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## The Quality of Business Model Disclosure in Integrated Reporting: Evidence from Poland

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**Abstract:**

**Purpose:** The purpose of the paper is to identify and evaluate business model disclosures in integrated reports published by Polish companies. The article attempts to determine how practitioners understand and explain the concept of a business model and whether the implementation of integrated reporting has influenced the scope and form of presenting information on the business model. The article uses the results of literature studies on the subject, the results of previous research, and observations of business practice in the area of integrated reporting.

**Design/methodology/approach:** The quantitative and qualitative content analysis of business model disclosures in integrated reporting was performed in order to assess the current status of business model disclosures presented by Polish companies. The analysis covered 74 integrated reports prepared in the years 2016-2019.

**Findings:** The findings proved that most elements of business model have the nature of qualitative narrations regarding strategy, various forms of capital, business activities and outputs, while less attention was paid to business model adaptability, position of the organization within the value chain, waist/by-products, and outcomes' effect on various forms of capital.

**Practical Implications:** The results of the study complement the research gap of current literature on business model disclosures quality in Polish practice.

**Originality/Value:** The research presented in the article contributes to the current literature on integrated reporting by using the novel dataset, identifying the level of business model disclosures in the examined integrated reports, and is aimed at presenting a critical interpretative perspective.

**Keywords:** Business model, integrated reporting, sustainability reporting, non-financial reporting, disclosure quality.

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## **1. Introduction**

Integrated reporting (IR) as a new world trend in corporate reporting presents the organization's business model (BM) and value creation process, highlights the types and use of resources on which the company relies, enables stakeholders to assess the company's ability to create value in the short, medium and long term more effectively and help reports' users in their assessment of the company's long-term profitability. The literature on the subject highlights the fact that IR is a logical consequence of the development of two trends of corporate reporting that have emerged in recent years – sustainable development reporting and corporate social responsibility reporting.<sup>3</sup> It should also be noted that due to the increasing amount of non-financial disclosures in the organizations' external reporting, the number of corporate social responsibility and sustainability reports has increased (KPMG, 2012).

The International Integrated Reporting Council (IIRC) Framework for IR (<IR> Framework) declares that “At the core of the organization is its BM, which draws on various capitals as inputs and, through its business activities, converts them to outputs (products, services, by-products and waste)” (IIRC, 2013a, p. 13). This is a communication model which structure is composed of different but integrated levels (Beattie and Smith, 2013; Nielsen and Bukh, 2011).

The appearance of the BM in IR<sup>4</sup> is undoubtedly a new phenomenon. Despite the fact that the BM has been indicated by the IIRC as one of the main topics for the future orientation of organizational reporting and the basic element of IR content, there are still many dilemmas and doubts related to its disclosure.<sup>5</sup> Investors have long promoted the position that “High quality business model reporting is critical to

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<sup>3</sup>*Reports on sustainable development and corporate social responsibility (CSR), issued as separate documents attached to the annual financial statements, are considered to be the predecessors of the currently prepared integrated reports. The predecessors of integrated reporting also include the Balanced Scorecard and the Triple Bottom Line. J. Elkington, an expert in social responsibility and sustainable development, formulated the phrase "People, Planet and Profit", creating what has been called the "Triple Bottom Line" in the literature. In line with this concept, the company's operations and performance are not only assessed in terms of financial performance, but also in terms of the company's environmental and social impact (Fărcaș, 2015).*

<sup>4</sup>*Integrated reporting is the latest approach to organizational reporting (corporate reporting), currently widely discussed in the literature on the subject and in business practice. Cf.: Eccles, Krzus, Tapscott D. (2010); Eccles, Saltzman (2011); Ernst & Young (2011); Maroun, Solomon (2012); Dragu, Tudor-Tiron (2013); Frias-Aceituno, Rodríguez-Ariza, García-Sánchez (2013); Rensburg, Botha (2014); Stubbs, Higgins (2014).*

<sup>5</sup>*The term "business model" was discussed in the IIRC's September 2011 discussion article Towards Integrated Reporting - Communicating Value in the 21st Century in which it was identified as one of two major topics for the future orientation of organizational reporting (IIRC 2011).*

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helping investors better understand performance in terms of the impact that external factors have on an organization, and how organizations create value that is sustainable over time”.<sup>6</sup> However, this does not mean that the management boards of companies that are concerned about breaching the commercially sensitive information related to disclosing their organization's BM are of the same opinion. Thus, the question arises how to disclose the BM to meet the needs of both the demand side and without infringing the interests of the supply side.

Numerous arguments are cited in the literature on the subject as supporting the disclosure of the BM in financial reporting, including the preparation of financial statements (EFRAG, 2014):

- an appropriately articulated BM would be useful for communicating management's understanding of the company's business with respect to the market, and thus – as a tool for improving the relationship between investors and the company's management;
- the BM is an important front-end focus of corporate reporting, and a reflection of BMs in financial statements would ensure that financial and non-financial information is linked;
- it would enable to assess the economic performance of entities and the accountability of the managers of these entities;
- the concept of the BM encourages a proactive, independent mindset and requires the reports preparers, auditors and users to consider how the business operates and creates value;
- its use would increase the substantive materiality and integrity of the financial information;
- the BM informs about socially responsible activities and sustainability, and allows to assess whether the organization complies with CSR and sustainable development (Ritala *et al.*, 2018).

It should be emphasized that the literature on BM focuses primarily on business models that create, deliver and capture economic value (Teece, 2010). Recently, models related to social and environmental values have also appeared in the literature on BMs (e.g., Stubbs and Cocklin, 2008; Boons *et al.*, 2013). Categorizations and typologies of sustainable BMs have been conducted by many academics and business practitioners, including e.g., Boons and Lüdeke-Freund (2013), Bocken *et al.* (2014), Clinton and Whisnant (2014) and Wells (2013). A systematic review by Bocken *et al.* (2014) demonstrated the broad variety of sustainability-related BMs available. This approach suggests that firms can adopt various activities that enable to create “shared value” (Porter and Kramer, 2011), combining economic goals with those aligned to social and environmental values.

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<sup>6</sup>*In its research, CIMA found that there is a growing interest in business model disclosure: investors in particular require access to information on business model that is not provided by traditional financial statements (IIRC, 2013b).*

Sustainable BMs according to Bocken, Short, Rana, and Evans (2013) “seek to go beyond delivering economic value and include a consideration of other forms of value for a broader range of stakeholders”. The concept of BM, as a schematic representation of the process of creating and capturing value, is the way of communicating stakeholders some logic-based insight through the eyes of the management board, which is the basic principle of narrative communication directed to the financial market (Beattie and Smith, 2013).

The purpose of this article is to identify and evaluate business model disclosures in integrated reports published by Polish companies. The article attempts to determine how practitioners understand and explain the concept of a business model and whether the implementation of integrated reporting has influenced the scope and form of presenting information on the business model. The article aims to examine the quality of disclosures about a business model in an integrated reports on the example of Polish companies.

## **2. Integrated Reporting vs Sustainability Reporting**

Integrated reporting is the latest approach to organizational reporting, currently widely discussed in the literature on the subject and in business practice (Dragu and Tudor-Tiron, 2013; Eccles *et al.*, 2010; Eccles and Saltzman, 2011; Ernst & Young, 2011; Frías-Aceituno *et al.*, 2013; Maroun and Solomon, 2012; Rensburg and Botha, 2014; Samelak, 2013; Stubbs and Higgins, 2014). The idea of IR appeared as a response to the shortcomings of traditional financial statements and the growing requirements of stakeholders related to disclosing information on value creation process, social responsibility and sustainable development.

It should also be emphasized that the expectations of stakeholders regarding the organization's reporting have changed – investors require more substantively relevant information that will enable them to make forecasts of the future development of the organization, and mainly the statement on value added (Haller and van Staden, 2014), while other stakeholders expect information on corporate social responsibility and sustainability of organization's strategy, decisions and activities, what may have an impact on the future success of the organization (Porter and Kramer, 2011).

The literature on the subject highlights the fact that integrated reporting is a logical consequence of the development of two trends of corporate reporting that have emerged in recent years – sustainable development reporting and corporate social responsibility reporting.<sup>7</sup> It should be emphasized that so far both of the above-

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<sup>7</sup>*Reports on sustainable development and corporate social responsibility (CSR), issued as separate documents attached to the annual financial statements, are considered to be the predecessors of the currently prepared integrated reports. The predecessors of integrated reporting also include the Balanced Scorecard and the Triple Bottom Line. J. Elkington, an*

mentioned reporting trends have developed independently and have led to an increase in the scope of disclosures in the financial statements, especially in the notes to financial statements and in the management commentary. It should also be noted that due to the increasing amount of non-financial disclosures in the organizations' external reporting, the number of corporate social responsibility and sustainability reports has increased (KPMG, 2012).

Integrated reporting combines two trends – relevant financial and non-financial information, reported separately – in one coherent document, and shows the relationships between the disclosures. The integrated report is also intended to explain how the individual activities of the entity affect its ability to create and maintain value in the short, medium and long term – it can therefore be called a value report. On the other hand, an integrated report should disclose CSR and sustainability related information in a transparent and consistent manner. Thus, IR can be defined as a holistic approach to organizational reporting that allows all stakeholders to understand how the organization really works and what results it achieves. The main goal of the integrated report is to communicate transparently organization's value proposition by providing a concise message on how the organization's strategy, governance, performance and outlook, in the context of its external environment, support its ability to create value (IIRC, 2021).

Institutionally, the greatest impact on the development of IR was exerted by the IIRC, which was established on the initiative of two leading organizations operating in the field of sustainability accounting: The Prince's Accounting for Sustainability Project (A4S) and the Global Reporting Initiative (GRI)<sup>8</sup>. The first action taken by the IIRC was publication of the Discussion Paper (IIRC, 2011), which outlined the proposed action program. The Discussion Paper also stated that the IIRC aims to develop an IR framework that will provide information on the use of all resources that determine the success and performance of the organization in creating value for investors, employees, customers and, more broadly, society. This idea is directly related to GRI sustainability criteria, which emphasizes that the basis of sustainability reporting is to “enable all companies and organizations to report their economic, environmental, social and governance performance”, and to “contribute to a sustainable global economy” (GRI, 2013).

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<sup>8</sup>*It should be emphasized that the history of integrated reporting begins even before the IIRC initiative, when large corporations began to disclose information on the company's sustainable development and actions taken in the field of social responsibility. Dragu and Tudor-Tiron (2013) distinguish three main stages of the evolution of integrated reporting: non-financial reporting initiatives; sustainability era; integrated reporting revolution.*

In December 2013, the IIRC published the first version of the <IR> Framework (IIRC, 2013). It presents the fundamental concepts and guiding principles that should be followed when preparing an integrated report. The essence of IR is “integrated thinking”, defined as “active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects” (IIRC, 2021). The <IR> Framework identifies three fundamental concepts on which IR is based on:

- various capitals (resources) that the organization uses in its activities,
- BM implemented by an organization,
- value creation, preservation or erosion over time.

These concepts are interrelated – capitals are considered as inputs to the process of creating value by the organization, which is implemented through a BM and creates value for both the organization and its stakeholders. To sum up, the history of IR is short, and significant progress took place only in the first decade of the 21st century.

### **3. Business Model as a Key Disclosure of Integrated Reporting**

The <IR> Framework (IIRCa, 2013) emphasizes that IR should focus on the BM of an organization, its resources and relationships which organization shapes and uses. The organization's BM has been identified as one of the key disclosures in IR. It should be emphasized that the term “business model” is commonly used in the business world, but there is no commonly agreed definition (Casadesus-Masanell and Ricart, 2010; Nielsen and Bukh, 2011; Teece, 2010; Zott *et al.*, 2011; Brandenburger and Stuart, 1996; Sandberg, 2002; Boulton *et al.*, 2000; Chesbrough and Rosenbloom, 2002; Osterwalder and Pigneur, 2010). It can be argued that this is why the BM and strategy are sometimes understood in the same way (Casadesus-Masanell and Ricart, 2010).

The BM is a fundamental concept for understanding how companies operate and how they create value.<sup>9</sup> This understanding is in line with the approach presented by IIRC, which published the “Business Model Background Paper” (IIRC, 2013b) to define the term business model and provide guidelines for disclosing the BM and strategy in IR. The BM describes the logic of the company, the way it operates and how it creates value for stakeholders, while the “strategy” refers to the choice of the BM through which the company plans to achieve a competitive advantage (Casadesus-Masanell and Ricart, 2010). Choosing a specific BM means determining

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<sup>9</sup>*The growing interest in the business model as a reporting element reflects the view that it is a key starting point for investor analysis. Therefore, the IASB has just launched a new initiative with the International Integrated Reporting Council to promote disclosure of the business model through a specific reporting format called “Integrated Reporting”. Integrated Reporting is a clear and concise representation of how an organization creates and maintains value, and business model is a fundamental issue of disclosure.*

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how to compete, operate and create value for the stakeholders. The BM and strategy are inseparable concepts, and the strategy summarizes all the company's BMs. Strategy can be seen as the implementation of the company's BM (Casadesus-Masanell and Ricart, 2010). The BM provides a platform for measuring, observing and analyzing the company's performance and improves planning, change and implementation of the company's strategy (Osterwalder, 2004). BMs allow companies to react faster to changes in the business environment, improve the alignment of strategy, business organization and technology, and help support innovation (Osterwalder, 2004).

The literature on BMs highlights fundamentally different views on the nature and scope of the BM. This differentiation is the result of looking at the BM from many different points of view and scientific disciplines; for example, some authors focus on accounting related aspects of the BM (i.e., emphasize financial categories such as revenue, expenses, profit, cash flow), others focus on components of the BM such as value chain, market strategy, culture and organizational values, and still others in particular relate to corporate social responsibility. The analysis of numerous BM definitions<sup>10</sup> in reporting has finally led to the adoption of one definition for the purposes of IR.

Ultimately, the <IR> Framework defines the BM as organization's "system of transforming inputs, through its business activities, into outputs and outcomes that aims to fulfil the organization's strategic purposes and create value over the short, medium and long term" (IIRC 2013a, 25). The components of the BM include: company presentation – what the unit does, what structure it has or in which areas it operates; business strategy – key aspects of the company's strategy; value chain – position in the value chain and dependence on key inputs and outputs; financial results – how the BM controls profitability or revenue generation; and value creation – how the company's inputs and outputs, business activities and relations lead to value creation and desired results. The IIRC emphasizes that the BM exists at the very heart of any organization and shows how value is created.

In line with the IIRC <IR> Framework, the organization uses a variety of capitals as inputs, and through business activities, transforms them into outputs (products, services, by-products and waste) (IIRC 2013a, 13). The BM should show the key features of the company's business, providing information for assessment (e.g., by investors) whether the organization is able to achieve the assumed financial and non-financial goals. It should answer a number of questions of fundamental importance to the organization, i.e. who are the company's customers, what value customers expect, how this value can be delivered to customers, at what cost and how the company uses its assets in business activities?

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<sup>10</sup>A comprehensive overview of the definitions of the business model is presented in the Appendix to Business Model Background (IIRC 2013b, 15-19) by IIRC.

When analyzing the components of the BM in detail, the following can be mentioned, value proposition, target customers, distribution channels, relationships, resources and capabilities, value configuration, partnership, revenue model and cost structure (Bini, Dainelli, Giunta 2016). When organizations use more than one BM at the same time, reflecting e.g., different market segments in which the organization operates, each of them must be separately considered and discussed (if relevant) and a comment should be made on the extent of interrelationships between the business models used (benefits resulting from the use of the synergy effect).

The discussion article (IIRC, 2011) also states that the disclosures regarding strategy and BM should be clearly distinguished – they should constitute separate elements of disclosure. The company's strategy sets an appropriate goal - a set of products and services (outputs) enabling the achievement of the desired effects that will generate the greatest benefits for customers and other stakeholders. The purpose of the BM is to use this strategy to achieve the desired outcomes, which can be assessed on the basis of key performance indicators.

Several features should be distinguished that characterize BM. The first is the unequivocal identification of the key elements of BM (input elements, business activities, output elements and outcomes). Moreover, the <IR> Framework presents additional features improving the quality of BM disclosure in IR. The <IR> Framework relates to the search for a balance between quantitative and qualitative indicators, negative and positive content, and - finally, forward-looking and past-oriented information. With regard to quantitative and qualitative indicators, the <IR> Framework states that both types of information are necessary for an IR to adequately represent the organization's unique story of value creation, as each provides context to the other. “Quantitative indicators, such as KPIs and monetized metrics, and the context in which they are provided can be very helpful in explaining how an organization creates value and how it uses and affects various capitals” (IIRC, 2013a, p. 8).

Regarding the balance between positive and negative content, the IR framework states that “an integrated report should include all material matters, both positive and negative, in a balanced way and without material error”. In particular with respect to disclosure of BM, the effects may be more positive (i.e., those that result in a net increase in the capitals and thus create value) or more negative (i.e., those that result in a net decrease in the capitals and therefore diminish value) (IIRC, 2013a, p. 26). Finally, with regard to the presence of forward-looking information, the <IR> Framework highlights the fact that “care is needed to ensure the organization’s stated expectations, aspirations and intentions are grounded in reality” and to “avoid generic disclosures” (IIRC, 2013a).

Such information is included in the IR only when there is practical usefulness of such information for the intended users of the report. This requires disclosures to be specific to the circumstances in which the organization operates. “Future-oriented



information is by nature more uncertain than historical information. Uncertainty is not, however, a reason in itself to exclude such information”, but the nature of the information and the degree of uncertainty must be disclosed.

Disclosures about the BM are divided into four groups. The IIRC guidelines also presents the basic principles that should be followed when describing the organization's BM (Table 1).

**Table 1.** Basic principles of describing the organization's BM

Disclosure type	Characteristics
Input elements disclosure	Disclosure of input elements including capitals, i.e. financial, manufactured, intellectual, human capital, natural capital, social and relational capital. The mentioned capitals form the so-called "store of value". By taking actions, the company increases, reduces or transforms these capitals. Interdependencies between different capitals must be clearly identified by companies, in line with the IIRC guiding principle of “consistency and connectivity of information”.
Business activities disclosure	These disclosures cover core activities such as planning, designing, manufacturing products, and activities that contribute to the long-term success of the organization, such as innovation, employee training, and relationship management. These activities, through consumption and/or transformation of input elements into output elements, are aimed at generating valuable effects.
Output elements disclosure	Disclosure of outputs covers not only the main products and services, but also by-products and waste that are relevant to the organization.
Outcomes disclosure	Disclosures of outcomes have been defined as internal and external consequences that constitute the result of the company's business activities. The effects can be: internal to the organization (e.g. employee morale and reputation of the organization) or external (e.g. the benefits customers get from the products and services offered by the organization, contributions to the local economy through employment and taxation, and environmental impact)

**Source:** IIRC, 2013a.

The use of non-financial performance measures is also promoted in the <IR> Framework. Moreover the Business Model Background Paper for IR (IIRC. 2013b) contains a guidance how to measure capital, proposing almost exclusively non-financial ratios. Disclosures must meet appropriate quality requirements. The qualitative features of disclosures about the BM also include (Bini *et al.*, 2016, p. 87-88) completeness, focus, and connectivity.

The literature on the subject also emphasizes that in order to ensure effective communication, the holistic and multi-faceted dimension of the BM must be communicated through a story (Beattie and Smith, 2013; Ghaziani and Ventresca, 2005; Magretta 2002; Bini *et al.*, 2016). This story can be expressed in various forms, in the form of numbers, diagrams/visualizations and narratives. The literature on the subject states that narration is a key form (Holland, 2004; 2006; Beattie and

Smith, 2013). The quality of the BM story that a company offers to its stakeholders depends on several characteristics, of which relevance is fundamental.

Summing up, the description of a BM should focus on its unique components contributing to the organization's value creation process, and disclosures about the BM should show the links between the key tangible and intangible factors in the value creation process, enabling stakeholders to evaluate the process over time. It should be emphasized that disclosure about the BM is undoubtedly a new area in business reporting. This area is just crystallizing, and due to the various approaches to defining the BM itself, it is difficult to develop a unified proposition in terms of its presentation. The guidelines for the disclosure of information about the organization's BM developed in the Business Model Background Paper for IR (IIRC, 2013b) and the <IR> Framework certainly unified the definitions of the BM for reporting purposes and organized the disclosure structure in a logical way. However, the question arises: how economic practice will respond to this proposition.

#### **4. Business Model in Integrated Reports – Results of Literature Research**

In general, empirical research on disclosures about the BM can be divided into two main groups, the first, raising the problem of compliance of BM disclosures with the <IR> Framework proposed by IIRC (Eccles *et al.*, 2015; Bek-Gaik and Rymkiewicz, 2016; Walińska *et al.*, 2015; Albertini, 2019; Malola and Maroun, 2019), and the second group aimed at assessing the quality of disclosed information on the BM (Lai *et al.*, 2013; Eccles and Krzus, 2014; Bagnoli and Redigolo, 2015; Bini *et al.*, 2016; Melloni *et al.*, 2016; Kiliç and Kuzey, 2018; Lai *et al.*, 2018; Pistoni *et al.*, 2018; Bezverkhyyi *et al.*, 2019; Gerwanski *et al.*, 2019; Sukhari and de Villiers, 2019; Agustia *et al.*, 2020; Songini *et al.*, 2020; Bek-Gaik and Surowiec, 2020; 2021; Al Amosh and Mansor, 2021; Iatridis *et al.*, 2021; Songini *et al.*, 2021).

Literature studies focus on analyzing the concept of a BM and searching for a universal definition of the model. On the other hand, research on the practice of disclosures about the BM is usually carried out as part of the content analysis of integrated reports and concerns the comparison of disclosures related to the BM with the framework proposed by the IIRC. Researchers focus their studies especially on examining the quality of disclosures about the BM.

Eccles and Krzus (2014) analyzed English-language reports published for 2012 by listed companies and assessed the quality of disclosure, including the disclosure on BM. The disclosures about the BM was assessed as average. In turn, Lai, Melloni and Stacchezzini (2013) conducted a study of disclosures about the BM through the linguistic analysis of the reports' content, taking into account three specific language attributes of information – type (whether it is quantitative or qualitative), tone (positive or non-positive), and time perspective (whether it is forward looking or not). The survey showed that most of the presented information on the BM is qualitative, do not refer to the future, and half disclosures are positive and half

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negative. Another study (Bini *et al.*, 2016) conducted on a sample of British high-tech companies listed on the stock exchange showed difficulties in distinguishing the description of the BM from other management concepts and lack of links between the individual components of the BM.

A study by Morioka *et al.* (2016) showed that there are difficulties in visualizing the links between the reported BM components, moreover some of the components have not been reliably reported. Bagnoli and Redigolo (2015) conducted the assessment of voluntary disclosures about the BM based on Italian production companies. It has been shown that companies with a BM based on technology-push and design-driven innovation have a lower propensity to fully disclose their BM, especially intangible resources. Sukhari and de Villiers (2019) in their study showed that after implementing the requirement to publish an IR in South Africa, companies disclose their strategic goals more transparently, but still do not link these goals to BM, key performance indicators (KPIs), risks or opportunities.

The literature on the subject also includes research on disclosures related to KPIs in BMs (Bini *et al.*, 2018; 2019). Other studies present analyzes of sustainable BMs. Ritala *et al.* (2018) examined the diversity of sustainable BM adopted by the largest global corporations, over the period 2005-2014. The results show that large capitalized firms have mostly adopted the environmentally-oriented BM archetypes, and to much lesser extent the societal and organizational ones. The sustainable BM was also the subject of research conducted by Lüdeke-Freund and Dembek (2017), and Rosa *et al.* (2019). Different approach presents the study conducted by Bini *et al.* (2021). The authors focused on investigating preparers' and users' perceptions of the BM and its elements in relation to reporting and disclosure requirements. The aim was to highlight how preparers and users of financial statements understand and consider this concept.

The key findings of the researchers indicate that companies provide users with information on their BM in relation to all major topics, i.e. input elements, business activity, output elements and outcomes, as well as selected components (e.g. financial, human capital). However, it was found that the vast majority of disclosures are not quantitative or prospective in nature. The research also raised concerns associated with the quality of disclosures, mainly their relevance, completeness and consistency. It has also been noticed that disclosures about the BM are published in various corporate reports, i.e., annual reports, management commentary, financial statements, CSR reports and sustainability reports. Disclosures are therefore scattered and the recipient has trouble filtering out relevant information describing the organization's BM.

Research on the quality of integrated reports also shows that companies increasingly refer to almost all elements of the BM proposed by IIRC in the disclosure map (IIRC, 2013b), but there is considerable variation in the quality and accuracy of individual disclosures about the BM. The research also shows that the reports

present very broadly the issues related to employment, the environment and society, and very narrowly comment on the other forms of capital. There is a lack of links between the individual elements of the BM and their contribution to value creation. A review of selected research on disclosure of the BM in organizational reporting allows the following conclusions to be drawn:

- disclosure of the BM seldom focuses on value creation, which prevents stakeholders from fully understanding the process of creating value in the organization;
- disclosures about the BM are very often incorrectly interpreted as disclosures about the organization's strategy;
- failure to clearly identify the components of the BM increases the risk of disclosure of general information and strategy;
- firms mainly disclose a list of the key elements of BM without showing their impact on value.

Based on a review of the literature on the subject and own study, it should be stated that there is a need to build a uniform definition and conceptual framework for presenting the essence of the BM in company periodic reports. The form and quality of disclosure on BM in corporate reports should also be increased.

## **5. Research Methodology**

The aim of the study is the quantitative and qualitative assessment of BM disclosures in the practice of IR of Polish companies. Starting from 2013, the number of companies publishing integrated reports has been gradually increasing, and the quality of published reports has also changed. Due to the fact that the objective of the study is to assess the current status, the integrated reports prepared by 24 capital groups in the years 2016-2019 were subject to analysis. Some of the surveyed companies prepared their integrated report both in traditional form and in an interactive form, some only in traditional or only interactive form. The research process included the following stages:

- identification of polish companies preparing integrated reports;
- quantitative assessment of BM disclosures in integrated reports;
- qualitative assessment of BM disclosures in integrated reports.

In order to conduct the research, the following research questions were formulated:

1. What elements of BM disclosures are most often shown in reports?
2. What is the quality of individual elements of business disclosures?
3. What changes can be observed in the quality of BM disclosure over the period 2016-2019?

For this purpose a list of elements being subject to both quantitative and qualitative assessment was defined. The study evaluated the following elements of BM disclosures: inputs, business activities, outputs, and outcomes. The first of these disclosure elements (inputs) assesses whether the document presents information on the following issues: overview of the financial capital, description of manufactured capital, description of human capital, value creation through intellectual capital, description of natural capital and social and relationship capital. In the area of business activities, it was analyzed whether the report contains such information as: contribution to long-term success, market differentiation, position of the organization within the value chain, encouraging a culture of innovation, and adaptability of the BM. The next aspect assessed was the disclosure in the field of BM outputs. In this area, the disclosures about products, services, waste, and by-products were analyzed. The fourth assessed area concerned the analysis of BM disclosures in terms of outcomes from activities and outputs. The particular attention was paid to outcomes' effect on environmental and social capital to examine the sustainability of business activities and practices.

The additional analysis concerned an overall assessment of the disclosures about the BM, such as: the form of presentation of BM's key elements, additional explanation of the relevance of BM elements, description of all material matters, information on key stakeholders, suppliers and customers, connection of BM to opportunities, risks, key performance indicators and financial information. It was also analyzed whether the organizations disclose a value creation model. In addition, the basis of reports' preparation and presentation (IIRC guidelines, GRI guidelines) and external verification of financial and non-financial data has been quantified.

**Table 2.** List of reports included in the study

Item	Company	2016	2017	2018	2019
Stock index: WIG20					
1	JSW			+	+
2	KGHM	+	+	+	+
3	LOTOS	+	+	+	+
4	LPP		+	+	+
5	MBANK		+	+	+
6	ORANGEPL	+	+	+	+
7	PGE	+	+	+	+
8	PGNiG		+	+	+
9	PKNORLEN	+	+	+	+
10	TAURONPE	+	+	+	+
Stock index: WIG30					
11	GRUPAAZOTY	+	+	+	+
12	INGBSK	+	+	+	+
13	PKPCARGO		+	+	
Stock index: mWIG40					
14	BOGDANKA	+	+	+	+
15	BUDIMEX	+	+	+	+

Stock index: sWIG80					
16	PEKABEX			+	+
17	Śnieżka	+			
Stock index: WIG-Poland, WIG					
18	ERBUD	+	+	+	+
Other, not listed					
19	ANG	+	+	+	
20	GAZ-SYSTEM	+	+		
21	Pelion	+			
22	PSE	+	+	+	+
23	GK PZU			+	+
24	GK TIM			+	+
	Total	16	18	21	19

*Note:* + *Integrated Report published.*

*Source:* Own study.

In case of a quantitative assessment, the presence or absence of each proposed variable was assessed. Score 0 was given in the absence of a particular element, while score 1 was assigned if the element was included in the report. In order to assess the quality of BM disclosures, a 6-point Likert scale was adopted, where 5 is the highest rating, and 0 means that the element is absent in the content of the report. The research sample included 74 integrated reports, prepared by 24 corporate groups, published in 2016-2019. The number of reports in individual years is presented in Table 2.

## 6. Results

The quantitative and qualitative assessment of BM disclosures in IR comprised two steps.

*Analysis of level of advancement in relation to business model disclosures:*

In the first stage of the analysis, the entire sample of 74 reports was assessed in order to obtain a general level of advancement in relation to BM disclosures (Tables 3-4). The analysis indicated that the majority of reports have a separate chapter or subchapter in the structure related to BM. However, in a separate part of the report, often only general information on the key elements of the BM is presented, while the detailed information is scattered throughout the remaining parts of the report. Preparing the BM disclosures, companies use their own individual approach, most often presenting that information as part of the strategy, in the form of description without providing specific interrelations. Table 3 presents the level of variables characterizing the examined integrated reports in the overall sample (24 firms, 74 firm-year observations for years 2016-2019). Not all companies published integrated reports in each of the four years, some stopped publishing during the period in question, others were just starting to publish, 12 companies published reports in each of the four years.

**Table 3.** Presence of variables characterizing business model disclosures in integrated reports in the overall sample

Item	Variables	NO	%	YES	%	Total	%
1	Overview of the financial capital	0	0%	74	100%	74	100%
2	Description of manufactured capital	4	5%	70	95%	74	100%
3	Description of human capital	0	0%	74	100%	74	100%
4	Value creation through intellectual capital	0	0%	74	100%	74	100%
5	Description of natural capital	2	3%	72	97%	74	100%
6	Social and relationship capital	2	3%	72	97%	74	100%
7	Contribution to long-term success	0	0%	74	100%	74	100%
8	Market differentiation	0	0%	74	100%	74	100%
9	Encouraging a culture of innovation	0	0%	74	100%	74	100%
10	Adaptability of the BM*	0	0%	74	100%	74	100%
11	Position of the organization within the value chain	0	0%	74	100%	74	100%
12	Products/services	0	0%	74	100%	74	100%
13	Waste/by-products	14	19%	60	81%	74	100%
14	Outcomes from activities and outputs	0	0%	74	100%	74	100%
15	Outcomes' effect on environmental capital	4	5%	70	95%	74	100%
16	Outcomes' effect on social capital	4	5%	70	95%	74	100%
17	Graphic presentation of key elements of the BM	7	9%	67	91%	74	100%
18	Additional explanation of the relevance of BM elements	0	0%	74	100%	74	100%
19	Description of all material matters	0	0%	74	100%	74	100%
20	Key stakeholders	0	0%	74	100%	74	100%
21	Key suppliers	0	0%	74	100%	74	100%
22	Key customers	0	0%	74	100%	74	100%
23	Connection of BM to opportunities, risks	0	0%	74	100%	74	100%
24	Connection of BM to KPIs	0	0%	74	100%	74	100%
25	Connection of BM to financial information	0	0%	74	100%	74	100%
26	Value creation model	6	8%	68	92%	74	100%
27	IIRC Framework	24	32%	50	68%	74	100%
28	GRI Guidelines	1	1%	73	99%	74	100%
29	External verification of financial data	0	0%	74	100%	74	100%
30	External verification of non-financial data	52	70%	22	30%	74	100%

**Note:** \* BM – business model

**Source:** Own study.

All analyzed reports indicate capitals as BM inputs, and only four reports do not identify manufactured capital – this applies to banks and results from the specific nature of operations and the understanding of financial capital as manufactured capital. Two reports do not describe natural and social capitals, however present the other forms of capital. Business activities are indicated in all reports. Also disclosures on outputs in terms of product and services are indicated in all reports, while the description of waste or by-products is not presented in 14 (81%) reports. Outcomes from activities and outputs are present in all reports as well, and in more detail – outcomes' effect on environmental and social capital are indicated in a large proportion of reports (95% of reports). This may suggest that most companies want their BM to be viewed as sustainable.

In the overall assessment of BM disclosures it can be observed that the majority of reports indicate value creation model (92%), and all reports present some disclosure on key stakeholders, suppliers and customers, connection of BM to opportunities, risks, key performance indicators and financial information. The graphic presentation of key elements of the BM is presented in 91% reports. A small number of reports (30%) has been externally verified and 24 reports has not been prepared in accordance with the IIRC guidelines.

Elements of BM disclosures occurring in the analyzed integrated reports were subsequently assessed in terms of quality (Table 4) in accordance with the proposed scoring system. In the qualitative analysis of the assessed variables, the results may be more subjective than in the quantitative assessment due to the wider scale of scoring.

**Table 4.** *Qualitative assessment\* of variables characterizing reports business model disclosures in the overall sample*

Variables	Frequencies						Mean	Median	Total
	0	1	2	3	4	5			
<b>Overview of the financial capital</b>	0	1	12	24	30	7	3,41	4	74
<b>Description of manufactured capital</b>	4	1	7	22	32	8	3,36	4	74
<b>Description of human capital</b>	0	1	15	19	36	3	3,34	4	74
<b>Value creation through intellectual capital</b>	0	7	17	18	24	8	3,12	3	74
<b>Description of natural capital</b>	2	8	12	20	26	6	3,05	3	74
<b>Social and relationship capital</b>	2	1	14	21	31	5	3,26	3	74
<b>Contribution to long-term success</b>	0	2	28	39	5	0	2,64	3	74
<b>Market differentiation</b>	0	7	15	31	21	0	2,89	3	74
<b>Encouraging a culture of innovation</b>	0	1	29	29	15	0	2,78	3	74
<b>Adaptability of the BM*</b>	0	4	40	20	7	3	2,53	2	74
<b>Position of the organization within the value chain</b>	0	5	46	19	4	0	2,30	2	74



<b>Products/services</b>	0	0	0	16	53	5	3,85	4	74
<b>Waste/by-products</b>	14	29	22	9	0	0	1,35	1	74
<b>Outcomes from activities and outputs</b>	0	0	2	25	42	5	3,68	4	74
<b>Outcomes' effect on environmental capital</b>	4	4	15	24	26	1	2,91	3	74
<b>Outcomes' effect on social capital</b>	4	2	12	36	20	0	2,89	3	74
<b>Graphic presentation of key elements of the BM</b>	7	2	6	23	27	9	3,19	3	74
<b>Additional explanation of the relevance of BM elements</b>	0	4	15	14	41	0	3,24	4	74
<b>Description of all material matters</b>	0	1	6	45	22	0	3,19	3	74
<b>Key stakeholders</b>	0	4	9	19	37	5	3,41	4	74
<b>Key suppliers</b>	0	13	38	21	2	0	2,16	2	74
<b>Key customers</b>	0	0	7	34	30	3	3,39	3	74
<b>Connection of BM to opportunities, risks</b>	0	5	16	25	28	0	3,03	3	74
<b>Connection of BM to KPIs</b>	0	0	6	38	30	0	3,32	3	74
<b>Connection of BM to financial information</b>	0	0	7	40	27	0	3,27	3	74
<b>Value creation model</b>	6	4	9	20	31	4	3,05	3	74

*Note:* \* 0 - element not present in the content

1 - element present, but poor description

2 - element present; description based on some quantitative information

3 - element present; balanced description of contents; average quantity of information

4 - element present; good and detailed description

5 - element included in the content, excellent description

*Source:* Own study.

The qualitative assessment shows some differentiation – only 2 out of 26 items reach the average score higher than 3.5. All analyzed companies presented inputs using the capital approach. Three forms of capital were disclosed by all companies: financial capital, human and intellectual capital. Financial, manufactured and human capital are presented in the most comprehensive and accurate way. Four reports provided information on manufactured capital within the description of financial capital. This approach is due to the specific nature of operations in the banking sector.

The weakest disclosure in the area of BM activities is the disclosure on the position of the organization within the value chain (2.30). Many reports lack information on adaptability of BM changes. Information about the contribution of business activities and efficiency initiatives to long-term success was not disclosed in detail also by many companies, this may be due to a fear of opportunistic behavior by competitors. The description explaining how companies differentiate themselves from competitors is presented a little more precisely, as well as the culture of innovation understood as the approach supporting corporate research and development and the process that can aid company in improving organizational innovation.

The BM outputs in terms of product and services, and outcomes from activities and outputs, are described in the most detailed and comprehensive way, while outputs related to waste or by-products are presented in the smallest scope (average rating 1.35) (Table 4). In terms of readability 67 reports provided information on the BM elements in graphic form and all reports presented the narrative of all elements of BM relevant to the company, identified key stakeholders, and disclosed information on key customers.

The results suggest that BM disclosures in integrated reports still needs to be refined, especially regarding non-financial information.

*Analysis of presence and average scores of variables:*

In the second section of the study, the presence of variables for each of the four years was analyzed (Table 5). The comparison of the presence of individual variables of BM disclosures over time is difficult due to the different number of published reports, which is why the survey is of an illustrative nature and the relative values expressed by the structure ratios have been compared.

The presence of variables characterizing BM disclosures in four analyzed years does not show a significant variation, which indicates the stabilization of the BM disclosures in practice, although this does not mean that the level of disclosures is satisfactory. The growing interest in integrated reports did not translate into a significant increase in the number of reports published by Polish companies in 2016 compared to 2019.

**Table 5.** *The presence of variables characterizing business model disclosures in years 2016-2019*

Variables	2016 16 reports		2017 18 reports		2018 21 reports		2019 19 reports	
	Quantity	%	Quantity	%	Quantity	%	Quantity	%
<b>Overview of the financial capital</b>	16	100%	18	100%	21	100%	19	100%
<b>Description of manufactured capital</b>	15	94%	17	94%	20	95%	18	95%
<b>Description of human capital</b>	16	100%	18	100%	21	100%	19	100%
<b>Value creation through intellectual capital</b>	16	100%	18	100%	21	100%	19	100%
<b>Description of natural capital</b>	16	100%	18	100%	20	95%	18	95%
<b>Social and relationship capital</b>	16	100%	18	100%	20	95%	18	95%
<b>Contribution to long-term success</b>	16	100%	18	100%	21	100%	19	100%
<b>Market differentiation</b>	16	100%	18	100%	21	100%	19	100%
<b>Encouraging a culture of innovation</b>	16	100%	18	100%	21	100%	19	100%
<b>Adaptability of the BM*</b>	16	100%	18	100%	21	100%	19	100%
<b>Products/services</b>	16	100%	18	100%	21	100%	19	100%
<b>Waste/by-products</b>	13	81%	15	83%	16	76%	16	84%
<b>Outcomes from activities and outputs</b>	16	100%	18	100%	21	100%	19	100%
<b>Outcomes' effect on environmental capital</b>	16	100%	18	100%	19	90%	17	89%
<b>Outcomes' effect on social capital</b>	16	100%	18	100%	19	90%	17	89%
<b>Graphic presentation of key elements of the BM</b>	13	81%	16	89%	20	95%	18	95%
<b>Additional explanation of the</b>	16	100%	18	100%	21	100%	19	100%

relevance of BM elements								
Description of all material matters	16	100%	18	100%	21	100%	19	100%
Key stakeholders	16	100%	18	100%	21	100%	19	100%
Position of the organization within the value chain	16	100%	18	100%	21	100%	19	100%
Key suppliers	16	100%	18	100%	21	100%	19	100%
Key customers	16	100%	18	100%	21	100%	19	100%
Connection of BM to opportunities, risks	16	100%	18	100%	21	100%	19	100%
Connection of BM to KPIs	16	100%	18	100%	21	100%	19	100%
Connection of BM to financial information	16	100%	18	100%	21	100%	19	100%
Value creation model	14	88%	16	89%	20	95%	18	95%
IIRC Framework	11	69%	13	72%	14	67%	12	63%
GRI Guidelines	15	94%	18	100%	21	100%	19	100%
External verification of financial data	16	100%	18	100%	21	100%	19	100%
External verification of non-financial data	3	19%	7	39%	6	29%	6	32%

*Source: Own study.*

The average scoring of BM disclosures in integrated reports (Table 6) indicate that the results for most items (except for the social and relationship capital) are at a similar level in each of the four years. Deviations in the level of average scores of the analyzed variables in the majority do not exceed 15%. A significant improvement occurred in 2017 in the case of such items as adaptability of the BM (increase by 22%), social and relationship capital (increase by 20%), graphic presentation of key elements of the BM and description of human capital (increase by 15%).

**Table 6.** Average scores on the single items characterizing business model disclosures in years 2016-2019

Item	Variables	2016	2017	2018	2019	2017/2016 %	2017/2016 %	2017/2016 %
1	Overview of the financial capital	3,06	3,33	3,57	3,58	109%	107%	100%
2	Description of manufactured capital	3,13	3,33	3,48	3,47	107%	104%	100%
3	Description of human capital	2,94	3,39	3,48	3,47	115%	103%	100%
4	Value creation through intellectual capital	2,88	3,17	3,19	3,21	110%	101%	101%
5	Description of natural capital	2,75	3,00	3,14	3,26	109%	105%	104%
6	Social and relationship capital	2,81	3,39	3,43	3,32	120%	101%	97%
7	Contribution to long-term success	2,56	2,72	2,62	2,63	106%	96%	100%
8	Market differentiation	2,75	3,00	2,90	2,89	109%	97%	100%
9	Encouraging a culture of innovation	2,63	2,83	2,81	2,84	108%	99%	101%
10	Adaptability of the BM*	2,19	2,67	2,57	2,63	122%	96%	102%
11	Products/services	3,88	3,83	3,86	3,84	99%	101%	100%
12	Waste/by-products	1,19	1,33	1,33	1,53	112%	100%	114%
13	Outcomes from activities and outputs	3,50	3,61	3,81	3,74	103%	105%	98%
14	Outcomes' effect on environmental capital	2,88	2,83	2,76	3,16	99%	97%	114%
15	Outcomes' effect on social capital	2,94	3,00	2,76	2,89	102%	92%	105%
16	Graphic presentation of key elements of the BM	2,81	3,22	3,19	3,47	115%	99%	109%
17	Additional explanation of the relevance of BM elements	3,06	3,22	3,29	3,37	105%	102%	103%

<b>18</b>	Description of all material matters	3,06	3,33	3,19	3,16	109%	96%	99%
<b>19</b>	Key stakeholders	3,25	3,50	3,48	3,37	108%	99%	97%
<b>20</b>	Position of the organization within the value chain	2,31	2,33	2,24	2,32	101%	96%	103%
<b>21</b>	Key suppliers	2,25	2,22	2,00	2,21	99%	90%	111%
<b>22</b>	Key customers	3,25	3,56	3,33	3,42	109%	94%	103%
<b>23</b>	Connection of BM to opportunities, risks	2,75	2,94	3,14	3,21	107%	107%	102%
<b>24</b>	Connection of BM to KPIs	3,25	3,39	3,33	3,32	104%	98%	99%
<b>25</b>	Connection of BM to financial information	3,19	3,22	3,29	3,37	101%	102%	103%
<b>26</b>	Value creation model	2,81	2,94	3,14	3,26	105%	107%	104%

*Source: Own study.*

The analysis of average scores of items characterizing business model disclosures proved that most elements of business model has the nature of qualitative narrations regarding strategy, various forms of capitals, business activities and outputs, while less attention was paid to business model adaptability, position of the organization within the value chain, waist/by-products, and outcomes' effect on various forms of capital.

## **7. Conclusions**

In the context of the above considerations, the need to disclose information about the BM seems obvious. Stakeholders expect information both about the organization's BM and its effectiveness. The problem is that nowadays disclosures on the BM appear in different parts of the integrated report. In addition, these disclosures can be found in other reports – in notes to the financial statement, as well as in various reports accompanying traditional reporting, e.g., in the management commentary, sustainability reports, CSR reports.

The observation of economic practice clearly shows that the practice of disclosing the BM in integrated reports is very diverse. Overall, when assessing disclosures on the BM, the following issues raise the most doubts:

- forms of presenting the BM;
- descriptions of individual resources at the disposal of the organization;
- presentation of key performance indicators.

The credibility of the disclosures presented is also an issue. It should also be considered whether it is really necessary to disclose the BM and what added value it brings to stakeholders in assessing the company's performance. All the indicated problems seem to be crucial for the future of disclosing the BM.

Therefore, a question can be asked whether identifying the BM as a key element of the integrated report is really justified, whether its disclosure will not cause competitors' opportunistic behavior, whether disclosing the BM will actually fill the information gap for the investor and, finally, how to disclose the BM in addition to

presenting it in the form of a schema that seems to be insufficient. To sum up, the future of disclosure on the BM is inextricably linked with the development of the entire IR, as well as the company's management board's approach to its disclosure.

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