the pandemics in terms of dynamics (the so-called “waves”), but also the fact that the death toll of the 1918 flu was higher – at least in the case of the United States of America – than the combined number of deaths caused by war. In the case of the 1918 pandemic, the most emphatic effects are on a demographic level (inducing variations in population dynamics, as well as more complex effects – for instance, psychological, marital status or fertility, with a secondary impact in workforce and economics). Another example is the typhoid fever epidemiological situation from the United States of America. In this specific case, there was a significant impact of the authorities’ measures (including on a public policy level), limiting the downsides which can produce a long-term impact, a good lesson which was replicated by other underdeveloped countries dealing with similar sanitary crises (Beach et al, 2016).

Nevertheless, even though authorities struggle to minimize the damage inflicted by pandemics, long-term effects usually occur. Jorda et al. (2020) reveal within their study the occurrence of shockwaves on an economic dimension, with significant correlations to the diminishing of asset returns, as well as the decrease of real wages (converging with the neoclassical economic model). The similarities between COVID-19 and previous pandemics emphasize the direction towards which the economic context is heading, but the fact that events unfold in close connection to some unknown variables generates variations in predictability on a timeframe of even a few months. Considering this dynamic, the social and demographic impact of the pandemic (especially concerning the death toll) is sensibly lower than in the case of previous pandemics. Also, the evolution of the pandemic waves and the way in which they affect certain demographic groups create the assumption for studies that predict the impact on demographic channels and workforce (for example, incipient waves take their toll on older groups, with comorbidities, whereas the following waves tend to affect younger groups). Last, but not least, the study by Jorda et al (2020) approaches the fiscal aspects of the pandemic, more specifically – the public debt generated by the authorities’ measures directed against the negative effects of the pandemic. These measures generate several pressure points on the governments (although some results reveal evidence that long-term fiscal sustainability can be consolidated).

On a social dimension, the effects occur on multiple extensions. One of the main downsides observed in the case of COVID-19 is the limitation of social interactions and, more emphatic, the impact on education. Evidence from the literature shows that the school closure in the context of the polio epidemic in 2016 (Meyers & Thomasson, 2017) reveals major deficiencies in the education of children which have the proper age to work, in the areas with high contagion risk (in the context of severe measures). However, wider results of the study show that there is a significant opportunity cost in the case of the measures taken by the authorities (concerning all dimensions, not just the educational one). Connected to the COVID-19 pandemic, although similar measures are being taken, the technological advances can be a factor in overcoming the deficiencies. Some of the measures incur controversial aspects regarding the accountability (or, in some cases, lack of) of the governing bodies (or authorities) – especially if we are discussing the death tolls in the context of COVID-19 (Yu, 2021) or the major increase of public spending compared to pre-COVID-19 times (Ahrens & Ferry, 2021).

The pandemic context also induces behavioral changes for workers, as they are susceptible to accepting lower wages if they are offered the possibility to work from home (Arthi & Parman, 2020). Simultaneously, the educational process is adapted accordingly, with online teaching and exams taking the spotlight. On the other hand, impact in terms of revenue (in general, because of chain restructuring and wage decrease to ensure sustainability) has implications in decreasing average consumption per household – adapted to the “new normal” (Mukit et al, 2021), as well as in decreasing general wellbeing and increasing poverty levels in certain areas (Jung et al, 2021).

In essence, evidence from the literature reveals the necessity of reshaping and rethinking the capital system within the integrated reporting format. Matta & Mohapatra (2021) propose changes in disclosure regarding integrated reporting (more specifically, concerning the capitals), postulating on an objective and principle-related levels additional elements which can increase transparency in connection to the responsiveness of reporting entities in the context of COVID-19. This is an important focus, ensuring complementarity with our research and providing validity to the usefulness of integrated reporting in pandemic context. The mentioned study has an extensive intake through the impact-response matrix, which accounts for the fundamental concepts included in the activity model of reporting entities and provides an analysis through the perspective of impact amplitude versus the quickness of the response. Moreover, the impact of the pandemic and the actions of the reporting entities are necessary to safeguard legitimacy in connection to interested parties. Nevertheless, the evident limitations are linked to subjectivity and lack of support elements from professional organizations, as well as lack of specificity (sector and dimension-based).

The pandemic context also revealed the significant emerging risks for reporting entities (an emphatic element in the integrated reporting structure). Roberts et al (2022) examine the consolidation of risks in the context of COVID-19 within integrated reports issued before the onset, with staggering results. Although a considerable amount of information was available about COVID-19 when the reports were drafted, a relatively

small number of entities (15.5% from the sample of 489 companies) disclosed this information in their integrated reports. The study raises awareness an important theme concerning the adequacy of significant risk prevention strategies – such as the pandemic context, demonstrating the lack of preparation of many reporting entities and the disclosure of minimal information (for conformity purposes).

The lack of awareness concerning disclosure of specific activities and elements connected to natural capital and sustainability is acknowledged and validated by Hassan et al (2021), in the context of the actor network theory. The study reveals the necessity for the concept of circular economy, as well as for the non-financial disclosure of natural capital and biodiversity. These elements can be included and nuanced by integrated reporting, especially during the pandemic, when reporting entities seek viable solutions for sustainability-related aspects. This trend is validated on a more analytical basis on a sample of entities from New Zealand (Dimes & de Villiers, 2021) and Denmark (Fijałkowska & Dyczkowska, 2022), without a wider amount of evidence on empirical grounds.

4 Refining the frame of integrated reporting for disclosing the impact of COVID-19

4.1 New dynamics in reporting: the view of professional organizations and standard setters

The pandemic context outlined by the spread of COVID-19 can be noticed, as well, in the communications of professional organizations and standard setters – involved with integrated reporting. Consequently, we identified a series of guidelines, press releases and clarifications which were published on specialized websites for framework issuance and implementation of integrated reporting (VRF, 2021c; IR South Africa, 2020; SAICA, 2021; Weaver, 2021). For instance, the main organization involved in regulating and guideline issuance for integrated reporting – VRF – issued a press release (VRF, 2021c) to offer a series of impact factors on the capitals, such as:

- Concerning human capital, the pandemic revealed the consequences of years of insufficient investments in the health infrastructure. The issue at hand is the amplitude of an entity's contribution to supply medical products and technologies, including wider societal hygiene. Also, there is a significant requirement to analyze the way in which products and technologies serve the purpose of approaching or contributing to the issue at hand (for instance, products which increase obesity, respiratory diseases, and other chronic deficiencies).
- In terms of social and relationship capital, the pandemic revealed the need for redefining the work relationships between employees, as well as a blurring of work and private space (with a clear preference towards work-from-home in case of many employees). There is a significant requirement for an analysis of the extent to which the reporting entities offer solutions for employee mental health (in case of multiple age groups and work contexts). Also, an increased importance

is attributed to the level of organizational and societal preparedness in case of disaster.

- Regarding natural capital, the pandemic emphasized the long-term consequences of deteriorating natural habitats (by humans) and increased the degree of awareness of wildlife trading (a nuanced reference to the alleged pandemic origins). From this perspective, VRF acknowledges the need for an analysis of the extent to which the operations and solutions offered by the reporting entities support the conservation and sustainable use of natural resources, including the critical role of biodiversity in developing the resilience of natural and human ecosystems.
- Concerning manufactured capital, we notice that the pandemic emphasized the role of digital economy in facilitating preparedness and response strategies. A growing importance is attributed in this sense to the analysis of the extent to which the reporting entity offers solutions for digital economy – one to include virtual collaboration, alternative mobility conceptions, data processing, as well as e-commerce, online education, as well as entertainment.
- Connected to financial capital, specific aspects refer to restarting the economies following lockdown and the extent to which this situation constitutes a real challenge for publicly owned and privately owned financial institutions (mostly, to process the aids and funding, ensuring the reliable allocation of resources according to the needs). Consequently, there is a significant need for an analysis of the extent to which the reporting entity offers solutions to facilitate the reliable and accountable transfer of financial resources towards households, entrepreneurs, and small businesses, supporting the rebuilding of the economy. Also, the VRF stresses the need for disclosure in terms of new innovative means – including fintech and thematic bonds, required to mobilize new capital.
- Regarding intellectual capital, VRF observes that a global pandemic generates disruptions in various industries, and those involved in transportation, travel and tourism are among the immediately affected entities from 2020. In the same manner as the systemic issue of climate change, the impact of COVID-19 will evolve during a longer time. Therefore, VRF acknowledges a need for analyzing the extent to which the reporting entity contributes to the increased trust in science, integration in risk management, enabling the re-skilling of employees, providing models of attractive work environments and online solutions to nurture future talents.

Recent studies which predominantly analyze the private sector (as data sources and the report evidence outnumber the public sector) identify changes in dynamics for integrated reporting. Foster (2020) reveals impact on corporate governance in the case of South African listed companies (starting from the conceptual framework established by King IV norms). The study emphasizes – alongside the negative impact of the COVID-19 pandemic on communities – constructive aspects concerning the need for a more solid dynamic of corporate governance in pandemic context, including the perspective of nuancing substance over form, as well as principle-based narrative reporting (opposed to

conformity-based “box-ticking” reporting). Moreover, a study conducted by Mates & Irimus (2020) discusses the emphasis on annual reports during the COVID-19 pandemic (more precisely, in terms of text mentions within the reports), revealing the inclusion of the pandemic context as future-oriented information (in the Outlook section) and the disclosure necessity for pandemic-related elements which fit the mold of integrated reporting.

In close connection to the new technologies, the economic environment is constantly adapting and ensures transition to new business and organizational models. The e-commerce measures are becoming predominant and are prioritized opposed to traditional commerce. Also, the education of beneficiaries and online platform users is becoming more emphatic, simultaneous with the sustainability of human resources. In this context, SAICA (2021) considers that integrated reporting can provide a good mean of communication in these special conditions, addressing multiple aspects which can be better explained holistically in a pandemic context. The focus is attributed to the following dimensions:

- What is the organizational model? How adaptable, flexible, or resilient is this model? Is there a need to restructure the model?
- Which are the relationships with the stakeholders?
- How are capitals managed within the organization?

In a wider analysis, integrated thinking is one of the essential aspects in delineating the reporting frame, consolidating the emphatic need to implement integrated reporting in corporations (or organizations) in pandemic context (Deloitte, 2021). The key principle from which this argumentative structure starts is the fact that no reporting entity acts isolated from its environment but is rather interconnected with other actors. In this context, within the business fundamental dynamics, the reporting entities will consider the operational risks and opportunities.

In the same reference frame, the COVID-19 pandemic exposed a fundamental truth: natural and human systems are inseparable, interdependent, and increasingly fragile, with the significant possibility of risk occurrence and a more fluctuating dynamic. Within these systems, technology acts as a catalyst – both potentially positive and negative – for business (activity) models. The environmental, social, and governance-related aspects (commonly abbreviated ESG) are acknowledged as main risks for business resilience, market stability and worldwide economic wealth (Deloitte, 2021). Simultaneously, the pandemic consolidated the importance of the risk disclosure and the way in which reporting entities approach value erosion (the 2021 revision of the framework aiding the entities to better communicate these aspects in the wider spectrum of their activity model). The incertitude climate left by the COVID-19 pandemic applies an additional pressure on reporting entities to provide a comprehensive risk assessment (Anders, 2021).

Consequently, more reporting entities reached a tipping point. Their social license to operate can no longer be taken for granted, as it must be earned and maintained through firm and constant actions. Long-term resilience and the ability of the reporting entities to create sustainable value is closely connected to the way it harmonizes its scope and values

with societal expectations. The purpose of the business (or organization) is redefined as entities adopt the capitalism of stakeholders, acknowledging the importance of value creation for all interested parties (issue confirmed by ACCA, 2020). This logic represents an opportunity to take responsible decisions and to build based on the principles of equity and sustainability. Supporting the new paradigm, the stakeholders acknowledge the need for a development initiative regarding an integrated thinking system which can be applied by entities in conversations with their management, as well as in consolidation of guidelines for ESG reporting (Deloitte, 2021). These elements can influence an analysis template concerning value creation, stakeholder relationships, as well as governance.

A similar argumentative logic is employed by CIMA (2020), considering that reporting professionals should consider the impact of the coronavirus pandemic on the reporting entity. A leadership which considers the overall activity (or business) model, as well as risk mitigation strategies, is best positioned to provide an efficient reporting of financial and non-financial elements, pinpointing benefits for their line of activity. In this sense, the analysis outlines three main directions (CIMA, 2020):

- An assessment of relevant material aspects – in the pandemic context, material aspects include supply chain management (as borders are closing and international trade becomes increasingly difficult), workforce (including subcontractors and consultants), as well as cash-flow timeframe (in the context of price increase temptation to offset short-term losses, mitigated with customer retention on the long-term).
- An adjustment to circumstances – in the pandemic context, reporting entities must account for changes in disclosure, including aspects connected to impairment assumptions and fair value of assets, aspects regarding going concern (on the ground of activity and travel restrictions, financial health of customers, government measures), as well as aspects concerning liquidity incertitude.
- A view of reporting beyond financial statements – in the pandemic context, reporting entities must explain certain aspects, such as: operational decisions, accounting for new challenges, adhering to new frameworks (e.g., VRF, GRI, etc.), preparation for economic difficulties.

All these elements – framed in the pandemic context – are part of a wider dynamic of the reporting system (especially, on the non-financial level). The impact of COVID-19 is major on both the local and global level – the reports being framed on a structure which addresses multiple dimensions of the pandemic (CGISA, 2021). In this sense, evidence from the literature reveals that approximately 74% of the financial management structures consider that the improvement – especially through digital means (Liakh, 2021) – of non-financial reporting is catalyzed by the pandemic context (EY, 2021), and aspects connected to the socio-economic dynamic, climate change, economic inequity and ecosystem risks are better nuanced and acquire more focus in the wider reporting frame (Dameri & Ferrando, 2021).

The reporting practice delineated a series of guiding directions “in a post-COVID world”, which can represent a ground for reporting entities to use in their disclosure outlets (BSR, 2020):

- A reexamination of materiality and its integration in risk management – the principle of materiality represents the keystone of a good sustainability report, allowing companies to identify relevant sustainability issues – material to both the stakeholders and the business success. As the entity is making its way out of the crisis, materiality assessments can be revised in two main directions. First, the clear financial impact of non-financial ESG issues during the pandemic strengthens the need to have a better integration of sustainability in the entity’s risk management. Second, entities can use materiality assessment to explore the relationship between their impact on a sustainability issue, as well as the other way around.
- An assessment of disclosure requirements for stakeholders, to determine the efficacy of the entity’s response to COVID-19 – stakeholders ultimately analyze the way in which the entities responded during the pandemic, and this action implies new presentations to aid information users in better comprehending the response to a specific issue. Stakeholders search for new information about the material issues, as well as perspectives for decision-making, so that entities will be bolstered to consult them to determine which information is of interest. For instance, stakeholders seek to understand the way in which an entity considered the needs of its most vulnerable employees or local communities, whether the entity conducted everything in its power to safeguard human rights in its COVID-related decisions and whether it balanced its short-term needs with long-term resilience.
- A significant increase in connectivity between non-financial and financial reports – for instance, a sustainability report or an integrated report offers an annual report of the way in which an entity responds to a material issue for stakeholders and serves as a marker for describing the strategy, approach, and performance. COVID-19 revealed how influential ESG problems can be in connection to financial performance. This link became so evident, as reporting entities had to use this argument as a justification to create a stronger bond between financial and non-financial reports. This status quo led to embedding multiple core values of the Sustainability Accounting Standards Board (SASB) in financial reporting or the increased occurrence of cross-references between financial and sustainability reports. This comes as a key development in the context of the European Union Directive concerning non-financial reporting, which represents an opportunity to further align the complementary approaches concerning sustainability disclosure.
- Measures to increase disclosure concerning the entity’s resilience – COVID-19 induced an enhanced level of attention to risk factors, including threats to public health, supply chain disruptions and operational flexibility. To improve resilience

reporting, entities may draw lessons from the Task Force on Climate-related Financial Disclosure (TCFD). The TCFD recommendations offer an appropriate frame for entities to disclose their climate-related risks and their mitigation strategies, but the pandemic clearly illustrates that systemic non-financial risks extend beyond climate changes and cover a large variation of social and durability issues. Considering the significant traction gained by the four pillars of TCFD (governance, strategy, risk, indicators/targets), a similar approach can be implemented for social and sustainability issues to report and manage this sort of risks. This approach can include the use of scenario analysis to establish a series of plausible prospects and to describe the way in which the company can respond to each of them, aiming to improve resilience to future sustainability challenges.

- Comparable disclosures on COVID-19 – stakeholders benefit nowadays from companies that use Global Reporting Initiative (GRI), SASB standards and TCFD guidelines. These frameworks allow entities to supply reasonable, comparable, and useful information. However, there is no template to compare the way in which entities responded to COVID-19. Entities can seek opportunities to work with similar operators from the industry to create taxonomies, disclosure, and coherent values to report about COVID-19. Thus, investors, stakeholders and decision-making factors can easily compare information.

4.2 Refocusing integrated reporting on pandemic impact: a theoretical proposition concerning the key components

The core structure of integrated reporting is delineated by the Integrated Reporting Conceptual Framework (VRF, 2021a), based on two fundamental concepts (the six capitals and value creation), as well as a set of guiding principles. The main architecture of an integrated report is molded on eight major content elements.

Considering the key structure of integrated reporting, as well as the elements from the literature and reporting practice in the context of the COVID-19 pandemic, we can postulate a key template for analysis concerning the inclusion of pandemic-related aspects within integrated reports (see Table 1). The template is grounded in the corresponding delineations from the Integrated Conceptual Framework (with specific references), each of them having attributed disclosure proxies (drawn from the documents issued by previously mentioned professional organizations, as well as elements from the literature – with clear source mentioned for each, for testing validity).

From Table 1, we observe that all fundamental concepts, guiding principles and content elements were approached through 57 disclosure proxies – either in a direct, specific manner, or in an indirect incurred impact. The proxies which are included in the template allow the triangulation of specific information within integrated reports and is prone to be used as a disclosure checklist, as well as for calculating a potential disclosure index (which can reveal an average level of transparency concerning the pandemic-related aspects within the integrated reports).

Table 1. Disclosure checklist for assessing the inclusion of pandemic-related information in integrated reports

Reporting components	Corresponding delineation in the IR Framework	Number of identified disclosure proxies (weight)	Disclosure proxies for assessing the impact of the COVID-19 pandemic	Disclosure proxy source
FUNDAMENTALL CONCEPTS				
Value creation	Chapter 2 – section 2B – art. 2.4-2.9; section 2D – art. 2.20-2.29	3	<ul style="list-style-type: none"> - Affecting value creation in the context of restrictions (e.g., transportation, temporary closure of certain activities) - Adequate steering of created value by the organization towards fighting against the pandemic - Value erosion in pandemic context 	Weaver(2021) VRF(2021c) Anders (2021)
Financial capital	Chapter 2 – section 2C – art. 2.15	6	<ul style="list-style-type: none"> - Financial resources for support during lockdowns - Financial reserves for wage payments - Financial contributions to rebuilding plans in fighting against the pandemic - Financial reserves for supply cost increase - Information on financial support directed to families, entrepreneurs, and small businesses which contribute to economic recovery - Using financial innovation (fintech, thematic bonds) to mobilize new capital. 	SAICA(2021) SAICA(2021) IRSA(2020) IRSA(2020) VRF(2021c)
Manufactured capital	Chapter 2 – section 2C – art. 2.15	5	<ul style="list-style-type: none"> - Periods of sales stalling during lockdown - Supply problems and import-export hindrances caused by travel restrictions - The role of digital economy in response strategies - Virtual collaborations - Alternative mobility concepts, data processing, e-commerce, online education, and entertainment 	VRF(2021c) SAICA(2021) SAICA(2021) VRF(2021c) VRF(2021c) VRF(2021c)

Reporting components	Corresponding delineation in the IR Framework	Number of identified disclosure proxies (weight)	Disclosure proxies for assessing the impact of the COVID-19 pandemic	Disclosure proxy source
Intellectual capital	Chapter 2 – section 2C – art. 2.15	4	- Transition to online sales platforms	SAICA(2021)
			- Increase of trust in science, integration in risk management	VRF(2021c)
			- Re-skilling employees	VRF(2021c)
			- Supplying innovative solutions for nurturing future talents	VRF(2021c)
Human capital	Chapter 2 – section 2C – art. 2.15	3	- Investments in health infrastructure	VRF(2021c)
			- Contributions to supplying medical products and technologies (including public health and hygiene)	VRF(2021c)
			- Products and services addressing a public health issue	VRF(2021c)
Social and relationship capital	Chapter 2 – section 2C – art. 2.15	5	- Activation of relationship capital to postpone rent expenditures	SAICA(2021)
			- Work relationships between workers in pandemic context	VRF(2021c)
			- Redefining the work environment and private space (implementation of work-from-home)	VRF(2021c)
			- Management solutions for mental health	VRF(2021c)
			- Organizational and societal preparation for disasters	VRF(2021c)
Natural capital	Chapter 2 – section 2C – art. 2.15	3	- Long-term consequences of human intervention in natural habitats	VRF(2021c)
			- Awareness of the effects of wildlife products sale	VRF(2021c)
			- Contribution of the organization to the sustainable use of natural resources (including the critical role of biodiversity to the increase of resilience)	VRF(2021c)
			GUIDING PRINCIPLES	
Strategic focus and future orientation	Chapter 3 – section 3A – art. 3.3-3.5	1	- Plausible prospects (possible future scenarios) and responses to scenarios aiming to improve	BSR (2020)

Reporting components	Corresponding delineation in the IR Framework	Number of identified disclosure proxies (weight)	Disclosure proxies for assessing the impact of the COVID-19 pandemic	Disclosure proxy source
			resilience to future sustainability challenges	
Connectivity of information	Chapter 3 – section 3B – art. 3.6-3.9	2	<ul style="list-style-type: none"> - Embedding multiple core values of other standards in financial reporting or the increased occurrence of cross-references between financial and sustainability reports - Disclosure links of material issues for stakeholders between multiple components 	BSR (2020)
Stakeholder relationships	Chapter 3 – section 3C – art. 3.10-3.16	5	<ul style="list-style-type: none"> - Assessment of the level of consumers' IT knowledge for online orders implementation - Negative impacts from the supply chain (e.g., bankruptcies) - Positive impacts (e.g., tax exemptions, increased digital component, postponements of forms, quotation increase, etc.) - Disclosing pandemic inferences which affect the needs and interests of stakeholders, as well as the relationship quality - Health protection and security for stakeholders 	SAICA(2021) IRSA(2020) IRSA(2020) IRSA(2020)
Materiality	Chapter 3 – section 3D – art. 3.17-3.35	2	<ul style="list-style-type: none"> - Inclusion of the pandemic in relevant disclosure (given that it affected and will affect the organization) - Assessment of materiality in close connection to sustainability (concerning the pandemic context) 	IRSA(2020) BSR (2020)
Conciseness	Chapter 3 – section 3E – art. 3.36-3.38	1	<ul style="list-style-type: none"> - Inclusion of elements concerning the pandemic does not affect conciseness (embedded links to detailed information about the pandemic in other outlets – such as the official website) 	IRSA(2020)
Reliability and completeness	Chapter 3 – section 3F – art. 3.39-3.53	1	<ul style="list-style-type: none"> - Assessment of the completeness and coherence of the information to 	VRF(2021b)

Reporting components	Corresponding delineation in the IR Framework	Number of identified disclosure proxies (weight)	Disclosure proxies for assessing the impact of the COVID-19 pandemic	Disclosure proxy source
			better inform stakeholders in pandemic context	
Consistency and comparability	Chapter 3 – section 3G – art. 3.54-3.57	1	- Collaboration with similar operators from the industry to create taxonomies, disclosure, and coherent values to report about COVID-19	BSR (2020)
CONTENT ELEMENTS				
Organizational overview and external environment	Chapter 4 – section 4A – art. 4.4-4.7	1	- Disclosure on the interaction with other actors from the economic environment	Deloitte (2021)
Governance	Chapter 4 – section 4B – art. 4.8-4.9	5	- Disclosing management plans for future years and the inclusion of pandemic related aspects	IRSA(2020)
			- Accountability statement	IRSA(2020)
			- Responsiveness to the pandemic	IRSA(2020)
			- Risk mitigation measures from the management, as well as health protection measures on the short, medium, and long-term	IRSA(2020)
			- Transition to digital means	IRSA(2020)
Business model	Chapter 4 – section 4C – art. 4.10-4.23	1	- Dynamic of the business model in pandemic context	Weaver(2021)
Risks and opportunities	Chapter 4 – section 4D – art. 4.24-4.27	2	- Operational risks and opportunities in pandemic context	Deloitte (2021)
			- Inclusion of risk mitigation, liquidity and going concern aspects in pandemic context	Weaver(2021)
Strategy and resource allocation	Chapter 4 – section 4E – art. 4.28-4.30	1	- Comments and statements from management concerning the measures to fight against the pandemic	IRSA(2020)
Performance	Chapter 4 – section 4F – art. 4.31-4.34	2	- Disclosure of financial impact of the pandemic	Weaver(2021)
			- Disclosure of non-financial impact of the pandemic	Weaver(2021)
Outlook	Chapter 4 – section 4G – art. 4.35-4.40	2	- Distinct section for outlook in pandemic context (connected to other content elements)	IRSA(2020)
			- Plans for going concern	VRF(2021b)

Reporting components	Corresponding delineation in the IR Framework	Number of identified disclosure proxies (weight)	Disclosure proxies for assessing the impact of the COVID-19 pandemic	Disclosure proxy source
Basis of preparation and presentation	Chapter 4 – section 4H – art. 4.41-4.49	1	- Flexibility for reporting framework and possibility to include pandemic-related issues	Weaver(2021)

Source: authors' projection, using elements from the VRF Integrated Reporting Conceptual Framework (VRF, 2021a), as well as cited sources for the proxies.

5 Discussion and template applicability

Integrated reporting gained a significant amount of traction since its inception. It is viewed as a readable outlet, with a easily understandable content, many key performance indicators, as well as an intuitive disposal of information. In this respect, it is regarded as an appropriate outlet to assess key information about a reporting entity “at-a-glance”. The intelligible narrative allows even users with average knowledge to understand key aspects regarding the activity of the reporting entity.

The COVID-19 pandemic – as supported by the literature and the releases from professional organizations and standard setters – affected most dimensions of the financial and non-financial aspects concerning most of the economic activities. Therefore, there is a high probability that most reporting entities are impacted by the pandemic (on various levels).

The analysis template from Table 1 allows an extensive analysis on the extent to which the specific aspects related to the pandemic are included in the integrated reports. As we observe from the weighing of disclosure proxies, some of the components have a more detailed approached within the documents issued by professional organizations and standard setters (as they are perceived to be more emphatic in the wider context of integrated reporting), whereas others are addressed more briefly. This assumption is closely connected to the way in which reporting entities stress their focus in the existing examples of integrated reports in the VRF database. Also, emphasis on certain reporting components is connected to their nuance (whether they are prone to be affected by the pandemic). Disclosure elements concerning the fundamental concepts (value creation and capitals) seem to attain the highest weight within the checklist (compared to other reporting components). Moreover, we observe a certain theoretical overlap between reporting components (for instance, aspects concerning materiality and risks are seen as connected to multiple reporting components).

In connection with the actor network theory (ANT), a relevant finding from the sources used for the disclosure checklist (in terms of refinement) shows that some key items from integrated reporting reveal multiple facets in the context of the pandemic. One example in this sense would be the risk assessment – which is revealed to be embedded in multiple disclosure proxies as a frame. This finding enforces an overlapping trait of emphatic elements in the context of the COVID-19, creating the premises for specific

approaches in special conditions (such as a widespread pandemic event). Similar facets and findings are connected to human capital (especially the reshaping of work environments) and societal effects (in terms of behavior), thus providing a junction with the previous research conducted on framing the integrated reporting system in the context of ANT.

The analysis template can be applied on a sample of integrated reports issued by reporting entities during the pandemic. However, an optimal empirical study would require considering comparable reports from consecutive years so that the triangulation of information according to the disclosure checklist from Table 1 can show an evolution of disclosure in dynamic (as situation was subject to sudden major changes during the pandemic). Having a larger sample of reports can diminish the heterogeneity of information and can outline the possibility of distinguishing subsets and comparative analyses. The template can be applied on a sample of reporting entities from the VRF database, as it would provide external validity to the study.

In a similar manner, the KPMG (2020) study concerning the inclusion of COVID-19 pandemic impact in the reports of listed Australian companies (ASX200), with the use of integrated reporting principles. Evidence shows that 96% of the reporting entities from the sample disclosed protection actions for their employees and/or their clients in the context of COVID-19, and 51% of the reporting entities discussed support activities for various stakeholders (e.g., suppliers, social partners, community) regarding health and economic impact of the pandemic.

6 Conclusions, limitations, research perspectives

The onset of the COVID-19 pandemic in 2020 sent a shockwave worldwide on all dimensions of the triple bottom line. Whereas this is not major event of this kind in history, its impact is being experienced by everyone and it affects day-to-day operations of economic actors. The globalization phenomenon and the closer links and interdependencies amplify this impact to the extent to which measures used to fight against the pandemic need to be generalize.

In the context of the actor network, these strict measures lead to shifts in certain paradigms and nuanced a “new normal” for many reporting entities. In this respect, the changes in operational parameters are also considered within their disclosure outlets, for all aspects concerning their activities (both financial and non-financial). However, the interconnected trait of some elements (especially in pandemic context, where risk assessment becomes a significant driver for disclosure or societal and work environment dynamics gain a higher weight in reporting outlets) further consolidates the theoretical ground in the actor network theory. Essentially, integrated reporting offers a reporting frame which can provide analytical tracking for certain pandemic-related variations and interactions, using the standard architecture.

Our findings show that all reporting components can address pandemic-related aspects and can provide an adequate level of disclosure within the report. Some reporting components have a higher weight, as they are addressed more extensively in the guidelines, releases and clarifications issued by professional organizations and standard setters, whereas other are regarded more lightly, with brief descriptions. In terms of research

contribution, our disclosure checklist offers a mean to determine a certain level of disclosure if applied on a sample of integrated reports, to determine the accurate extent to which pandemic-related information is included in integrated reports.

The extensive approach on the capitals and value creation from the sources used in the drafting of the disclosure checklist emphasizes the significant attention gained by these elements in pandemic times. In the way that the capital system is designed (in the wider frame of integrated reporting), the capitals encompass most of the resources (internal and external) used by the reporting entities within the dimensions of their business model (in a static presentation). As the pandemic created a vast majority of pressure points on key aspects of day-to-day life, all capitals are affected (as revealed by the findings and the content of the disclosure checklist, where capitals gain the most weight). Consequently, given the amplitude of the aspects included in integrated reporting (delineated in terms of pandemic impact in the disclosure checklist), we can postulate that a large extent of pandemic-related elements of impact can be embedded in the benchmark integrated reporting template (disclosing useful and timely information on effects and countermeasures). In the context of emergence of multiple post-COVID-19 integrated reports, the previously mentioned postulate is prone to be analyzed through empirical data.

Our study has several limitations. First, the research is connected to a volatile major event, so important changes can be incurred by the measures of authorities which can influence the results of a potential empirical study (as some parameters can change significantly). Also, as most relevant public health measures are taken against the pandemic, at some point, its impact will be diminished under a certain level of materiality. Second, the reporting practice is actively adapting its outlet to the heterogenous pool of data, meaning that comparability between reporting entities can be affected (as some areas have a higher impact than others). This distinction is not clearly addressed in the selected documents from professional organizations and standard setters (so it is possible that further clarifications are issued and can be complementary to the current version of the checklist). Last, but not least, our research by employing content analysis is prone to researcher subjectivity (which could be addressed by resuming to the proxies proposed by professional organizations and standard setters).

The research has interesting perspectives. Alongside the possible test application on a sample of integrated reports, the checklist can be constantly improved through the inclusion of multiple additional elements (with external validity). Also, the checklist can be adapted and be applied in the context of other major events (such as: conflagrations and natural disasters).

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