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The Unique Challenge to The Contemporary Corporate Reporting of Achieving Efficiency in The Disclosure of Climate-Related Issues

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Info Articles

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Abstract

Over the recent decades, climate change has been rising. The problems caused by the intensifying climate change are unique. The climate change process creates an existential threat to humans and all living beings interrelated with another risk arising from the crisis caused by the observed biodiversity deterioration and environmental degradation. The compound and complicated coexisting impacts of both factors on people, biodiversity, and economic entities and sectors pose unprecedented challenges to humankind. The unfavorable present-day circumstances and effects due to climate change require adequate governmental, managerial, and administrative strategies, policies, and activities for achieving sustainable, fair, and resilient growth. Moreover, phenomena and processes indicating climate change are developing on a global scale that gives rise to discussion, highlights, and justifies the existing need for meaningful climate-related disclosures through the system of corporate reporting. The necessity of trustworthy, transparent, and reliable disclosures on climate-related matters and inherent risks and opportunities focused on climate-change mitigation and adaptation is a problem of crucial importance to the present article. The relevance of climate-related disclosures as a significant part of present-day corporate reporting proves to be of great importance in achieving disclosure efficiency. The author aims to highlight, discuss and justify the necessity of a responsible approach to conducting an adequate disclosure policy and providing meaningful and consistent disclosures concerning climate-related matters, risks and opportunities considered a significant part of corporate reporting, and to substantiate why probable benefits for a sustainable future can be expected, not only for the company. The terminology of the research is in the field of financial and non-financial reporting and their numerous regulatory frameworks that are not fully aligned yet. Heuristic methods of knowledge such as analysis and synthesis, induction and deduction, descriptive approach, and techniques such as observation, analogy, comparison, and others are applied in the research process which is crucial to achieving the author's objective.

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INTRODUCTION

Remarkable scientific and empirical research efforts dedicated to the subject matters of sustainability, sustainable development, and climate change have been made over the recent decades. Scientists, ecologists, and environmentalists devoted to research in different scientific fields maintain the thesis that greenhouse gas emissions create and pose considerable risks to many economic sectors and the global economy as a whole. “There is a not inconsiderable risk that the climate scientists are right, therefore it’s irresponsible for boards not to be considering and looking at issues around climate change”, *Investor* wrote. The results of comprehensive surveys confirm our hypothesis that the conceptual idea of sustainability is not an innovative one. It is even argued in specialized literature that the idea dates back to Roman times. “It was part of the traditions and cultural norms of indigenous societies all over the world since their origin,” (Sakalasooriya, N., 2021, p. 1).

At the Conference on Human Environment in 1972, the United Nations Organization (UN) introduced the concept of sustainability[1]. The conceptualization of the problem and the explanation and justification of the essential core values of sustainable development has been central to much scientific research and conceptual frameworks developed by influential global organizations and initiatives. After decades of thorough and intensive debates and scientific research, it is not surprising that at present there exist over one hundred definitions of sustainable development even over three hundred definitions regarding sustainability. The interpretations found in particular studies differ – the authors’ views, reflections, and descriptions are not identical but wide-ranging.

The sustainable development paradigm is considered the supreme overarching paradigm of the United Nations (UN). Generally, the meaning of the phrase primarily refers to achieving economic and social development in ways that do not exhaust countries’ natural resources. The World Commission on Environment and Development’s (WCED’s) definition of 1987 is widely spread – “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” It is true that among the most commonly accepted and endorsed definitions is the one proposed by the Brundtland Commission Report. It is specified there that “Sustainable development is not a fixed state of harmony but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.” The dimensions of sustainable development regarding society, environment, culture, and economy, are not separate but intertwined. “Sustainability is a paradigm for thinking about the future, in which environmental, societal, and economic considerations are balanced in the pursuit of improved quality of life. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water, and clean air for its citizens.” The question arises whether any difference exists between sustainability and sustainable development. “Sustainability is often thought of as a long-term goal (i.e., a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it [the goal] (e.g., sustainable agriculture and forestry, sustainable production and consumption, good government, research, and technology transfer, education and training, etc.).” The strategic goal of our not only century but also millennium is to achieve such a process of radical change globally, such a progressive movement worldwide, for attaining the well-being of present and future generations, humankind, and all living beings. Devoted to the achievement of such most humanistic goals, scientists, environmentalists, and ecologists have been sounding the alarm for decades now that the prevailing mode of production, imposed by economic globalization and merging of business entities targeted at monopolizing highly profitable economic activities predominantly generates a strongly detrimental effect on the ecosystems of the Planet. However, ecological limits exist, and if the model does

[1] Sakalasooriya, N. (2021). Conceptual Analysis of Sustainability and Sustainable Development. *Open Journal of Social Sciences*, Volume 9, No.3, 396-414. DOI: 10.4236/jss.2021.93026.

not globally change, the likelihood (risk) of becoming such dangerous processes irreversible increases considerably. "If governments fail to act or delay adopting the necessary policies, the likely consequences and costs of [caused by] this policy inaction will be significant. Without further policies to combat climate change, the OECD projects that GHG emissions will grow by about 52% by 2050. This would raise the global temperature between 1.7° and 2.4 °C compared to pre-industrial levels – at least twice the temperature increase was seen between 1899 and 2005" (OECD, p. 1).

CLIMATE CHANGE AND THE PARADIGM OF SUSTAINABLE DEVELOPMENT

Back in November 2011, a powerful message was sent to all governments and people across the world from the Summit in Durban, South Africa[2]. Climate change and the destruction of the Planet's biological diversity lead to the interruption of natural chains among living organisms. When an animal or plant species are lost, the chain of life and natural history changes. This is an infringement on the freedom of nature and a fundamental threat to the survival of humankind.

Several years later, in 2015, the 2030 Agenda for Sustainable Development was adopted by the United Nations Member States providing a common plan for peace and prosperity for the People and Planet. The Sustainable Development Goals (SDGs) underlying most humanistic doctrines were adopted after decades of hard work on behalf of 193 countries and the United Nations as an urgent appeal for action by developed and developing countries and governments and representatives of countries. It is recognized in the justification of the SDGs that ending poverty and other deprivations must be combined with strategies that improve health and education, reduce inequality, and spur economic growth – all this alongside tackling climate change and working to preserve oceans and forests of the Planet.

On December 12, 2015, the unprecedented Paris Agreement was signed up[3], charting a new course in global efforts against climate change. The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, in December 2015, and entered into force on 4 November 2016. Its essential goal is to restrict the rising of global temperature to well below 2 degrees (2 °C) above pre-industrial levels, as well as pursue efforts to limit the increase to 1.5 degrees (1.5 °C), setting the innovative ambition to respond to climate change globally (2015, Paris). It is of crucial importance to achieve Paris Agreement goals for the nature of the challenges posed to humankind by climate change to be thoroughly understood on a worldwide scale.

The UN Global Goals, the Paris Agreement, and the Special Report of the Intergovernmental Panel on Climate Change of October 2018 appeal for urgent actions to reduce greenhouse gas emissions and create a low-carbon and climate-resilient economy. The EU has accepted to encourage targets for 2030 regarding greenhouse gas emissions reductions, renewable energy, and energy efficiency[1], and has endorsed rules on greenhouse gas emissions from land use and emission targets for cars and vans. In 2018, the Commission published the strategic long-term vision for building up a prosperous, competitive, and climate-neutral economy by 2050.

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[2] At the UN Climate Change Conference, Durban, 2011, a breakthrough on the international community's response to climate change was achieved. At the second-largest meeting of this kind, the negotiations significantly advanced regarding the implementation of the Convention and the Kyoto Protocol, the Bali Action Plan, and the Cancun Agreements. Parties decided to adopt a universal legal agreement on climate change no later than 2015. The President of COP17/CMP7 Maite Nkoana-Mashabane pointed out: "What we have achieved in Durban will play a central role in saving tomorrow, today." At https://unfccc.int/process-and-meetings/conferences/past-conferences/durban-climate-change-conference-november-2011/durban-climate-change-conference-november-2011, last accessed on June 15, 2022.

[3] At the COP21, Paris, 2015, Parties to the UNFCCC reached a landmark agreement to combat climate change, to accelerate and intensify the actions and investments needed for a sustainable low carbon economy and future. The Paris Agreement built upon the Convention, for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects that enhanced support to assist developing countries to do so. UN Climate Change Key aspects of the Paris Agreement, 2022. Available at https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement, last accessed on June 15, 2022.

In the Intergovernmental Panel on Climate Change (IPCC) report issued on February 28, 2022 (Berlin), it was announced that "*Human-induced climate change is causing dangerous and widespread disruption in nature and affecting the lives of billions of people around the world, despite efforts to reduce the risks. People and ecosystems least able to cope are being the hardest hit* (emphasis added)". Concerning such processes and anticipated relevant risks, Hoesung Lee, the IPCC Chair emphasized that the report is a dire warning about the consequences of inaction and reveals that "climate change is a grave and mounting threat to our wellbeing and a healthy planet. Our actions today will shape how people adapt and nature responds to increasing climate risks," (Hoesung Lee, 2022, Berlin). "… the IPCC's king Group I report showed — unequivocally – that human activities have warmed the climate at a rate not seen in at least the past 2000 years" – Hoesung Lee's remarks during the press conference presenting the Working Group II contribution to the Sixth Assessment Report (February 2022). "We are on course to reach global warming of 1.5 degrees Celsius within the next two decades. And the temperature will continue to increase unless the world takes much bolder action."[4]

Nowadays, companies carry out various activities, not only of industrial nature, in different geographical regions; that way companies experience the influences of various climate and physical-geographical factors; for performing their activities, companies held, control, and manage resources (assets) of different types; therefore, different companies may experience aggressive or unfavorable impacts of different climate-related phenomena, processes, and factors in a different way. Many companies will incur increases in costs (expenses) or decreases in revenues and income, or both effects. For example, increasing the cost of water and energy will lead to an increase in electricity and energy costs, consumed in operational activities of some companies; assets, for example, stocks or other kinds of investments, loans, or infrastructure assets may be foiled in specific locations due to extraordinary circumstances or unforeseen phenomena. For some companies, climate-related issues are material even now, with impacts disrupting supply chains and changing consumer behavior. In other cases, issues related to climate are a matter of long-term decisions, targeted at strategic planning, while other company-related risks are highly probable and foreseeable. As the manifestation of such risks becomes clearer, more and more people are likely to adapt their behavior and investments, thus making the prevention against potential aggressive climate change influences a short-term mission, task, and high responsibility for many companies. Equally important is the problem of how companies' operational activities affect the environment and climate, and what damage, impacts, and consequences these activities cause or engender.

In June 2017, the Task Force on Climate-Related Financial Disclosures (TCFD)[5] released its final report and recommendations. The Task Force's goal was to provide a framework for supporting companies to develop much more effective, climate-related disclosures through the existing financial reporting practices and procedures. In the report, the TCFD highlighted the importance of transparency in assessing risks, including risks related to climate change that would better support informed and efficient decisions regarding the allocation of capital. The TCFD recognized the existence of challenges, associated with generating and disclosing information on issues of risks related to climate change and underscored the fact that moving climate-related issues into the mainstream annual financial filings would allow practices and techniques to evolve more rapidly. It can be expected that if practices and techniques were improved it would lead to further improvement of the quality of climate-related financial disclosures and ultimately support a more appropriate evaluation of risks and allocation of capital in the global economy. The process of management of assets and the predominant part of investors regardless of their investing capacity are facing the prospect of significant losses presupposed because of anticipated climate change effects.

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[4] Hoesung Lee (2022). Remarks by the IPCC Chair during the press conference to present the Working Group II contribution to the Sixth Assessment Report, February 28, 2022.

[5] The Financial Stability Board (FSB) created the TCFD to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks – risks related to climate change.

Companies may incur losses – assets may be damaged by natural phenomena like storms, floods, droughts, etc. There exists a probability for portfolios of assets to be affected and impaired through weaker cost-effectiveness, weaker profitability and growth, and lower returns on assets. Climate change generates long-term even short-term problems, highly probable unfavorable processes that may prove irreversible surrounded by significant uncertainty.

There exists the consideration that climate change does not only pose challenges, it also creates opportunities of not only financial character, and such considerations give rise to optimistic attitudes. Evaluations of the International Energy Agency suggest that the desired transition to a lower-carbon economy is estimated to require around $1 trillion of investments a year for the near future which will generate new investment opportunities (International Energy Agency, World Energy Outlook Special Briefing for COP21, 2015). The expected transition to a lower-carbon economy is estimated to require around $3.5 trillion, on average, in energy sector investments a year for the near future, generating new investment opportunities. At the same time, the risk-return profile of companies exposed to climate-related risks may change significantly because of the physical impacts of climate change, policy toward climate, or new technologies. A study estimated the value at risk to the total global stock of manageable assets because of climate change ranges from $4.2 trillion to $43 trillion between now and the end of the century. The study highlights that "much of the impact on future assets will come through weaker growth and lower asset returns across the board." This suggests that investors may not be able to avoid climate-related risks by moving out of certain asset classes, as a wide range of asset types would be affected.

Both investors and company executives must consider their longer-term strategies and the most efficient allocation of capital. Companies that invest in activities vulnerable to climate-related risks may prove to be less resilient to the transition to a lower-carbon economy, and the probability of experiencing lower returns by the investors exists. Compounding the effect on longer-term returns is the risk that present valuations do not adequately factor in climate-related risks because of insufficient information. As such, long-term investors need adequate information on how companies are preparing for a lower-carbon economy; and the companies that meet this need may have a competitive advantage over others. The Government of the United Kingdom has set a target to bring all greenhouse gas emissions net-zero zero by 2050. Other governments are realigning around such targets with investors beginning to follow, for example, as part of the UN-convened Net-Zero Asset Owner Alliance. This target provides a unique 30-year signal for the future, for which both companies and investors will aim. Having in mind this tendency, more and more companies will provide information on what their business model would look like in the future and how it will get there.

Results of our comprehensive research on the subject indicate that over the last decade, there have been noticed good trends and reporting practices in Bulgaria and abroad of progressively intensifying disclosure focusing on climate-related risk even by companies, for which such disclosure is not obligatory. Many companies disclose such information voluntarily. Nevertheless, it should be emphasized that further improvement is necessary regarding both the quantity and quality of the disclosed information to optimize the balance between them. As it is specified in the Communication from the Commission (EC) "Guidelines on non-financial reporting: Supplement on reporting climate-related information"[6], improving the disclosure of climate-related information would bring benefits to the disclosing companies themselves. Probable benefits are the following:

- Improved awareness and understanding concerning climate-related risks and opportunities within the company focused on climate-change mitigation and adaptation;
- Improved risk management and more informed decision-making and strategic planning;

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[6] Official Journal of the European Union C 209/1 of June 20 2019, "Communication from the Commission (EC) Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01)", p. 1–30.

- A more diverse base of investors and a potentially lower cost of capital due to inclusion in actively managed investment portfolios and sustainability-focused indices;
- Improved credit ratings for bond issuance and better creditworthiness assessment of bank lending practices;
- A more productive dialogue with stakeholders, especially investors, shareholders, and others;
- Better corporate reputation of the company and maintenance of social license to operate, in other words, positive public appraisal and benevolence.

Following Directive 2014/95/EU of the European Parliament and the Council[7] certain large undertakings and groups are required to disclose information to the extent necessary, to understand the development, performance, state of affairs, and impact of the companies' activities, relating to environmental, social, and employment matters, to human rights, anti-bribery and anti-corruption issues. Logically, climate-related information can be considered to refer to the category of environmental issues. It is set out in the Commission's Non-Mandatory Guidance on the Disclosure of Non-Financial Information of 2017 that the wording on the "impact of [the entity's] activities" introduces a new element, which should be taken into consideration when the materiality of non-financial information is assessed. In practice, the perspective on materiality in the EU Directive on non-financial reporting and disclosure is double-sided. The reference to the "development, performance [and] condition" of the company means financial materiality in the broad sense of impact on the value of the company. Climate-related information should be disclosed if necessary to understand the company's development, performance, and condition, and this perspective is usually of the most interest to investors. The reference to 'the impact of [the undertaking's] activities' implies materiality concerning environmental and social issues. Climate-related information should be disclosed if it is necessary to understand the external impacts of the company. Typically, the most interested in this perspective are citizens, consumers, employees, business partners, communities, and organizations of civil society. However, increasingly investors also will need to be informed of the climatic impacts of the companies, in which they have invested, to better understand and measure the climate impacts of their investment portfolios. The perspective concerning "the materiality" of the EU Non-Financial Reporting Directive touches upon it from a financial viewpoint and an environmental and social one as well, whereas the Task Force on Climate-related Financial Disclosures (TCFD) perspective covers materiality from a financial viewpoint only. "Where undertakings are required to prepare a non-financial statement, that statement should contain, as regards environmental matters, details of the current and foreseeable impacts of the undertaking's operations on the environment, and, as appropriate, on health and safety, the use of renewable and/or non-renewable energy, greenhouse gas emissions, water use, and air pollution."[8]

DISCLOSURES ON CLIMATE-RELATED ISSUES: THE DOUBLE MATERIALITY PERSPECTIVE[9] AND THE EU NON-FINANCIAL REPORTING DIRECTIVE[10]

Companies should consider a longer-term period than the one traditionally taken into consideration for financial statement information when assessing the materiality of climate-related information.

[7] Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, OJ L 330, 15.11.2014, pp. 1–9.
[8] Ibid.
[9] The EU Commission released (2019) the Consultation Document on the Update of the Non-Binding Guidelines on the EU Non-Financial Reporting Directive (NFRD). The Document introduces a new definition of materiality called "double materiality". The first perspective concerns the potential or actual impacts of climate-related risk and opportunities on the "performance, development and position" of the company, indicated as "financial materiality", with an investor type of audience. The latter refers to the "external impacts of the company's activities", labeled as "environmental and social materiality", whose audience consists of consumers, civil society, employees, and investors too.
[10] The new Corporate Sustainability Reporting Directive (CSRD) will mandate over 50,000 companies in Europe to conduct a double materiality assessment.

Companies are advised not to prematurely conclude that climate is not a material issue just because some climate-related risks are regarded to be long-term in nature. As specified in the Communication from the Commission (EC) Guidelines on non-financial reporting[11], when assessing the materiality of climate-related information, companies should consider their whole value chain, both upstream in the supply chain and downstream. Given the systemic and pervasive impacts of climate change recently, most companies under the scope of the Directive are likely to conclude that climate is a material issue. In case companies conclude that climate is not a material issue from their viewpoint, then companies are advised to consider making a statement to that effect, explaining how such a conclusion has been reached. Amongst the examples of risks, causing negative impacts on climate are the following[12]:

- An industrial production facility held by a company may directly emit greenhouse gases into the atmosphere;
- The energy purchased by a company for its operations may have been produced by using fossil fuels;
- The product that the company produces may require the consumption of fossil fuels, for example in the case of cars that run on petrol or diesel;
- The production of materials, used by the company, can lead to GHG emissions up its value chain. This may be the case for companies that use materials such as cement or aluminum in their production processes. Similarly, a company producing, and processing timber, or agricultural commodities, including in sectors such as the food, clothing, or timber industries, could be causing a land-use change directly or indirectly, including deforestation and forest degradation and associated greenhouse gas emissions.

Risks to the company's activities and financial performance arising from climate change can be categorized as either physical or transition-related risks. Physical risks are the risks to the company that arises from the physical impacts of climate change. Amongst those risks are:[13]

- Risks of excessive physical damage arising from certain events, especially weather events such as storms, floods, fires, or heat waves, which can damage production facilities and disrupt value chains;
- Risks of chronic physical damage that arise from longer-term climate changes such as temperature changes, sea-level rise, reduced water availability, loss of biodiversity, and changes in land and soil productivity.
- A company's exposure to physical risks does not depend directly on whether that company hurts the climate.

Transition-related risks to the company are risks that arise from the transition to a low-carbon and climate-resilient economy. Such types of risks include:

- Policy risks may arise as a result of energy efficiency requirements, carbon pricing mechanisms increasing the price of fossil fuels, or policies promoting sustainable land use;
- Legal risks, for example, could be the ones of litigation due to failure to avoid or minimize adverse climate impacts or failure to adapt to climate change;
- Technological risks can arise if a technology with less climate-damaging impacts replaces a technology with more climate-damaging impacts;
- Market risks can arise if a consumer and business customer choice shifts to less climate-damaging products and services;
- Reputational risks concern the difficulties of attracting and retaining customers, employees, business partners, and investors because a company has a reputation for climate damage.

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[11] Official Journal of the European Union C 209/1 of June 20, 2019, "Communication from the Commission (EC) Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01)", p. 1–30.
[12] Official Journal of the European Union C 209/1 of June 20, 2019, "Communication from the Commission (EC) Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01)", p. 1–30.
[13] Ibid.

Generally, it can be expected that a company with a higher negative climate impact will be more exposed to transition-related risks. As regards the structure of the proposed disclosures, the Commission Guidelines on non-financial reporting: Supplement on reporting climate-related information, propose climate-related disclosures for each of the five areas of disclosure, described in the business model; the policies and due diligence; the policy outcome; the principal risks and risk management; and the key performance indicators. For each area of disclosure, the guidelines identify a limited number of disclosures that are recommended. An entity should consider the disclosures recommended to the extent necessary to understand the entity's development, performance, condition, and impact of its activities[14]. Companies decide whether to use the recommended disclosures and the detailed suggestions included under further guidance and to what extent. When deciding on the matter, companies should embrace the principles underlying good non-financial reporting practices specified in the Commission's 2017 Non-Binding Guidelines on Non-Financial Reporting, including the principles concerning the disclosed information being: *material*; *fair*, *balanced, understandable*; *comprehensive but concise*, *strategic and forward-looking*, *stakeholder orientated*, *consistent and coherent*.[15]

Over the recent decades, globally influential organizations and reporting initiatives have made tremendous efforts envisioned for achieving sustainable development goals. Each of these organizations is focused on its aims and specific objectives; its conceptual framework is based on principles similar to a certain extent to other frameworks' principles, but not fully aligned or at least not identical with the philosophy of other frameworks; the audience, users and targets of its guiding recommendations are not the same. The organizations diverge in their approach applied depending on which stakeholder group their initiatives and activities are focused on. At the Ethical Corporation's Responsible Business Summit in New York (2018) it was exactly emphasized that: "One of the best ways to understand the fundamental differences between the reporting frameworks is to look at how each one defines "materiality" for a business." As it is stated in the quoted article, "GRI and SASB complement each other nicely on this front," – Mohin pointed out (June 27, 2018)[16]. "Materiality to GRI is outward looking since it refers to the impacts of the company on the world around it". SASB's materiality revolves around the impacts of sustainability topics on a company's financial condition or operating performance, suggesting a more inward-looking approach (Helle Bank Jorgensen, 2018, Reuters Events). "They are converse, while complementary," – Mohin argued. "CDSB sees materiality from a bird's-eye view, in the sense that it considers equally how the organization influences the environment and vice versa. The IIRC considers a matter to be material if it could substantively affect the organization's ability to create value in the short, medium, or long term."[17]

Does the question arise what is the major contribution and the mission of each of the worldwide leading organizations regarding the crucial problem of the article? Due to its activities throughout several decades, the influential International Accounting Standards Board (IASB) *contributes transparency, accountability, and efficiency primarily to financial markets and investors thus fostering trust, growth, and long-term financial stability in the global economy*. The Carbon Disclosure Project (CDP) *focuses on investors, companies, and cities taking urgent action to build a truly sustainable economy*, while the mission of the Climate Disclosure Standards Board (CDSB) is *to create the enabling conditions for material climate change and natural capital information to be integrated into mainstream reporting, which will enhance the efficient allocation of financial capital*. The Sustainability Accounting Standards Board (SASB) *follows the objective to enhance investors' decision-*

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[14] In addition, Annex I, provides further guidance for banks and insurance companies.
[15] Official Journal of the European Union C 215/1, European Commission, Communication from the Commission Guidelines on non-financial reporting (methodology for reporting non-financial information) (2017/C 215/01), pp. 1–20.
[16] Helle Bank Jorgensen (2018) Demystifying the 'alphabet soup' of reporting frameworks, June 27, 2018. *Reuters Events*, *Sustainable Business*.
[17] Helle Bank Jorgensen (2018) Demystifying the 'alphabet soup' of reporting frameworks, June 27, 2018. *Reuters Events*, *Sustainable Business*.

making to sustain value creation. The goal of the International Integrated Reporting Council (IIRC) is to align capital allocation and corporate behavior to the wider goals of financial stability and sustainable development. The mission of the Global Reporting Initiative (GRI) is *to empower decisions that create social, environmental, and economic benefits for everyone*. The International Organization for Standardization (ISO) *strives to create high-quality, safe, and efficient products* as the basis for enabling trade. Therefore, *further alignment is globally necessary* – a more complete alignment of the principles and targets of the conceptual frameworks focused on sustainability and sustainable development, and if it is achieved it will bring greater progress towards sustainability and sustainable development. "Moderately optimistic assumptions could be made that the climate changes will drive the world towards a technological leap and will remain a challenge, which will most probably bring about innovations and improvements in technologies and the characteristics of the basic resources," (Oreshkova, 2013, p. 52). It may be suggested that finding appropriate solutions will create new opportunities for innovation in present-day economies and societies.

The growing institutional and societal concern arising from climate change regards its present and possible future impacts on business entities, financial institutions, and other organizations, and their activities examining and applying different standards and frameworks focused on sustainability reporting. Usually, the aim was to identify which of the frameworks will best articulate their specific climate-related risks and strategies to stakeholders. It was publicized (2019) that *climate-related reporting frameworks are highly aligned – but not fully [author's note] – aligned*[18]. The report by the Corporate Reporting Dialogue (CRD) was a part of a two-year study named "The Better Alignment Project", which found alignment even stronger than was expected between the Task Force on Climate-Related Financial Disclosures's (TCFD's) recommendations and global organizations' standards and frameworks on sustainability reporting.[19] The technical mapping of the report found out that the participants' standards and frameworks are harmonious and complementary with the Task Force on Climate-Related Financial Disclosures's (TCFD's) seven principles for effective disclosures (i.e., *disclosures should present relevant information*; *disclosures should be specific and complete*; *disclosures should be clear, balanced, and understandable*; *disclosures should be consistent over time*; disclosures should be *comparable among organizations within a sector, industry, or portfolio*; disclosures should be *provided on a timely basis*[20]) the Task Force on Climate-Related Financial Disclosures's TCFD's 11 recommended disclosures – on governance, strategy, risk management, and metrics and targets – are comprehensively covered by the participants' standards and frameworks; CDP, GRI, and SASB indicators fully or reasonably cover 80% of the TCFD's 50 metrics; and of all CDP, GRI, and SASB climate-related indicators, 70% show no substantive difference with the TCFD's 50 metrics.[21] Mackintosh, chair of the Corporate Reporting Dialogue (CRD) and a former vice-chairman of the International Accounting Standards Board (IASB) pointed out that the study compared the participants' frameworks against the TCFD's recommendations because the Task Force has been gaining significant traction and many organizations are interested in presenting the recommended metrics in their corporate reporting. "TCFD has been quite successful," – Mackintosh fairly remarked. The TCFD's framework rests on four pillars: *governance*: governance of climate-related risks and opportunities, including the board's oversight and management's role in assessing and managing them, by both the investor and the companies it invests in; *strategy*: the risks and opportunities posed by climate change, how they affect asset allocation, and the processes investors use to assess performance; *risk management*: the processes investors follow to measure,

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[18] Tho, Alexis See (2019) Climate-related reporting frameworks highly aligned, *FM Financial Management SustainabilityAccounting and reporting*, November 1, 2019.
[19] Five participants were involved for the purpose of investigations, comparative analysis and preparing the report – CDP, the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB).
[20] TCFD Final Report 2017. Task Force on Climate-related Financial Disclosures Recommendations of the Task Force on Climate-related Financial Disclosures, June 15th, 2017.
[21] Tho, Alexis See (2019) Climate-related reporting frameworks highly aligned, *FM Financial Management SustainabilityAccounting and reporting*, November 1, 2019.

monitor and manage climate-related risks; *metrics and targets*: the measures (e.g., greenhouse gas emissions) investors use and steps they can take to manage their climate-related risks and opportunities.[22]

In the same report, a survey found out that "the vast majority of corporate report users and preparers are unclear how sustainability reporting frameworks and standards in the market complement or differ from one another – whether on comparability, materiality, definitions of [terms and – author's note] terminologies, or the metrics used"[23]. Preparers and investors, funders and regulators consider that "it would be much more preferable to have one set of standards which everybody could understand and use and would be comparable across companies and industries and countries," (Mackintosh, 2019). Considering such high levels of alignment, which standard or framework should an organization use – is the substantial question? Mackintosh suggested three areas to look at – a framework's comparability with other frameworks, what is material to the organization, and the organization's goal in climate-related disclosures. But – as Mackintosh admitted – he does not think that there's a straight answer to the question," and added that the Corporate Reporting Dialog (CRD) report's Q&A section gives some answers. "… there's still a lot of crossover and potential for confusion," – Mackintosh admitted (2019)[24]. Undoubtedly, the approach of each company or organization should be tailored to the nature and specifics of its activity and the particular risks the activity and inherent assets face due to climate change, and the risks that the activity itself creates regarding climate. Therefore, there is no uniform, universally valid answer to the question.

THE PERSPECTIVE: THE NEW SEC's, ISSB's, AND EFRAG's PROPOSALS FOR STANDARDS FOR CLIMATE-RELATED DISCLOSURES

Recently, three significant proposals designed for standards for reporting concerning climate-related matters have occurred. The first one is the U.S. Securities and Exchange Commission's (SEC's) proposal for *"The Enhancement and Standardization of Climate-Related Disclosures for Investors"* of March 2022, and comments were expected by June 17, 2022. The second proposal is the International Sustainability Standards Board's (ISSB's)[25] *"[Draft] IFRS S-2 Climate-related Disclosures"* of March 2022, with comments expected by July 29, 2022. The third one is the European Sustainability Reporting Standards (ESRS) of April 2022, developed by the European Financial Reporting Advisory Group (EFRAG) *"ESRS E1: Climate change"* with comments expected by August 8, 2022.

The U.S. Securities and Exchange Commission (SEC) has a unique position in the financial reporting process in the United States[26]. On 21 March 2022, the U.S. supreme institution in the field of financial reporting regulation, the U.S. SEC, proposed rules to enhance and standardize climate-related disclosures for investors. The changes would require registrants to include certain climate-related disclosures in their registration statements and periodic reports, including information concerning climate-

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[22] Net-Zero Knowledge Hub (2022) Your Net-Zero Strategy Aligning with TCFD recommendations: Climate-related financial reporting, July 2022.

[23] Tho, Alexis See (2019) Climate-related reporting frameworks highly aligned, FM Financial Management SustainabilityAccounting and reporting, November 1, 2019.

[24] Ibid.

[25] On 3 November 2021, the IFRS Foundation Trustees announced the creation the International Sustainability Standards Board (ISSB) intending to meet international investors' demands. Investors with global investment portfolios are increasingly calling for high quality, transparent, reliable, and comparable information on climate-related issues and other environmental, social, and governance matters. The new ISSB intends to deliver a comprehensive global baseline of sustainability-related disclosure standards that will provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to assist them in making informed decisions.

[26] The Commission not only has authority under the securities laws of the United States to set accounting standards to be followed by public companies but also the power to enforce those standards. Practically since its inception, the Commission has looked to the private sector for leadership in establishing and improving the accounting methods used to prepare financial statements. The body currently performing that function is the Financial Accounting Standards Board (FASB). As a result, the FASB has the power to set, but not enforce, accounting standards to be used by public companies.

related risks that are reasonably likely to have a material impact on their business, results of operations, or financial condition, as well as certain climate-related financial statement metrics in a note to their audited financial statements. The required information regarding climate-related risks would include disclosure of a registrant's greenhouse gas emissions, which have become a commonly used metric to assess a registrant's exposure to such risks. It is pointed out in recent publications[27] that the SEC's course of action and programme are politically influenced. Well-known is the fact that amongst Republican circles in the U.S., the existence of climate change is denied as well as the assumption that climate change is a result of human activity. There exists "thinking that market forces and technological innovation will bail us out"[28] (Eccles, 11 June 2022, *Forbes*).

In Professor Eccles's view, all three proposals have a lot more in common than different, and this is encouraging. However, "Some of the differences are important," – Eccles argued. Regarding a future global framework and standard for disclosure on climate-related issues, Professor Eccles is rather an optimist since he considers "the groundwork is being laid for a truly global standard for climate-related disclosures, with the necessary nuances to accommodate the laws, regulations, and customs of different jurisdictions" (Eccles, 11 June 2022, *Forbes*). Professor Eccles's hypothesis is based on a released report recently, "The Evolution of Sustainability Disclosure: Comparing the 2022 SEC, ESRS, and ISSB Proposals," by Persefoni and the SustainAbility Institute by ERM based on a comparative review of all three proposals. In the report "The Evolution of Sustainability Disclosure" released by the SustainAbility Institute by ERM (ERM) and Persefoni on June 9, 2022, it is revealed that a substantial convergence is achieved between the new climate-related disclosure frameworks. Specifically, it addresses the proposed rules developed by the U.S. Securities and Exchange Commission (SEC), the European Financial Reporting Advisory Group (EFRAG) in the EU, and the International Financial Reporting Standards (IFRS) Foundation's International Sustainability Standards Board (ISSB). It is emphasized that a significant opportunity for greater harmonization exists and if it is achieved it would increase the comparability and the quality of climate-related disclosure. "The urgency of the climate crisis and lack of common reporting requirements has led to a proliferation of standards in response to investor and other stakeholder demands for more climate-related financial information from companies. This has resulted in an 'alphabet soup' of standards that can be difficult to navigate, with both issuers and investors calling for convergence and harmonization."[29] (ERM, *New report helps companies and investors make sense of proposed climate disclosure standards*, 2022).

Regulatory organizations that occupy different positions in the global regulatory landscape develop the proposals. It was already mentioned that the SEC's proposal of 21 March 2022, "Enhancement and Standardization of Climate-Related Disclosures for Investors" focuses primarily on the protection of investors in publicly traded companies in the U.S. Specifically SEC's proposal applies to all SEC registrants including foreign private issuers. On April 21, 2022, EFRAG released guidance on a broad range of requirements concerning sustainability-related disclosure, including the European Sustainability Reporting Standards (ESRS). The objective of the [Draft] ESRS E1 '*Climate change*' as stated, is for disclosure requirements to be specified to enable sustainability statements users to understand:

- "How the undertaking affects climate change, in terms of positive and negative material actual or potential impacts;
- Its past, current, and future mitigation efforts in line with the Paris Agreement (or an updated international agreement on climate change) and limiting global warming to 1.5 °C;

[27] Eccles, R. G. (2021). A Comparative Analysis of Three Proposals for Climate-Related Disclosures, *Forbes*, June 11, 2022, p. 1, at https://www-forbes-com.cdn.ampproject.org/c/s/www.forbes.com/sites/bobeccles/2022/06/11/a-comparative-analysis-of-three-proposals-for-climate-related-disclosures/amp/, last accessed 9 July 2022.
[28] Ibid.
[29] ERM 2022. New report helps companies and investors make sense of proposed climate disclosure standards, June 9, 2022, at https://www.erm.com/news/new-report-helps-companies-and-investors-make-sense-of-proposed-climate-disclosure-standards/, last accessed 9 July 2022.

- The plans and capacity of the undertaking to adapt its business model(s) and operations in line with the transition to a sustainable economy and to contribute to limiting global warming to 1.5 °C;
- Any other actions [that are] taken, and the result of such actions, to prevent, mitigate or remediate actual or potential adverse impacts;
- The nature, type. and extent of the undertaking's material risks and opportunities arising from the undertaking's impacts and dependencies on climate change, and how the undertaking manages them; and
- the effects of risks and opportunities, related to the undertaking's impacts and dependencies on climate change, on the undertaking's development, performance and position over the short-, medium- and long-term and therefore on its ability to create enterprise value."[30]

This proposal will help notify the EU's Corporate Sustainability Reporting Directive (CSRD) and will eventually apply to all large companies in the EU, companies with listings in the EU, and certain non-EU companies with EU subsidiaries. EFRAG's ESRS proposal is based on the principle of double materiality that focuses on both how sustainability influences reporting companies and how companies influence the environment and society. The International Accounting Standards Board (IASB) and the International Sustainability Standards Board (ISSB) do not have the authority to compel disclosure; rather, as standards setters, both Board' key role is to develop sustainability standards that different jurisdictions and regulators can adopt or otherwise use in their rulemaking process. The thorough comparative analysis of the three proposals reveals increasing alignment in the development of climate-related disclosure frameworks. This is of crucial importance to developing a consistent global baseline across reporting requirements. It has the potential to influence the overall quality of climate-related data and information favorably, ultimately resulting in improved insights and outcomes.

Key takeaways and results of comparative analysis, are revealed in the report "The Evolution of Sustainability Disclosure: Comparing the 2022 SEC, ESRS, and ISSB Proposals," by Persefoni and the SustainAbility Institute by ERM[31].

- The U.S. Securities and Exchange Commission's (SEC) guidance, the European Financial Reporting Advisory Group's (EFRAG) guidance, and the IFRS Foundation's guidance are significantly improved.
- Evolving engagements among international experts and organizations dedicated to ESG, sustainability, and climate change matters continue to develop, which improves the overall disclosure background for ESG-related information, especially quantifiable data about GHG emissions and climate change-related risks.
- For now, companies should focus on the Task Force on Climate-related Financial Disclosures (TCFD) framework (applied across industries, geographies, and types of organizations) underlying the three proposals intended for helping companies to evaluate their climate-related financial risks and opportunities.[32]

Now, companies, investors, and all other interested parties are strongly encouraged to share their comments on the proposals. Tom Reichert, CEO of ERM, pointed out: "We welcome the increasing alignment in the development of climate-related risk and opportunity disclosure frameworks, which will help companies navigate this complex landscape and manage their reporting requirements more effectively. ERM believes that global alignment on climate disclosure guidelines also has a positive impact on the overall quality of climate data, to the benefit of companies and investors alike. We're looking forward to

[30] EFRAG PTF-ESRS [Draft] ESRS 1 Climate change, Exposure Draft, April 2022.
[31] ERM 2022. New report helps companies and investors make sense of proposed climate disclosure standards, 9 June 2022.
[32] "More companies will disclose emissions (Scope 1, 2, and 3): This will increase the amount of available data and facilitate reporting over time. In particular, as more companies report their Scope 1 and 2 emissions data, Scope 3 reporting will become easier and more reliable," (Quote from the: "New report helps companies and investors make sense of proposed climate disclosure standards", 9 June 2022, ERM 2022).

seeing further harmonization between the three frameworks that support the development of a clear global baseline for climate and broader ESG-related disclosure requirements."[33] Kentaro Kawamori, CEO of Persefoni, stated: "As a business community, we must pursue the much-needed convergence and harmonization of global climate reporting standards. This will not only have the benefit of making climate disclosures less complicated but also more widely accepted. Persefoni is proud to partner with ERM on this paper, and we encourage readers to consider this information as they submit public comments on the SEC, EFRAG, and ISSB proposals."[34] Kristina Wyatt, Deputy General Counsel of Persefoni, indicated: "There has been a real need to harmonize what has been termed an "alphabet soup" of reporting standards. The recent proposals from the SEC, EFRAG, and ISSB reflect substantial convergence on the direction of travel. Climate risks and opportunities are a top priority for investors and increasingly for companies. The SEC, EFRAG, and ISSB proposals don't line up squarely with each other given the organizations' different mandates but seeing that their proposals are constructed on essentially the same foundation – the Greenhouse Gas Protocol (GHG Protocol) and the Task Force on Climate-related Financial Disclosures (TCFD) – is encouraging."[35] Robert LaCount, Partner at ERM, said: "Companies will be encouraged to see the level of convergence between the new climate-related disclosure frameworks. However, there are still important differences, which means that they must carefully assess what's required and ensure they have the right business strategies, governance processes, and performance data in place to adhere to these guidelines. The good news is that companies that proactively take action on their climate strategies not only place themselves in a better position for the finalized rules, they also gain a competitive edge by becoming more agile in identifying and executing on opportunities and mitigating risk."[36] In the European Commission Guidelines on reporting climate-related information, the Commission highlighted the benefits for companies to report on climate-related information particularly by increasing awareness and understanding of climate-related risks and opportunities within the company, diversifying the investor base, and creating a lower cost of capital and improving constructive dialogue with all stakeholders. Diversity on company boards might influence decision-making, corporate governance, and resilience.

CONCLUSION

The thesis that greenhouse gas emissions pose considerable risks to the global economy is well-founded. Its supporters maintain the widespread view that greenhouse gas emissions affect and will continue to have a strongly negative impact on numerous economic sectors and entities. Therefore, it is reasonable to be expected that stakeholders – communities of present and potential investors, creditors, employees, and other interested parties, will increasingly need credible information about companies and companies' business activities mostly exposed to risk arising from climate change, and companies that generate risk concerning climate due to their activities' nature.

Therefore, it is necessary to know to what extent concerned companies are organized to incur unfavorable impacts and effects of evolving aggressive phenomena due to climate change and to what extent companies are prepared to take appropriate actions for prevention. The role of civil society is also of crucial importance. Civil society members should have morality, awareness, and interest to require an adequate response to the necessity of sound, qualitative disclosures about climate-related matters. The disclosure efficiency mostly depends on the priorities and concerns, the insight and responsibility of directors, executives, and officials acting at the highest levels of corporate governance and management.

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[33] ERM 2022. New report helps companies and investors make sense of proposed climate disclosure standards, 9 June 2022.
[34] Ibid.
[35] Ibid.
[36] Ibid.

Climate change is turning into the most important factor influencing significant decisions regarding capital allocation globally. Investors are increasingly trying to navigate climate risks and gain an investment advantage and benefit of a climate transition. It is not surprising that the new proposals occur in a period of flourishing climate-related disclosure regulations worldwide. Over the last decade, remarkable progress has been achieved – the global baseline for disclosures on climate-related matters was developed. However, there is still a long way to go to reach the extent, to which the regulatory basis for international financial reporting is developed.

The present-day thinking and philosophy of the necessity of appropriate solutions regarding climate change should be developed and raised to a qualitatively new level. The appropriate actions for mitigation (of) and adaptation to climate change considered an effective strategy for a sustainable future can help reduce probable negative effects as well as the manifestation of climate-related risks and decrease the vulnerability of people, ecosystems, and biodiversity. Unfortunately, beyond certain temperatures, adaptation will no longer be possible for some species. Climate change poses unique challenges to humankind. However, another key point is that climate change can be regarded as an exclusive chance for creating new opportunities. Proper solutions will most probably create opportunities for innovations in the economies, societies, and technologies in favor of climate-change mitigation, and adaptation. Developing high-quality international standards for climate-related disclosures, which are to be universally applied globally, should be regarded as THE highest priority and a substantial part of constituting a comprehensible regulatory basis for corporate reporting on the matters of sustainability.

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