



RIGA TECHNICAL
UNIVERSITY

Ilze Zumente

MODEL OF CORPORATE SUSTAINABILITY DRIVERS THROUGH BUSINESS LIFECYCLE

Doctoral Thesis



RIGA TECHNICAL UNIVERSITY
Faculty of Engineering Economics and Management
Institute of Corporate Finance and Economics

Ilze Zumente

Doctoral Student of the Study Programme “Management Science and Economics”

**MODEL OF CORPORATE SUSTAINABILITY
DRIVERS THROUGH THE BUSINESS LIFE
CYCLE**

Doctoral Thesis

Scientific supervisors
Professor Dr. Oec.
NATAĻJA LĀCE
Dr. Oec.
JŪLIJA BISTROVA

Riga 2023

Zumente, I. Model of Corporate Sustainability Drivers through Business Life Cycle. Doctoral Thesis. Riga: RTU Press, 2023. 199 p.

Published in accordance with the decision of the Promotion Council "P-09" of 19 June 2023, Minutes No. 04030-9.9.2-e/4.

Gratitude: I am deeply grateful for the support and guidance of my supervisors. I extend my appreciation to my family for the support, and especially to my husband, for being my sparring partner and encouragement throughout this adventurous journey of completing my Ph.D.

DOCTORAL THESIS PROPOSED TO RIGA TECHNICAL UNIVERSITY FOR THE PROMOTION TO THE SCIENTIFIC DEGREE OF DOCTOR OF SCIENCE

To be granted the scientific degree of Doctor of Science (Ph. D.), the present Doctoral Thesis has been submitted for the defence at the open meeting of RTU Promotion Council on 19 December 2023 10:00 at the Faculty of Engineering Economics and Management of Riga Technical University, 6 Kalnciema street, Riga, Latvia.

OFFICIAL REVIEWERS

Professor Dr. oec. Inga Lapiņa Riga Technical University

Professor Dr. oec. Andrejs Čirjevskis RISEBA University, Latvia

Professor Dr. oec. Rima Tamošiuniene Vilnius Gediminas Technical University, Lithuania

DECLARATION OF ACADEMIC INTEGRITY

I hereby declare that the Doctoral Thesis submitted for the review to Riga Technical University for the promotion to the scientific degree of Doctor of Science (Ph. D.) is my own. I confirm that this Doctoral Thesis had not been submitted to any other university for the promotion to a scientific degree.

Name Surname: Ilze Zumente (signature)

Date:

The Doctoral Thesis has been written in English. It consists of an Introduction; 5 Chapters; Conclusion; 41 figures; 23 tables; 8 appendices; the total number of pages is 199, including appendices. The Bibliography contains 282 titles.

Anotācija

Strauji pieaugošā tendence ieguldīt līdzekļus uzņēmumos, kas atbilst ētiskiem vides, sociālajiem un korporatīvās pārvaldības jomā (no angļu valodas – *environmental, social, and governance* jeb *ESG*) atbilstošiem standartiem, ir piesaistījusi gan uzņēmēju, gan investoru un finanšu profesionāļu uzmanību. Šī pāreja no tīri finansiālās atdeves uz vispārinātu pieeju ieguldījumiem liek nozares dalībniekiem pievērst lielāku uzmanību ar ilgtspēju saistītiem apsvērumiem. Uzņēmumu ilgtspējas koncepcija, ko mēra ar *ESG* faktoriem, atbilst uzņēmējdarbības pieejai, kas vērsta uz ilgtermiņa vērtības radīšanu visām ieinteresētajām personām, ieskaitot to akcionārus, integrējot vides, sociālos un korporatīvās pārvaldības apsvērumus lēmumu pieņemšanā un saimnieciskajā darbībā.

Tā kā Eiropas Savienība arvien lielāku uzsvāru liek uz ilgtspēju, Centrāleiropas un Austrumeiropas (CAE) valstīs, tostarp trijās Baltijas reģiona jaunattīstības valstīs - Igaunijā, Latvijā un Lietuvā, uzņēmumi tiek stimulēti uzlabot savus *ESG* rādītājus. Līdz ar to šī tendence kļūst arvien nozīmīgāka šī reģiona investoriem, kā arī uzņēmumiem, kuri vēlas paaugstināt savu *ESG* atbilstības līmeni. Turklāt *ESG* investīciju pieaugums CAE valstīs var palīdzēt veicināt ekonomisko izaugsmi un mazināt plaisu starp Austrumiem un Rietumiem investīciju un ekonomiskās attīstības līmeņa ziņā.

Šajā disertācijā tiek pētīts *ESG* ieviešanas prakses un briedums CAE reģionā, īpašu uzmanību pievēršot Baltijas valstīm. Tajā ir izklāstīta pašreizējā situācija *ESG* ieviešanas jomā, tostarp ilgtspējas faktoru ieviešana, informācijas atklāšana, atbilstība starptautiskajiem standartiem. Papildus tiek pētīti arī *ESG* virzītājspēki un pastāvošie šķēršļi. Lai noteiktu *ESG* standartu *status quo* Baltijas valstīs, tiek izmantota kvalitatīva satura analīze, kas papildināta ar investoru un uzņēmumu aptaujām. Sekas, uzņēmumiem neatklājot ilgtspējas informāciju, tiek iztirzātas, izpētot pašreizējo *ESG* reitingu pārklājumu CAE reģionā. Pamatojoties uz akadēmiskās literatūras novērtējumu, tiek pētīta saikne starp augstāku *ESG* ieviešanu un akcionāru vērtību. Pēc tam, pamatojoties uz ekspertu aptaujām un literatūras apskatu, tiek noteikti faktori, kas ietekmē *ESG* ieviešanu. Visbeidzot, šajā pētījumā ir izklāstīta inovatīva pieeja, lai noteiktu būtiskos *ESG* faktorus dažādos uzņēmuma dzīves cikla posmos, izmantojot analītisko hierarhijas procesu (AHP).

Rezultāti liecina, ka AHP ir piemērots instruments, lai novērtētu *ESG* katalizatoru relatīvo nozīmīgumu, un ilustrē, ka pastāv dažādi faktoru kopumi, kas ietekmē *ESG* ieviešanas lēmumus dažādos uzņēmuma attīstības posmos. Šis pētījums piedāvā praktisku struktūru lēmumu pieņēmējiem, kuri cenšas atšķirt un noteikt prioritātes *ESG* virzītājspēkiem un īstenot plašāku *ESG* ieviešanu Baltijas valstu ekonomikās.

Šī disertācija ir rakstīta angļu valodā un sastāv no ievada, piecām nodaļām, secinājumu un ieteikumu sadaļas, kā arī bibliogrāfijas ar 282 avotiem. Tajā ir 41 attēls, 23 tabulas un 8 pielikumi, un tās apjoms, ieskaitot pielikumus, ir 199 lapaspuses.

Abstract

The rapidly increasing trend towards Environmental, Social, and Governance (ESG) investing has captured the attention of business, investors, and financial professionals alike. This shift in focus from purely financial returns to a more holistic approach of investing is pushing industry participants to pay closer attention to sustainability-related considerations. The concept of corporate sustainability as measured by ESG factors corresponds to a business approach that focuses on creating long-term value for all stakeholders by integrating environmental, social, and corporate governance considerations into decision-making and operational activities.

As the European Union has been placing more emphasis on sustainability, companies in Central and Eastern European (CEE) countries including the three developing economies of the Baltic region – Estonia, Latvia and Lithuania, have been incentivized to improve their ESG performance ratings. As such, this trend is increasingly important for investors in this region, as well as for companies who are looking to increase their ESG compliance level. Additionally, increased ESG investments in CEE can help to drive economic growth and bridge the gap between East and West in terms of investment and economic development level.

This dissertation examines the state of ESG practices in the CEE region, with a focus on the Baltic countries. It outlines the current situation in the ESG implementation including different degrees of adoption and transparency measures, compliance with international standards, as well as determines the ESG drivers and existing barriers. Qualitative content analysis supplemented by surveys of investors and corporations are used to reveal the status quo of ESG standards in the Baltics. The outstanding transparency challenges are highlighted by the examination of current ESG rating coverage. Based on an evaluation of academic literature, the relationship between higher ESG implementation and shareholder value is examined. Subsequently, the factors affecting ESG adoption are determined based on expert surveys and literature review. Finally, this research presents an innovative approach to determining the relevant ESG drivers across corporate life cycle stages using Analytical Hierarchy Process (AHP).

The findings indicate that AHP is a viable tool to measure the relative significance of ESG catalysts and illustrate that there exist different sets of drivers which have an impact on ESG enactment decisions at different times of a firm's evolution. This thesis offers a practical structure for decision makers who are trying to distinguish and prioritize ESG drivers with an aim to pursue a more extensive ESG implementation in the Baltic economies.

This dissertation is written in English and consists of an introduction, five chapters, a conclusion and recommendations section, and a bibliography with 282 sources. It features 41 figures, 23 tables and 8 annexes, and is over 199 pages long, including annexes.

Glossary of Abbreviations

AHP – analytical hierarchy process
CEE – Central and Eastern Europe
CEO – Chief Executive Officer
CG – Corporate Governance
CSCC – Cross Sectoral Coordination Centre
CSA – Corporate sustainability assessment
CSR – Corporate Social Responsibility
CSRD - Corporate Social Responsibility Directive
EC – European Commission
ESG – Environmental, Social, and Governance
EU – European Union
GDP – Gross Domestic Product
GPP – Green procurement process
GRI – Global Reporting Initiative
IPO – Initial public offering
M&A – Mergers and Acquisitions
NGO – Non-governmental organization
NYSE – New York Stock Exchange
OECD – Organization for Economic Cooperation and Development
PE – Private Equity
PRI – United Nations Principles for Responsible Investment
SASB – Sustainability Accounting Standards Board
SDG – Sustainable development goals
SHV – Shareholder value
SME – Small and medium-sized enterprise
SOE – State-owned enterprise
SRI – socially responsible investing
S&P – Standard and Poor's
TCFD – Task Force on Climate-Related Financial Disclosures
UN – United Nations
VC – Venture Capital

Table of Contents

Introduction.....	9
1. Corporate sustainability: Emergence, definitions, and implementations	25
1.1. ESG concept and methods of measurement.....	25
1.2. Legislative background.....	32
1.3. Linking ESG disclosure and performance to financial results.....	37
1.4. Current ESG-associated challenges.....	40
2. ESG impact on the shareholder value concept.....	44
2.1. Traditional shareholder value drivers	44
2.2. Discovering ESG performance implications on the shareholder value creation.....	46
3. CEE corporate landscape from the ESG perspective	54
3.1. ESG relevance for the CEE markets.....	54
3.2. Sustainability trend in the CEE – mission statement analysis	59
3.3. ESG rating coverage in CEE and its impact on the investor behavior	63
3.4. ESG disclosure level in the Baltics.....	67
4. Factors impacting ESG adoption.....	72
4.1. External factors affecting ESG adoption	72
4.1.1. <i>Society expectations</i>	72
4.1.2. <i>Regulatory and compliance effect</i>	74
4.1.3. <i>Industry factors</i>	75
4.2. Internal factors affecting ESG adoption	76
4.2.1. <i>Business model related factors</i>	76
4.2.2. <i>Size and resource availability</i>	77
4.2.3. <i>The role of company's management</i>	78
4.2.4. <i>Ownership</i>	80
4.3. Assessing the drivers and obstacles of ESG adoption in an empirical setting.....	83
4.3.1. <i>Regulation – case study of Latvian SOEs</i>	83
4.3.2. <i>Board diversity impact on Baltic stock listed companies</i>	87
4.3.3. <i>Financial investors</i>	91
4.3.4. <i>Ownership and management</i>	95
5. Drivers of effective ESG implementation across company life cycle stages	105
5.1. Corporate life cycle theory.....	105
5.1.1. <i>Definition of company life cycle</i>	105
5.1.2. <i>Stages of life cycle</i>	108
5.1.3. <i>Measuring the life cycle stage</i>	113
5.2. ESG drivers at different company life cycle stages.....	116

5.2.1. <i>Combining corporate life cycle stages with corporate sustainability decisions</i>	117
5.2.2. <i>Methodology</i>	125
5.2.3. <i>Sample and data</i>	127
5.2.4. <i>Results</i>	132
5.3. Model of ESG drivers at different corporate life cycle stages	140
Conclusions and Recommendations	149
Bibliography	153
Appendices	173
Appendix 1 The sources used for bibliography analysis	173
Appendix 2 The sources used for qualitative content analysis on the ESG and SHV relationship	181
Appendix 3 Investor survey - ESG in the Baltics	187
Appendix 4 SOE survey – Non-financial Reporting	191
Appendix 5 Questionnaire of Latvian Corporations	193
Appendix 6 AHP survey	196
Appendix 7 AHP Project structure	201
Appendix 8 ESG driver life cycle model – conceptual versus tested	202

Introduction

Sustainability as a concept and goal to be achieved to improve how humans live and treat the environment has been around for several decades. While initially, the discussions on the topic were mainly conducted on an inter-governmental or supranational level, the focus has heavily shifted toward corporations in recent years. With the latest Sustainable Development Goals (SDGs) set by the United Nations (UN), the call for action to tackle global challenges has been extended also to the corporation level (UNEP & WBCSD, 2010). Consequently, the purpose statements of corporations have changed tremendously over the years. If previously there was an open debate on whose interests should come first – shorter-term profit maximization as suggested by Shareholder theory (Friedman, 1970) or longer-term total value maximization for the broader society as described by the Stakeholder theory (Freeman, 1984), recently the weight has heavily shifted towards the more sustainable, more long-term oriented version of value creation. The stock markets and investors have proven this point by the fact that as of 2019, 84% of the S&P500 company value consisted of intangible assets (Ocean Tomo, 2021). If historically investors were willing to pay for physical assets such as property, equipment, and machinery, then nowadays, the value of the companies consists largely of such intangible values as reputation, corporate culture, and customer loyalty. Also, public interests have shifted from seeing corporations as solely financial market participants to market players that should contribute to the well-being of society and the environment (López-Duarte et al., 2016) giving corporate sustainability an even higher degree of topicality.

Similarly, while initially the concept of shareholder value was mainly associated with short-term profit orientation, then nowadays, the notion increasingly leans towards reflecting the need to act responsibly and sustainably for the organization to ensure its place in the economy in the long term. More concentration is put on long-term value preservation for the shareholders and sustainability (Bistrova & Lace, 2012).

The general consideration for corporate sustainability implementation in organizations follows actions across three distinct pillars – environmental, social, and governance (ESG). The three ESG components have varying definitions; however, at large, the environmental factors include such topics as climate change, use of natural resources, and waste management; social pillar tackle questions of human capital, employee treatment, supply chains and contributions to society, while the governance factor comprises corporate governance aspects, risk management, and corporate strategy. The term ESG was first used in 2005 in the UN Global Compact publication “Who Cares Wins”, which mainly encouraged ESG considerations with the aim of creating more predictable and stable markets (UN Global Compact, 2005). While sustainability is a broad, multi-faceted, and hardly measurable concept, ESG aids at serving as a specific quantitative measure of a company’s sustainability and corporate social performance, thus allowing a better understanding of the impact of social responsibility efforts on quantifiable outcomes of the company’s financial and operational performance (Clark & Viehs, 2014).

The intensified awareness regarding the necessity of adopting long-term oriented business planning has brought sustainability to the forefront of not only corporate agendas. Investors and financiers have also been increasingly motivated to incorporate sustainability criteria in their financing decisions. The specific “sustainable investing” approach uses ESG factors during the investment screening (Fulton et al., 2013). ESG factors are used to supplement the purely financial considerations with potential wider risks and opportunities assessment to ensure that in addition to earning a sound financial return, the investments are socially responsible. Even though the sustainable investing concept cannot be considered new, during the latest decade it has arguably emerged from a niche to a widely employed financial strategy across the globe. Despite the financial downturn driven by the Covid-19 pandemic and the global market turbulences, 2020 marked a new all-time high of 1 trillion USD in assets under management in sustainable investment funds (Reuters, 2021). ESG factors as a tool for choosing sustainable investments have also been increasingly trending in the markets for the last decade. EY Fifth global institutional investor survey dated July 2020, revealed that 98% of global institutional investors are assessing company performance using ESG factors (EY, 2020)

A part of the ESG trend is dictated by legislative requirements. For the EU countries, Directive 2014/95/EU on non-financial reporting requires all public interest entities with more than 500 employees to publish reports with respect to their actions in environmental protection, social and human rights domain, anti-corruption practices as well as board diversity components. The form of the reporting, however, is relatively free leading to the use of differing international and national reporting standards. Following a wish for unification and a higher degree of comparability of the ESG disclosures and data, the Corporate Sustainability Reporting Directive (CSRD), proposed by the European Commission in April 2021, foresees an introduction of mandatory reporting starting in 2024. All companies with more than 250 employees and exceeding 40 million euros in revenues or a 20-million-euro balance sheet sum are exposed to the new policy. The new CSRD is expected to be implemented into national laws suggesting that corporations should be ready to report their ESG achievements for 2023 with an obligation to report in 2024 (European Commission, 2021). Sustainability reporting obligations are expected to be binding also to small and medium-sized enterprises starting from 2026. The CSRD aims to integrate the sustainability domains in the overall annual report, thus balancing the importance of the financial and non-financial data in the reporting. The more detailed reporting requirements and uniform standards for the new reporting are in preparation by the European Financial Reporting Advisory Group. In 2011, 44% of the largest global companies included ESG disclosures as part of their annual reporting standards, while in 2020, this number has grown to 80% (KPMG, 2020) and even up to 96% in 2021 (KPMG International, 2022).

As such, the level of ESG adoption across corporations is still far from being unified – there are differences across stock-listed and privately held companies, companies with differing financial strengths and headquartered across differing geographies (Yu & Luu, 2021). With respect to the geographies – while European Union is generally in a global pole position in terms of existing

regulations and efforts in corporate sustainability encouragements, the Central and Eastern European (CEE) countries, including the Baltic region of Estonia, Lithuania, and Latvia in terms of ESG is still developing markets when compared to Scandinavia or Western Europe. Nevertheless, shareholder value sustainability in emerging markets such as the CEE countries is even more critical. Given the rather low level of stock market capitalization as well as the overall less developed financial market culture, the degree of corporate disclosure and information availability, in general, is lower. In addition, higher political uncertainty, and greater risk exposure of the privately held companies hinder higher foreign investor interest in the region and therefore impose a competitive disadvantage to the companies of the more developed economies (Bistrova & Lace, 2012).

The significant power attributed to the ESG disclosures and endeavors to affect companies' value and financial performance could potentially become an accelerator leading to improved development of the corporations and the investment climate in the emerging markets. In addition, given the fact that particularly the CEE countries are the fastest-growing countries of the EU and over the years have become significant contributors to the overall EU service and manufacturing output, then the progress in terms of sustainability in this region should be meaningful also for the overall EU market development (Invest Europe, 2021a). Consequently, this Doctoral Thesis sets forth to understand the optimal conditions, potential impact factors, and prerequisites for efficient ESG practice implementation in this geographic area. In addition, given the varying set of drivers and obstacles as well as ESG implementation areas across different stages of the development of corporations (Atif et al., 2022), the topic is considered from the lens of company life cycle theory, which currently is still missing in the academic literature.

Research questions

The field of corporate sustainability has been rapidly evolving in the past decade, and the trend is supported by consumers, investors, and financiers who place more emphasis on the responsible behavior of corporations (Chang et al., 2017). The rise of sustainable finance, which involves considering ESG factors when making investment decisions, has further driven the growth of corporate sustainability. In the early 2000s, companies started to adopt sustainability reporting, and the trend has continued to gain traction, with a growing number of companies publishing sustainability reports along with their financial statements. The emergence of ESG ratings and scores has also contributed to the growth of corporate sustainability, providing investors with tools and comparable scores to assess the ESG performance of companies. Finally, legislation has played an important role in the development of corporate sustainability, with some of the directives being instrumental in promoting sustainability reporting. Given the rapid speed of the development and the ongoing debates on the exact definitions of the concept and measurement techniques as well as the growing body of legislation and academic literature around the corporate sustainability matter, *Research Question 1* seeks to explore the emergence and application of the concept of corporate sustainability and summarize the existing evidence on its impact on corporations.

Research Question 1 - How has the concept, measurement, and legislation of ESG developed, and how does it impact corporations?

The issue of corporate sustainability introduction in the Baltic countries and the wider CEE region is very topical. While corporate sustainability might be seen as a positive future aim, it can also be a cost and effort-intensive activity in the short term. Thus, especially, for companies in emerging markets bounded by limited financial resources, it is of high importance to understand the tradeoff between the current investments providing value in the longer term, essentially forming the question between satisfying the more short-term financial needs of the shareholders or aiming for the rather longer-term benefits for the stakeholders.

The academic literature tends to largely support the positive ESG and corporate financial performance relationship, a recent meta-study summarizing that around 90% of the 2200 academic papers in the explored sample reveal improved financial performance for companies with better sustainability practices (Friede et al., 2015). Also, other operational and stakeholder-related factors such as long-term growth and reputation are found to be positively influenced by higher ESG performance (Flammer, 2015a). The factors found to be impacted by ESG largely correspond to the key criteria used to define shareholders' long-term value, suggesting the interrelatedness of both concepts, thus *Research question 2* aims to summarize and explore the impact of ESG on shareholders' value.

Research Question 2 - How does a company's ESG implementation impact shareholder value?

After establishing the link between corporate sustainability and shareholders' value, it is important to understand the key factors impacting ESG adoption. The academic research so far has explored a wide range of potential impact factors, differentiating between (1) company internal factors (i.e., company size, management, financial metrics) and (2) external or environmental factors (i.e., geographical differences, legislation). To identify and investigate the key drivers and hindering factors of ESG, *Research question 3* is explored. The assessment of this research question aims to shed light on the internal and external factors, which have direct and indirect effects on promoting corporate sustainability implementation in the companies.

Research Question 3 - What are the drivers and barriers impacting effective ESG implementation?

Finally, given the growing trend and adoption of corporate sustainability, it is important to understand the critical differences between companies' various life cycle stages. What could be important for mature stock-listed enterprises can turn out to be less impactful for early-stage small

and medium-sized enterprises. There are a variety of drivers for ESG implementation in companies across different corporate life cycle stages. ESG can be a key differentiator in early-stage companies and can help attract investors and partners. In later-stage companies, ESG can be used to signal a shift in strategy or to improve performance.

Therefore, *Research question 4* is devoted to the investigation of the company life cycle stages and its impact on the ESG adoption across companies operating in the corporate ecosystem of the Baltic countries. It focuses on understanding and validating a set of relevant drivers and factors that can foster ESG implementation for companies across different stages of the company's life cycle. The findings of this research question will help to better understand how a company's life cycle stage affects its engagement in ESG activities and provide insights on how to improve ESG implementation at different stages of a company's life cycle.

Research Question 4 – What are the relevant drivers for ESG implementation in companies across different corporate life cycle stages?

To summarize, **the goal of the Doctoral Thesis** is to identify the factors that encourage the implementation of ESG practices at various stages of a company's life cycle, with the aim of enhancing value creation for shareholders in Baltic companies.

To achieve the goal of the Doctoral Thesis, the following objectives have been established:

1. To explore the matter of corporate sustainability as measured by ESG factors, its proxies, and definitions, as well as the existing legislative framework and applicable measurements.
2. To investigate the factors through which ESG is contributing value to the shareholders of corporations.
3. To identify external and internal factors that positively or negatively impact ESG implementation and disclosure in corporations.
4. To explore the relevance of specific ESG drivers across different stages of the corporate life cycle.
5. To develop a set of recommendations for the improvement of ESG implementation in the Baltic companies.

The Object of the Doctoral Thesis is the ESG implementation level of corporations operating in Estonia, Lithuania, and Latvia (Baltic region). For certain parts of the Thesis data for companies operating in the larger CEE area is used.

The Subject of the Doctoral Thesis is the drivers affecting ESG implementation in different stages of the corporation life cycle.

Research Limitation and Constraints

1. Given the limited data availability in the field of corporate sustainability and ESG, various data collection and analysis methods have been applied in this research, including own-developed methods of ESG score calculation, third-party rating agency scores, surveying of companies and investors as well as qualitative assessments. The data limitation has not allowed the construction of a static sample of companies that could have been used throughout all the stages of analysis. A description of the data collection method and the sample is therefore added to each individual part of the study.
2. All in all, the research has been focused on the exploration of companies headquartered in the Baltic region – Estonia, Lithuania, and Latvia. In order, however, to understand the importance of third-party ratings, the focus, given the limited data availability, was put on the wider CEE region countries as Croatia, Romania, Hungary, Czech Republic, Slovakia, Poland, Bulgaria, and Slovenia. The wider CEE region analysis has also been chosen to describe the ESG relevance for the CEE region to allow for an improved comparison of the country level indicators.
3. The period when various parts of the analysis were performed was rather long – from 2019 to 2023. Given the fast-developing nature of the research topic (including the legislation in force), the thesis might not have reflected certain changes.
4. Due to the limited data availability, the research was conducted by including a wide range of companies - for specific analyses focusing on stock-listed companies, while for others choosing also privately held corporations and state-owned enterprises. The sample description in each of the individual study parts states the type of corporations analyzed.
5. A potential limitation to this research is the incorporation of the corporate life cycle theory only in the latter stages of the study (Chapter 5). Earlier chapters focus primarily on establishing the foundation and understanding of corporate sustainability and ESG in general, thus do not elaborate on the distinctions based on separation into the life cycle stages.
6. Language limitations. The interviews with the investors and companies were conducted either in English or Latvian. The surveys were offered in English (for investor study) or Latvian (for corporations). The AHP survey was offered to the expert panel in English.

Theoretical and Methodological Framework of the Doctoral Thesis

The study is based on theories and practical findings elaborated by world-leading scholars and business practitioners in the relevant fields – shareholder theory (Friedman, 1970), stakeholder theory (Freeman, 1984), upper echelon theory (Hambrick & Mason, 1984), shared value concept (Porter & Kramer, 2011), legitimacy theory (Suchman, 1995), institutional theory (DiMaggio &

Powell, 1983), resource-based view or resource theory (Pfeffer & Salancik, 1978), voluntary disclosure theory (Verrecchia, 1983; Dye, 1985), corporate social responsibility research and theories proposed by Carol (1970), organisational life cycle theory (Anthony and Ramesh, 1992; Miller & Friesen, 1984; Kath and Kahn, 1978; Smith, Mitchell, and Summer, 1985; Black, 1998; Richard L. Daft, 1999; Mintzberg, 1984; Adizes, 1989), and analytical hierarchy process developed by Saaty (1970).

A comprehensive range of primary and secondary data sources were leveraged to gather a substantial body of information and diverse perspectives:

- Publicly accessible corporate sustainability and annual reports from NASDAQ OMX Baltics stock-exchange listed companies, accessible via the stock exchange's official website.
- Online resources and annual reports from corporations listed on Central and Eastern European (CEE) stock exchanges.
- Scholarly databases including Scopus, Web of Science, ScienceDirect, Directory of Open Access Journals, and JSTOR, which offer a wealth of academic research data.
- Financial databases such as Bloomberg and Yahoo Finance, providing current and historic financial data.
- Publications from influential supranational organizations, including the OECD, European Commission, and European Central Bank, offering policy guidelines, economic data, and regulatory insights.
- National and international legal instruments and regulations, providing insight into the legal and regulatory landscapes.
- Original surveys of investors and companies, conducted by the author, delivering unique, primary source data.
- Reports and publications from professional service providers and firms within relevant business sectors such as Morningstar, Reuters, KPMG, Deloitte, EY, McKinsey, and their equivalents, contributing expert industry insights.

Research Methods

The research study integrates both qualitative and quantitative methodologies, utilizing the following data collection methods:

Interviews:

- Semi-structured interviews with private equity investors and banking representatives from Latvia, Lithuania, and Estonia. These discussions (n=5) revolved around

sustainable investing trends and were conducted online between January and March 2021.

- Structured interviews with corporations based in Latvia (n=3), designed to gauge their self-perceptions regarding the implementation of ESG factors. These interviews were conducted online from October to November 2021.
- Unstructured, in-depth interviews with Latvian state-owned corporations (n=4), with a focus on ESG regulations and their adoption. These face-to-face interviews took place in May 2022.
- Unstructured interviews and opinion gathering sessions with a broad spectrum of relevant stakeholders conducted throughout the process of drafting the Doctoral Thesis. This included representatives from stock exchanges, oversight bodies of state-owned corporations, corporations, and corporate sustainability subject matter experts among others.

Surveys:

- A survey conducted in January 2021, questioning the opinions of Baltic financiers and investors (n=33) on the current trends in sustainable investments.
- An online questionnaire distributed to corporations (n=74) between October and December 2021. This survey aimed to gather data on corporations' self-evaluations of their ESG implementation.
- A similar online survey distributed to state-owned corporations (n=21) from April 19, 2022 to April 28, 2022. This sought to understand these corporations' self-assessments of their ESG implementations.
- Lastly, a survey issued to ESG experts (n=25) between November and December 2022. The aim was to gain insights on the Analytic Hierarchy Process (AHP) assessment of the ESG drivers across various life-cycle stages.

The research study utilized a range of qualitative and quantitative data analysis techniques as follows:

Qualitative Data Analysis Techniques:

- Comprehensive analysis of scientific literature.
- Qualitative content examination of academic literature.
- Content analysis of legislative documents and business literature.
- Detailed examination of respondent answers at various stages of the research.
- Bibliometric analysis to map the impact and interrelationships of publications.
- Content analysis of corporate mission statements.

- Triangulation of literature analysis outcomes with empirical research findings to ensure validity and reliability.
- Comparative analysis to discern patterns and differences among the study's variables.

Quantitative Data Analysis Techniques:

- Descriptive analysis for summarizing and understanding the basic features of the data.
- Benchmarking for comparing processes and performance metrics.
- Analysis of average and relative ratios to gain insights into relationships between different aspects of the data.
- Correlation analysis to determine the degree to which two variables are related.
- T-test analysis to compare means and ascertain statistical significance.
- Frequency analysis to identify patterns and trends within the data.
- Application of the Analytical Hierarchy Process to prioritize and make decisions about complex problems.

Research Design

The research questions, research goal, and research objectives order the logic of research design across different phases of the research as depicted in Figure 1.

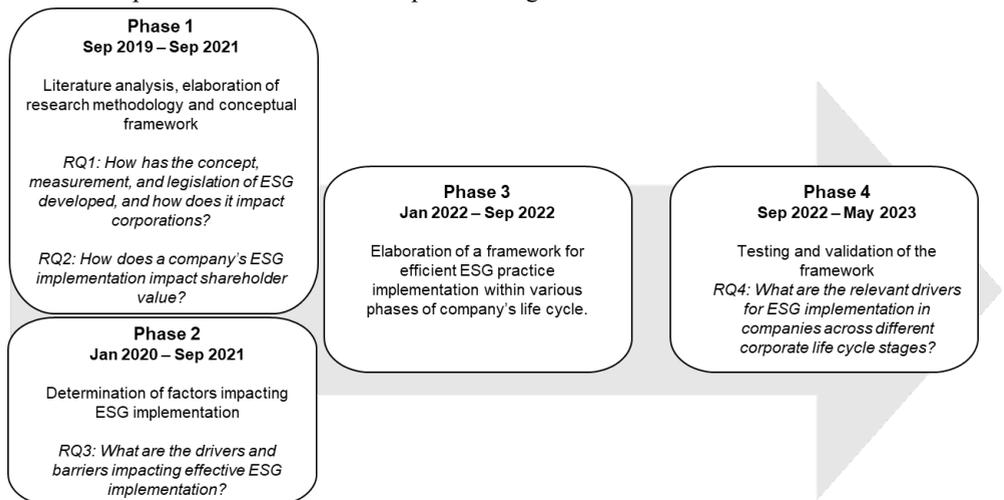


Figure 1 Research design. Created by author.

Phase 1. Elaboration of research methodology and conceptual framework of ESG effect on the shareholder value.

This research phase consists of the following:

- analysis of scientific literature with an aim to identify the research problem and formulating the research questions;
- elaboration of research methodology – setting the research goal and objectives, formulating the research object and subject, working out the research design, and choosing appropriate research methods;
- the exploration of the ESG concept as the variable measuring corporate sustainability performance. Determination of its definitions, historical development, and measurement methods as well as the overlaps with the corporate social responsibility concept.

The first research question - *How has the concept, measurement, and legislation of ESG developed, and how does it impact corporations?* - was explored via scientific literature analysis – including exploration of legal documents, academic studies, and business reports. The results achieved provided a common baseline for understanding the development of the corporate sustainability concept and its limitations, the approaches of measurement as well as highlighted the relevance of the matter for corporations.

The second research question formulated as *How does a company's ESG implementation impact shareholder value?* was answered based on the qualitative and quantitative content analysis of the scientific literature and enabled the author to work out a conceptual framework for exploring the link between corporate sustainability performance and long-term shareholder value creation.

Phase 2. Determination of factors impacting ESG implementation in the Baltic region corporations

The aim of this phase was to identify the drivers and barriers impacting ESG adoption. The study of Research question 3 – *“What are the drivers and barriers impacting effective ESG implementation?”* brought to the following:

- the revealing of the aspects and characteristics, which might have a significant impact on corporate sustainability advancements in a company;
- understanding of key obstacles hindering a wider degree of ESG adoption, by especially exploring a sample of corporations in the Baltic region;
- the identification of key drivers and factors (split between company-internal and company-external factors), which have a positive impact on ESG adoption and implementation.

Phase 3 and 4: Elaboration of a model for understanding the key ESG drivers across various phases of company's life cycle.

Phase 3 initially obtained an overview of the corporate life cycle theory in light of corporate sustainability adoption. Based on the academic literature and the previously attained study results, a conceptual model summarizing internal and external drivers for ESG implementation was elaborated with an aim to understand the relevance of the respective drivers at the inception, growth, and maturity stage of the corporate life cycle.

The conceptual model formed the basis for addressing Research question 3 “*What are the relevant drivers for ESG implementation in companies across different corporate life cycle stages?*” in Phase 4 of this research.

To examine the key drivers of the ESG implementation at various life cycle stages of a company, the analytical hierarchy process approach was applied. The weight assignment was performed via surveying an expert panel representing the largest Baltic banks, risk capital funds, associations, consultants, and corporate sustainability subject matter experts.

The corporate life cycle theory is applied only in the latter stages (Chapter 5) of this study because it offers a useful framework to understand the context-specific influences on ESG implementation. Stages 1 and 2 of the research focus on establishing a foundational understanding of ESG, its development, measurement methods, impact on shareholder value, and identifying the drivers and barriers of ESG adoption. Once these key concepts and variables are elaborated and analyzed, the corporate life cycle theory is introduced to link these components within different corporate stages—inception phase, growth, and maturity—helping to map the ESG drivers over time therefore filling gap in the existing academic literature and providing a practicable and novel model. Using the corporate life cycle theory in the final phase allows a nuanced analysis of ESG drivers, effectively identifying which factors are most influential at different points in a company's evolution.

Main contributions and scientific novelty:

1. The central contribution of this doctoral thesis is the development of a model that explores the key drivers of ESG implementation at various stages of a corporation's life cycle. This model has been empirically tested in the Baltic region and provides valuable insights for both business practitioners and policymakers on the factors that can drive wider ESG adoption by corporations.
2. In addition, this thesis elaborates a conceptual model exploring the link between ESG performance and long-term shareholder value creation by determining the critical factors through which ESG can impact long-term value creation for the company's shareholders.
3. The results obtained in various studies comprised in the Doctoral Thesis contribute to the Baltic (and in certain cases also wider CEE) region-specific academic evidence:
 - a. on the corporate ESG adoption level (the first existing evidence of ESG disclosure level in the Baltic stock-listed companies as well as results of self-assessment of the ESG adoption by a large sample of corporations in Latvia);

- b. trend analysis of the corporate sustainability emergence in the stock-listed CEE corporations via a mission statement analysis;
- c. novel evidence on the external ESG rating availability among the CEE corporations and its impact on the trading volume;
- d. new insights into investor's and financier's perspectives on the importance of ESG adoption in the Baltic region;
- e. new contribution to the academic literature measuring the board diversity metrics impact on the non-financial performance from the sample of Baltic stock-listed corporations.

Practical value

The results obtained in the process of writing this Doctoral Thesis can be used to promote a higher corporate sustainability degree as measured by ESG factors in the Baltic region as well as potentially also in the wider CEE region. Given the obtained overview of higher ESG levels associated with higher shareholder value, the results can be used to promote the implementation of higher ESG relevance and motivate corporations and financiers to consider a greater degree of adoption. The proposed model of drivers of ESG implementation across various life stages can aid financiers and shareholders in finding the most important levers for catalyzing higher ESG adoption across the corporations at differing development phases.

The results of surveys and studies performed within the process of writing this dissertation can be used for business practitioners and investors to better understand the current ESG implementation degree across the Baltic corporations. The results of the survey of the financial investors and banks can be used by corporations to understand the current and expected requirements of the ESG adoption necessary for capital attraction.

Certain parts of the study (mission statement analysis as well as ESG disclosure level results over time) can also shed light on the trends and tendencies of corporate sustainability adoption over time in the specific region of Baltic countries or in the context of the wider CEE area.

Hypothesis

Different sets of internal and external drivers have relevant impact on ESG implementation at various corporate life cycle stages.

Theses for defense

1. Higher ESG performance positively impacts shareholder value directly through improved financial performance and reduced risk and indirectly via factors such as transparency, stakeholder engagement, management, long-term orientation, employees, reputation, capital management, operating capabilities, and customers.
2. The positive outcomes of ESG adoption can be seen as even more crucial in emerging economies, such as the CEE area and the Baltic countries, as the region is characterized by

below-average performance of the legal system, low degree of stock market activity, and diversity measures.

3. The empirically tested model of relevant ESG drivers across corporate life cycle stages in the Baltic region can ensure the efficient use of levers to catalyze wider ESG adoption in the region.

The Approbation and Practical Application of Research Results

The research results were discussed at international scientific conferences in Latvia, Lithuania, the US, Poland, and South Korea and were further reflected in relevant scientific publications. The conferences have allowed for gathering valuable insights and reflecting on the received comments and peer-reviews in the improvement of the scientific quality of the research performed.

The research results can be applied in the field of financial market investments among policymakers and corporations: (1) by addressing the shortcomings and challenges highlighted by this research, the policymakers and business practitioners can explore the ways how to foster wider adoption of ESG policies across the companies in Baltic countries; (2) study results might be beneficial for the top management of companies to understand the benefits and shortcomings of ESG implementation and therefore, further drive ESG implementation across corporations, (3) the conclusions of this study can aid financiers and investors in better understanding the status quo of the companies they potentially like to invest in.

Scientific publications

The results of the research have been reflected in 12 published articles 11 of which are indexed in SCOPUS and Web of Science data bases:

1. Zumente, I., Lāce, N. (2023). ESG Disclosure in the Baltic Region – Evidence in a Temporal Perspective. *Intellectual Economics*, Vol. 17, No.1, pp. 73-85; <https://doi.org/10.13165/IE-23-17-1-04> (Scopus)
2. Daszyńska-Żygadło, K., Marszałek, J., Piontek, K. & Zumente, I. (2023). Are green bonds a good investment opportunity for turbulent times? *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, Vol. 57, No. 2, pp. 7-25; <http://dx.doi.org/10.17951/h.2023.57.2.7-25>
3. Zumente I., Lāce N. (2023). Understanding Corporate Sustainability Drivers Across Corporate Life Cycle. *Proceedings of the 14th International Multi-Conference on Complexity, Informatics and Cybernetics: IMCIC 2023*, pp. 168-175; <https://doi.org/10.54808/IMCIC2023.01.168> (Scopus)
4. Zumente I., Lāce N. (2022). The Impact of Regulation on the ESG Implementation – a Case Study of Latvia. *Proceedings of the 26th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2022*, Vol. I, pp. 127-132; <https://doi.org/10.54808/WMSCI2022.01.127> (Scopus)

5. Zumente, I., Bistrova, J., Lāce, N. (2022) Environmental, Social and Governance Policy Integration and Implementation from the Perspective of Corporations. *Intellectual Economics*, Vol. 16, No. 1, pp.41-57. ISSN 1822-8038. Available from: doi:10.13165/IE-22-16-1-03 (Scopus)
6. Zumente I., Lāce N. (2022). Are We There Yet? The Evaluation of ESG Impact on Corporate Financial Performance in CEE. 12th International Scientific Conference “Business and Management 2022”, Lithuania, Vilnius, 12-13 May, 2022. Vilnius: Vilnius Tech, 2022, pp.1-7. ISBN 978-609-476-288-8. e-ISBN 978-609-476-289-5. ISSN 2029-4441. e-ISSN 2029-929X. Available from: doi:10.3846/bm.2022.718 (Web of Science)
7. Zumente I., Lāce N. (2021). ESG Rating—Necessity for the Investor or the Company? *Sustainability*, 2021, Vol. 13, No. 16, pp.8940-8954. e-ISSN 2071-1050. (Scopus, Web of Science).
8. Zumente I., Bistrova J. (2021). Do Baltic Investors Care about Environmental, Social and Governance (ESG)? *Entrepreneurship and Sustainability Issues*, 2021, Vol. 8, No. 4, pp.349-362. e-ISSN 2345-0282. (Web of Science).
9. Zumente I., Lāce N. (2020). Does Diversity Drive Non-Financial Reporting: Evidence from the Baltic States. *Intellectual Economics*, 2020, Vol. 14, No. 2, pp.50-66. e-ISSN 1822-8011. (Scopus).
10. Zumente I., Bistrova J. (2021). ESG Importance for Long-Term Shareholder Value Creation: Literature vs. Practice. *Journal of Open Innovation: Technology, Market, and Complexity*, 2021, Vol. 7, No. 2, pp.1-13. e-ISSN 2199-853. (Scopus).
11. Zumente I., Bistrova J., Lāce N. (2020). ESG Disclosure Patterns in the Baltics. In: *International Scientific Conference "Business and Management 2020"*, Lithuania, Vilnius, 7-8 May 2020. Vilnius: VGTU Press, 2020, pp.28-37. e-ISSN 2029-929X. (Web of Science)
12. Hadro, D., Fijałkowska, J., Daszyska-Zygadlo, K., Zumente, I., Mjakuškina, S. (2021) What do stakeholders in the construction industry look for in non-financial disclosure and what do they get? *Meditari Accountancy Research*, 2021, Vol. 29, No. 6, pp.1-15. ISSN 2049-372X. Available from: doi:10.1108/MEDAR-11-2020-1093. (Scopus, Web of Science).

The results of the research have been presented at the following international scientific conferences:

1. 14th International Multi-Conference on Complexity, Informatics and Cybernetics (IMCIC 2023), March 28-31, 2023. Report: Understanding corporate sustainability drivers across corporate life cycle
2. Riga Technical University 63rd International Scientific Online Conference “Scientific Conference on Economics and Entrepreneurship”, SCEE’2022, Riga, Latvia, October

- 13-14, 2022. Report: ESG Disclosure in the Baltic Region – Evidence in the Time Perspective.
3. Zafin Finance and Sustainability Conference, July 1, 2022, Wrocław University of Economics and Business. Report: Are green bonds good investment opportunity for the turbulent times?
 4. 12th International Scientific Conference “Business and Management 2022”, May 12–13, 2022, Vilnius, Lithuania. Report: Are We There Yet? The Evaluation of ESG Impact on Corporate Financial Performance in CEE.
 5. Riga Technical University 62nd International Scientific Online Conference “Scientific Conference on Economics and Entrepreneurship”, SCEE’2021, Riga, Latvia, October 14-15, 2021. Report: The Assessment of ESG Maturity in the Baltic Companies.
 6. Society of Open Innovation: Technology, Market, and Complexity (SOI) & Riga Technical University 2021, July 12-15, 2021. Report: Discovering environmental, social and governance performance implications on the long-term shareholder value creation.
 7. Riga Technical University 61st International Scientific Conference “Scientific Conference on Economics and Entrepreneurship”, SCEE’2020, Riga, Latvia, October 16, 2020. Report: Does Diversity Drive Sustainability in the Baltics?
 8. Riga Technical University 61st International Scientific Online Conference “Scientific Conference on Economics and Entrepreneurship”, SCEE’2020, Riga, Latvia, October 16, 2020. Report: Research on the Impact of Problems Caused by Covid-19 on the Latvian Enterprises and Opportunities for Overcoming the Negative Consequences.
 9. 11th International Scientific Conference “Business and Management 2020”, May 7–8, 2020, Vilnius, Lithuania. Report: ESG Disclosure Patterns in the Baltics.
 10. Riga Technical University 60th International Scientific Conference “Scientific Conference on Economics and Entrepreneurship”, SCEE’2019, Riga, Latvia, October 11, 2019. Report: Legal Tools for Corporate Governance Implementation in State Owned Enterprises in Latvia.

Content and Volume of the Thesis

The Doctoral Thesis consists of an introduction, five chapters, conclusions, and recommendations, as well as a list of references with 282 sources. The thesis is illustrated by 41 figures and 23 tables. The volume of the Thesis is 199 pages, including eight annexes.

Chapter 1 of the Doctoral Thesis focuses on (1) providing high-level insight into the historical development of the corporate sustainability field, the key concepts, and legislative framework, (2) understanding the definition of the ESG and its differences with other forms of corporate social responsibility as well as (3) measurement and application of the ESG factors in the financial markets and corporate finance.

The second chapter concentrates on providing an overview of the traditional shareholder value drivers as summarized in academic literature and discussing the potential impact of ESG introduction to the traditional shareholder value principles. The first part of this chapter compiles academic insights on the academically discussed shareholder value drivers, while the second part of the second chapter provides the results of bibliometric and qualitative content analysis discovering ESG impact on the shareholder value determinants.

The third chapter undertakes to provide an insight into the (1) reasons why ESG relevance is even more crucial in emerging economies like the Baltics and the overall CEE region, as well as assesses the (2) current status quo of ESG implementation degree characterized by company mission statements analysis (sub-chapter 3.2), examination of ESG rating availability and its consequences on capital attraction (sub-chapter 3.3) as well as estimated ESG disclosure level following an examination of a sample of stock-listed companies in the Baltic states of Estonia, Latvia, and Lithuania.

Next, chapter 4 focuses on the drivers impacting ESG adoption in corporations. In addition, a summary of the barriers is also discussed in this chapter. Both the drivers and barriers are applied on generalized terms, firstly without a dedicated distinction between organizational life cycle stages. Concluding the fourth chapter, a selection of empirical studies validating key drivers in the regional context of the Baltic countries is provided in sub-chapter 4.3.

The fifth chapter of this Thesis is dedicated to the corporate life cycle theory and linking it to the ESG drivers. Sub-chapter 5.1 provides a baseline of the corporate life cycle theory – discussing multiple definitions and variations offered in the academic literature, exploring the differences characterizing individual development phases as well as summarizing offered measures for assessing the stage the company belongs to. The second sub-chapter provides an overview of the existing academic literature and empirical evidence linking corporate sustainability decisions with specific development phases of the corporations forming a conceptual model of ESG drivers relevant at various corporate life cycle stages. Finally, the last part of this chapter uses expert opinion summarized by the AHP method to quantify the impact of different ESG drivers across diverse corporate life cycle stages.

Finally, conclusions and recommendations are offered as the closing chapter of this Thesis.

1. Corporate sustainability: Emergence, definitions, and implementations

Corporate sustainability refers to the approach of integrating ESG considerations into the business operations and decision-making process of a corporation, with the goal of balancing economic success with social responsibility and environmental awareness. Corporate sustainability is an evolving concept and is becoming increasingly important as society and consumers place more emphasis on the responsible behavior of corporations. The trend is also supported by investors and financiers looking for more sustainable investments. There is an increasing tendency to consider ESG matters when making investment decisions with an aim to strive for more long-term investments in sustainable economic activities, companies, and projects (European Commission, n.d.c). As the emergence of the corporate sustainability field has been especially prevalent in the last decade, also the subject matters, terms, and academic literature on the topic have developed swiftly and are rather novel in academic literature. Therefore, the first chapter focuses on (1) providing high-level insight into the historical development of the field, the key concepts, and legislative framework, (2) understanding the definition of the ESG and its differences with other forms of corporate social responsibility as well as (3) measurement and application of the ESG factors in the financial markets and corporate finance.

The first chapter is dominantly compiled of literature review on topics like ESG concept emergence and definitions and measurements as well as key differences from the corporate social responsibility concept (1.1), legislative developments and key characteristics of the legislative environment with a focus on European Union (1.2.), differences between sustainability disclosure and performance and their relation to the financial performance of the corporations (1.3.) as well as documented challenges currently present in ESG application (1.4).

1.1. ESG concept and methods of measurement

The range of terms that have evolved around sustainable finance is large and growing. It is partly driven by the acceptance of more general, not-uniformly defined terms for the subject matter that have been adopted in the academic and business world over time (Capelle-Blancard & Monjon, 2012). For instance, a decade ago the notion of “ethical” was a generally accepted description of sustainable finance practices. With time the term “ethical” has been gradually replaced with “socially responsible investing” (SRI), further evolving into “sustainable investing” or “responsible investing” (Daugaard & Ding, 2022). Despite the differences in terminology, the overarching idea of the sustainable finance approach remains the same - fostering economic growth while simultaneously reducing any negative impact on the environment and taking into account also the social and governance aspects (European Commission, n.d.c).

The field of sustainable finance and the concept of corporate sustainability share a close relationship as they both aim to integrate ESG considerations into corporations' business operations and decision-making processes. The term *ESG* was first used in 2005 in the United Nations Global Compact publication "Who Cares Wins", which mainly encouraged ESG considerations intending to create more predictable and stable markets (UN Global Compact, 2005). The three ESG pillars have varying definitions, however, they all revolve around the three impact spheres that can ensure that a company is operating sustainably and ethically. The environmental factors measured usually include such topics as climate change, use of natural resources, and waste management, social pillar talks about human capital, employee treatment, and contributions to society, while the governance factor comprises corporate governance aspects, management quality, and questions related to corporate strategy. Table 1.1 summarizes the most frequently reported factors across the three ESG pillars.

Table 1.1

ESG factor summary (author's analysis)

Environmental	Social	Governance
Energy efficiency	Human and labor rights	Board composition
Greenhouse gas emissions	Employee demographics	Board diversity and inclusion
Water management	Staff turnover	Remuneration / incentives
Climate change risks	Training and education	Independence
Waste management	Health and safety	Corporate actions
Pollution of air, water, and land	Working conditions	Corruption and bribery
Resource depletion	Community engagement	Accounting and audit quality
Biodiversity	Data security and privacy	Risk management
Environmental management systems	Supply chains	Transparency
	Equality and diversity	

Companies in different industries are exposed to varying ESG risks. So, for example, a manufacturing company in China will have a higher exposure to environmental and human rights risks than a software development company operating in Germany. There exists a trade-off between sustainability endeavors and the financial performance of the companies suggesting that a strategical focus on the material ESG issues is necessary in order to remain on the so-called efficient "performance frontier" and avoid value discretion (Eccles & Serafeim, 2013). Authors suggest four steps for the creation of a sustainable strategy – (1) identifying ESG issues that are material for the company operating in a specific industry, (2) quantifying the impact of ESG matter improvement in financial terms, (3) creating an innovation strategy based on key areas, (4)

communicating the sustainability strategy to stakeholders via reporting. For the first step – materiality assessment - Sustainability Accounting Standards Board (SASB) comes in place. SASB is a United States based non-governmental organization (NGO) aimed at helping companies around the world to understand and report on sustainability matters that are meaningful and relevant to their investors and their represented industries. SASB has developed a map indicating the financial material areas across the topics of environment, social and human capital, business model, and governance for companies in specific industries. In general, SASB implies that not all ESG factors have an equal financial impact on businesses operating in different industries (SASB, 2021).

A close concept relating the ESG facets to the financial performance is the Tripple Bottom Line. While ESG in essence is a measurement tool for assessing the sustainability and ethical impact of an organization, the Tripple Bottom Line is an accounting framework that includes three dimensions of performance: social, environmental, and financial often referred to as the three P's— people, planet, and profit, which seeks to measure the economic value of a corporation, factoring in the full cost borne by societies, the environment, and the economy (Elkington, 1998). In addition, due to its rather qualitative nature and historically blurring boundaries, the corporate sustainability concept tends to be seen as partly or completely overlapping also with the classic notion of corporate social responsibility (CSR) and the concept of corporate social performance (CSP). A commonly cited CSR definition is provided by the European Commission defining CSR as “the responsibility of enterprises for their impacts on society [by] integrating social, environmental, ethical, human rights and consumers concerns into their business operations and core strategy and following the law” (European Commission, 2011). CSP, on the other hand, has been defined by Carroll (1979) as a multi-dimensional construct consisting of economic responsibility to the shareholders, legal responsibility to the law, ethical responsibility to the society, and discretionary responsibility to the community (Carroll, 1979)

The academic literature on the exact definition and borderline between CSR, CSP, and ESG is inconclusive. By assessing the afore-defined dimensions, a potentially likely cause of the mixed usage of the terms is coming from the lack of clear measurability. CSR, by its nature, is subjective as it is selectively reported by the company as well as hardly measurable due to its qualitative properties. It relates more to the reputational impacts and marketing activities rather than clearly measurable activities (Daugaard & Ding, 2022). While historically most of the papers differentiated between the terms, lately more of the academic papers treat these concepts as one and use ESG as a proxy for CSR performance in their research (Ioannou & Serafeim (2012), Hasan et al.(2018)). As noticed by Hillman & Keim (2001) there is a general shortage of CSR data proxies available for academics. Moreover, a meta-study of literature on CSP impact on the financial performance of companies also finds the variances in CSP dimensions as a source for inconsistencies in the previous research (Griffin & Mahon, 1997).

On the other hand, the ESG domains ultimately include a large majority of the CSP dimensions – constructs such as philanthropy, community, diversity, and human rights refer to the S score, while reputation, shareholder treatment, and ethical behavior are comprised in the G dimension

(Escrig-Olmedo et al., 2019). It has been argued that the “sum” of the single ESG factors can be seen as a proxy for a company’s CSP and thus can provide a quantitative measure for the otherwise hardly measurable CSR concept (Clark & Viehs, 2014). In addition, via the ESG factors, the commitment and CSR efforts of corporations become measurable, therefore, ESG can be easier used by investors when making decisions and comparing potential investments (Daugaard & Ding, 2022).

All in all, with the development of ESG measurement and quantification, the scores implicitly include the majority of the CSR dimensions, thus the ESG scores can arguably be seen as a quantitative metric to measure the CSP of a company. An increasing number of companies are being appraised by sustainability rating agencies with an aim to provide relevant data for stakeholders which would like to use the non-financial information on the companies to evaluate their investments or construct portfolios (Friede et al., 2015). A typology of the most common approaches of the ESG data and rating providers has been provided by Li & Polychronopoulos (2020) differentiating between:

(1) fundamentals – companies like Refinitiv and Bloomberg collecting data from public sources, but not offering any value-adding input or scoring,

(2) comprehensive – including ESG data providers that gather public and own-created data to combine it via their own methodology to issue a score or a rating (e.g., Sustainalytics, MSCI, RepRisk),

(3) specialists – companies focusing on specific ESG issues (e.g., Carbon Disclosure Project).

The classification and differences among them strongly highlight that the focus and the methodological approach of the providers are of utmost importance. While some rating agencies evaluate the company’s endeavors based on compliance with certain sustainability standards, others put more weight on the company’s ability to recognize and manage the risks. Additional differences emerge based on the consideration of the materiality in the whole assessment process (Lopez et al., 2020). Finally, the data sources used and the exact metrics applied cause an additional gap, where the differences in the outcome can emerge (OECD, 2020b)

While there are estimated to be over 500 ESG rankings available, a large share of investors and interested parties rely on the most impactful players (Eccles et al., 2019). An overview of the arguably most prominent and frequently used ESG data and rating providers is compiled in the following section. It offers to obtain an insight into the differences in the scoring approaches likely to explain some of the further documented divergences.

MSCI ESG Ratings

MSCI has more than 17 years of industry expertise. It covers around 14 thousand issuers linked to 600 thousand securities. MSCI ESG rating provides an overall ESG score on a seven-grade scale from AAA to CCC. The legacy companies of MSCI include KLD, Innovest, IRRC, and GMI Ratings (MSCI, 2021). The data is analyzed against 35 ESG issues, measuring the extent the company is exposed to the risks of specific industries and how well the company is managing those

risks. Additionally, a relative comparison to the company's peers is provided. The key issues are particular to each industry and can be updated annually. The E and S sub-scores are derived by calculating a weighted average of individual material issue scores relative to the corresponding industry peer group. The weights are set individually for each GICS Sub-industry ranging from 5-30%. The risk exposure and ability to manage the risk are combined in the assessment. The governance score, in contrast, is awarded on absolute terms on a scale from 0 to 10 and includes metrics regarding ownership, pay, board, accounting, business ethics, and tax. ESG Controversy score, measured from 0 to 10, provides an assessment of controversies having a potentially negative effect on the company's operations coming from factors as measured by ESG (MSCI ESG Research, 2020).

The data sources comprise macro data from academic and governmental data sets, company level disclosures like annual and sustainability reports, and daily monitored media news. Systemic communication with companies is performed to verify the data (MSCI, 2021).

RobecoSAM

RobecoSAM has been active in the sustainable investment market for over 25 years. In 2019 the ESG data business of this company was acquired by S&P Global (S&P Global Market Intelligence, 2019). The data source of RobecoSAM ratings is the Corporate Sustainability Assessment (CSA) survey – an annual questionnaire filled out by large companies globally. The CSA, which S&P acquired in line with RobecoSAM, has been in the market since 1999 and allows companies to report their sustainability performance. In 2021, the list of CSA-invited companies comprised 5000 global corporations (S&P Global, 2021).

Its most recent ESG rating score (named the Smart ESG score) aims to account for previous in academic literature mentioned biases arising due to differences in geography, company size, and disclosure level. The adjustments are made on different levels. Firstly, as ESG disclosures are more developed in Europe, the scores that award points for data availability usually result in higher scores awarded for European companies. Similarly, larger companies, which typically have extra resources to develop more sophisticated sustainability policies, usually end up scoring higher in the ESG scores than their peers. RobecoSAM Smart ESG scores adjust to these differences by comparing only those companies with similar sectoral and geographical backgrounds. In addition, heavier weights are provided for issues having a financially material impact on specific industries. The final result is assessed on a 100-point scale (RobecoSAM, 2021).

Sustainalytics

Sustainalytics has been in the ESG market for around 25 years and, as of 2021, provides sustainability-related ratings to more than 20 thousand companies worldwide. In 2020 the company was acquired by Morningstar Inc. (Morningstar Inc., 2020). The methodology of Sustainalytics combines a quantitative score representing the part of the ESG risks that remains unmanaged (measured in an open-end scale) and a risk category, which is assessed based on the quantitative

score peer comparison. The ESG score (expressed on a 100-point scale) is calculated based on three pillars— corporate governance, material ESG issues, and idiosyncratic issues measured on the company level. The dimensions are evaluated from two viewpoints – exposure to the specific ESG factor and the company's ability to manage this risk. To tailor the industry-wide scoring to a specific company, the company's ESG exposure to the particular issue is derived via beta estimation over quantitative factors like production, financials, events, and geographical location, as well as individual qualitative assessment.

The data sources used in the industry scoring process include quantitative marks gained from numeric data, corporate standpoint obtained via the company's disclosures, and expert opinion represented by the industry expertise of the scorers. The industry scores are updated annually. The specific company data is also updated annually based on publicly disclosed information. The rating agency obtains the company's feedback before the final score is assessed (Sustainalytics, 2020).

ISS Quality Score

The ISS quality score does not offer a complete sustainability assessment. Instead, it focuses only on the governance aspects. The score has been awarded to more than 6000 companies globally. The methodology of the governance score is numeric and assesses the governance risks of the individual company relative to its peers and the region.

ISS Quality score assesses four dimensions – board structure, compensation practices, shareholder rights, and audit and risk management. The dimensions altogether encompass more than 220 single factors. After a weight-based analysis of the individual dimensions, the Governance Quality Score is ultimately expressed on a scale from 1 to 10, where a lower score corresponds to a lower risk level (ISS ESG, 2021).

RepRisk

RepRisk does not provide an ESG rating but instead offers a view of those ESG risks that will be material in data sets. Contrary to other similar service providers, RepRisk excludes the company's self-reported information arguing that it cannot be trusted, and therefore only external, public data is sourced in the analysis.

Machine learning tools are used for information gathering, ensuring daily screening of more than half a million documents in 20 languages. The key output is expressed in the form of the RepRisk Index - a quantitative measure on a scale from 0 to 100 concerning the reputational risk exposure to ESG issues, and RepRisk Rating – measured on a scale from AAA to D to ease the benchmarking and comparison (RepRisk, 2021).

Some of the other widely used and impactful rating agencies include Corporate Knights Global 100 publishing an annual index of the most sustainable companies, Thomson Reuters ESG Research Data (including legacy company Asset4), which measures the ESG performance and Controversy score, based on public data as well Bloomberg ESG data service, which published an ESG disclosure score (Huber & Comstock, 2017).

Based on the document analysis and the academic literature, the author proposes the following ESG scoring comparison table also including the potential assessed risks and benefits of the approaches used.

Table 1.2

Overview and methodology analysis of the major ESG scoring agencies (author's analysis)

Scoring agency	Methodology	Scoring scale	Data sources	Benefits / Risks
MSCI Ratings	Analyzes data against 35 ESG issues, considering both risk exposure and risk management. Governance and ESG Controversy scores are provided separately.	AAA to CCC (for ESG); 0 to 10 (for governance and ESG Controversy)	Macro data, company level disclosures, daily monitored media news	Benefit: Extensive coverage with detailed, industry-specific issues. Risk: May be more complex and difficult for some users to interpret.
RobecoSAM	Uses CSA survey filled out by large companies globally. Also adjusts for biases due to differences in geography, company size, and disclosure level.	100-point scale	Corporate Sustainability Assessment (CSA) survey	Benefit: Accounts for geographic and size biases. Risk: Relies heavily on self-reported information.
Sustainalytics	Evaluates from two viewpoints – exposure to a specific ESG factor and the company's ability to manage this risk.	100-point scale	Numeric data, company's disclosures, and industry expertise of the scorers	Benefit: Detailed, two-sided evaluation of ESG issues. Risk: May be less comprehensible due to complex methodology.
ISS Quality Score	Focuses only on the governance aspects and assesses governance risks	1 to 10	N/A	Benefit: Strong focus on governance. Risk: Limited in scope,

	relative to peers and the region.			does not assess environmental and social aspects.
RepRisk	Excludes company's self-reported information and only considers external, public data to measure reputational risk exposure to ESG issues.	0 to 100 (for RepRisk Index); AAA to D (for RepRisk Rating)	Public data sourced through machine learning tools	Benefit: Solely relies on external, public data, reducing bias from self-reported information. Risk: May overlook positive internal practices not publicly reported.

The analysis underscores the importance of understanding each agency's methodology and potential trade-offs to choose the most suitable one for a specific purpose making it also noteworthy to understand the use of the proper proxy or score when undertaking ESG evaluation.

1.2. Legislative background

The development of the field has been marked by certain milestones. Global Reporting Initiative (GRI) organization, founded in 1997, can be seen as one of the pioneering movements – setting milestones in the approach to how corporate sustainability practices are disclosed. GRI encourages companies worldwide to understand and measure the impact of their operations not only in financial terms but also on key sustainability areas such as climate, corporate governance, human rights and social welfare (“Global Reporting Initiative,” 2022). The GRI standards for sustainability reporting by now have been adopted by 93% of world’s largest 250 companies (KPMG, 2020).

The United Nations (UN) has been another key player contributing to the promotion of sustainability from the corporate perspective. The UN Global Compact dated 2000 is the world’s largest corporate sustainability initiative. Formed as a voluntary initiative, the Compact encourages companies to pursue sustainable business across the three pillars – economic, social, and governance as well as strive to commonly achieve the 17 Sustainable development goals (SDG), which correspond to the global challenges the world is facing. The UN-supported Principles for Responsible Investment (PRI), established in 2006, invites its signatories to include ESG factors in their operations and investment considerations. The number of PRI signatories has been growing significantly – while as of 2019, PRI has around 2370 signatories, the number had more than doubled in 2022 – as of April 2022 the number of signatories had reached 4909. The majority of

the PRI signatories are European companies; 38 of them representing CEE countries (Principles for Responsible Investment, 2022).

Finally, another pioneer linking financial reporting with climate-related impact has been Task Force on Climate-Related Financial Disclosures (TCFD). The Task Force consists of 31 members from across the G20, representing companies, financiers, asset managers, and other users of financial disclosures. In 2017, the TCFD released climate-related financial disclosure recommendations intended to assist companies to deliver clearer information to support informed capital allocation. The recommendations include information that businesses should disclose to support investors, lenders, and insurance companies in appropriately evaluating and valuing risks related to climate change (TCFD, 2022).

Largely impacted by the global sustainability initiatives, the absolute number of policy interventions related to corporate sustainability have grown exponentially. According to the UN PRI database, which gathers sustainable finance policies around the globe, the cumulative number of sustainable investment related policy interventions reached around 800 in 2020. In comparison, the number stagnated around 50 across the years from 1960 to 2000, and since then – has grown steadily, reaching new peaks every year, especially in the last 5-year period. As summarized by PRI – 96% of the policies have been developed since the year 2000 (UN PRI, 2022). According to the data, the largest share of the increase has been driven particularly by the European policy interventions as summarized in Figure 1.1.

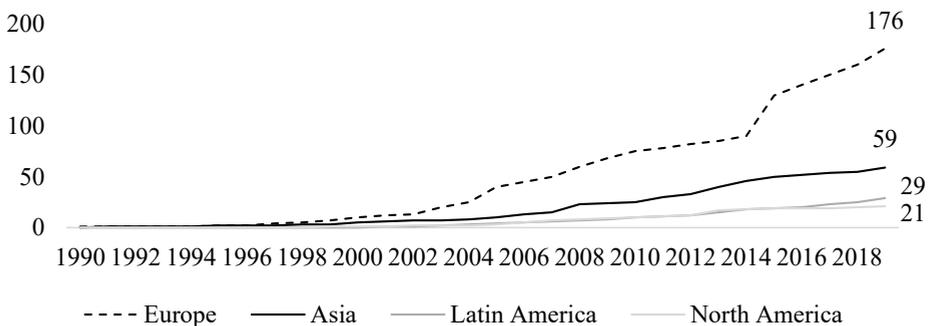


Figure 1.1 Corporate sustainability related policy interventions by geography (Source: UN PRI (2022)).

The policies and regulations, however, have not been targeted purely at corporations. All in all, regulations act as drivers of ESG in a twofold manner – firstly, affecting the issuers or the corporations that must disclose their sustainability performance and secondly, motivating the investors to consider ESG in terms of their investments, ultimately also cascading the ESG requests forward to the corporations. In addition, some of the regulations foresee specific disclosures to be completed on a product level. In recent years, the focus of the regulations has largely been seen on

the investor side – according to MSCI research, for example, in 2018 – of 170 regulatory or quasi-regulatory actions, 80% targeted institutional investors (Lee & Moscardi, 2019).

With respect to the degree of implementation, Europe has been a clear leader and pioneer in sustainability legislation. The centre of the entire sustainable finance approach is the European Green Deal – the EU’s response to tackling climate change. The key goal of the roadmap announced in December 2019 is to make Europe the first climate-neutral continent on earth by setting targets of no emissions by 2050 and sustainable economic growth without resource depletion. The set of specific proposals is envisaged across multiple industries, players and activities, however ultimately, they form a unified set of action items with an aim to reduce greenhouse gas emissions (European Commission, n.d.b).

As argued by Sikora (2021) the challenge is to transform the comprehensive climate agenda into efficient legal and economic instruments. And exactly this approach has been taken by the EU over the recent years. Emerging from the Green Deal targets of reaching common EU’s climate targets for 2030 in terms carbon emission reduction of at least 55% and longer-term goals, a certain requirement has emerged on investments and funds to be channeled into the projects that ensure the approaching of sustainable development.

In line with the Green taxonomy trying to unify the standards of the financial products across the industry, institutional investors, banks, pension funds and asset management funds are expected to devote much higher attention to the proper implementation of the ESG standards required by legislation (OECD, 2020b). The EU taxonomy is a complex system to classify which products and services can be presented as sustainable. The list of activities and certain characteristics are used to provide “green” labels for the products that are deemed sustainable. While the taxonomy does not prohibit investments outside of the labelled activities, the use of “climate friendly” is regulated (Abnett, 2022).

Other investment-related directives already in place include Regulation 2019/2088 on Sustainability-Related Disclosures in the Financial Services Sector (SFDR). Developed within the frame of the European Commission’s Action Plan on financing sustainable growth adopted in early 2018, SFDR entered into force in 2021. The core of the SFDR lies within promoting transparency in sustainability-marked financial products and services, as well as disclosure of ESG policies, processes and principle adverse impacts on sustainability areas, which may result in negative impact on the society and environment (Official Journal of the European Union, 2019). This so called “double materiality” concept aims to acknowledge the cases where risks and opportunities can be material from both a financial and non-financial perspective. Double materiality foresees that companies and financial institutions must manage and take responsibility for the actual and potential adverse impacts of their decisions on society and the environment. Up to 98% of the global institutional investors already use ESG metrics in their portfolio creation and management process (EY, 2020).

A wide set of regulations is also present on the corporation side. The Non-Financial Reporting Directive (NFRD) is in force for the EU public interest entities with more than 500 employees. The

NFRD stipulates that corporations must publish reports with respect to their actions in environment protection, social and human rights domain, and anti-corruption practices as well as board diversity components. The form of the reporting, however, is unspecified, leading to the use of differing local and globally accepted reporting standards (European Commission, n.d.-a). According to the Deutsche Bank (2021) survey, across the European entities 55% of the companies report in alignment with Global Reporting Initiative standards, 52% in the alignment of Task Force on Climate-Related Financial Disclosures, and 27% in alignment with Sustainability Accounting Standards Board. 18% of the corporations' report without any alignment with the aforementioned standards.

The aim to reach a higher degree of comparability of the ESG disclosures and data has been one of the key aspects underlying the subsequent policy proposal. The Corporate Sustainability Reporting Directive (CSRD), proposed by the European Commission in April 2021, foresees an introduction of mandatory reporting starting from 2024. All companies having more than 250 employees and exceeding either 40 million euros revenue or 20-million-euro balance sheet sum are exposed to the new policy. The new CSRD is expected to be implemented into national laws that corporations should be ready to report their ESG achievements for the year 2024 (European Commission, 2021).

The sustainability reporting obligations are expected to be binding also to small and medium size enterprises starting from 2026. The CSRD aims to integrate the sustainability domains in the overall annual report, thus balancing the importance of the financial and non-financial data in the reporting. The more detailed reporting requirements uniformed standards for the new reporting are in the preparation by the European Financial Reporting Advisory Group. Additional key difference foreseen by the CSRD is the extension of the liability of the management also for the ESG related content thus implying the need also for the sustainability audit. In addition, also CSRD aims to include the double materiality concept foreseeing that company should report simultaneously on sustainability matters that are financially material to company's business value as well as material to the market, the environment, and society.

With respect to the diversity, in specific, in June 2022 the Directive of the European Parliament and of the on improving the gender balance among [...] directors of companies listed on stock exchanges, or the so-called "Women on Boards" Directive was approved with the intention to foster transparent recruitment procedures in companies aiming at having at least 40% of non-executive director posts or 33% of all director posts filled by underrepresented gender. Entering into force in mid-2026, EU stock listed companies will have to comply with and report this information annually (European Parliament, 2022).

An overview of the key milestones and legislative requirements has been summarized in Table 1.3 providing a concise outline of the major aspects that should be considered to understand the evolution of the current corporate sustainability landscape.

Table 1.3.

Overview of the ESG legislation landscape (author's analysis)

Milestone/Legislation	Year	Applicability	Description
Global Reporting Initiative (GRI)	1997	Worldwide Corporations	Sets milestones in the approach to how corporate sustainability practices are disclosed, focusing on financial impacts as well as climate, corporate governance, human rights, and social welfare.
UN Global Compact	2000	Worldwide Corporations	Encourages companies to pursue sustainable business across economic, social, and governance pillars and strive to achieve the 17 Sustainable Development Goals (SDG).
Principles for Responsible Investment (PRI)	2006	Worldwide Signatories	Invites signatories to include ESG factors in their operations and investment considerations.
Non-Financial Reporting Directive (NFRD)	2014	EU Public Interest Entities with >500 employees	Requires corporations to publish reports on their actions in environment protection, social and human rights domain, and anti-corruption practices as well as board diversity components.
Task Force on Climate-Related Financial Disclosures (TCFD)	2017	G20 Member Companies	Provides recommendations for companies to deliver clearer information to support informed capital allocation in relation to climate risks.
European Green Deal	2019	EU Countries	Aims to make Europe climate-neutral by 2050 and promotes sustainable economic growth without resource depletion.
EU Taxonomy	2020	EU Financial Services	Classifies which products and services can be presented as sustainable, regulating the use of "climate friendly" labels.
Sustainability-Related Disclosures in the Financial Services Sector (SFDR)	2021	EU Financial Services	Promotes transparency in sustainability-marked financial products and services, as well as disclosure of ESG policies, processes, and principle adverse impacts on sustainability areas.
Corporate Sustainability	Proposed 2021, applicable	All EU companies having more than 250	Mandates reporting of ESG achievements, integrating sustainability domains in the overall annual report,

Reporting Directive (CSRD)	from 2024 and to SMEs from 2026	employees and exceeding either 40 mEUR revenue or 20 mEUR balance sheet	thus balancing the importance of the financial and non-financial data in the reporting.
"Women on Boards" Directive	2022	EU stock listed companies, applicable from 2026	Aims at having at least 40% of non-executive director posts or 33% of all director posts filled by underrepresented

The overview table clearly illustrates the dynamic nature of the corporate sustainability legislation suggesting the significant adoption challenges that the European corporations are currently facing.

1.3. Linking ESG disclosure and performance to financial results

The connection between ESG disclosure volume and the actual ESG performance seemingly goes hand in hand. While the aggregate analysis of the ESG implementation degree is based on actual disclosures, a higher degree of disclosure is necessary to limit the information asymmetry. This view would support Voluntary Disclosure (Dye, 1985; Verrecchia, 1983) suggesting that companies having better performance should also voluntarily like to disclose more. Alternatively, one could argue that extensive disclosure only fosters greenwashing concerns rather than providing valuable content. So, for example, Cho et al. (2015) have suggested that “contradictory societal and institutional pressures, in essence, require organizations to engage in hypocrisy and develop façades, thereby severely limiting the prospects that sustainability reports will ever evolve into substantive disclosures” (Cho et al., 2015).

Greenwashing, misleading communication by companies towards external stakeholders about the environmental performance of the overall corporation or specific product properties (Marquis et al., 2016), has increased along the corporate sustainability trend. It has been argued that particularly the fragmented regulatory environment can be one of the drivers for such behavior (Delmas & Burbano, 2011). As there is still no one globally accepted sustainability reporting standard, the extent of the ESG disclosure varies greatly across (1) geographies due to differing regulations, (2) industries due to changing materiality as well as (3) chosen reporting standards that can be used for the disclosures (Ioannou & Serafeim, 2012). The punitive consequences for misstatements in ESG disclosures are still limited therefore limiting the incentives to put structures and processes in place to ensure unbiased disclosures (Delmas & Burbano, 2011).

Academic research has documented mixed findings concerning the relationship between ESG disclosure and performance. Some authors report a positive impact of corporate social responsibility disclosure on sustainability performance and the subsequent cost of capital (Dhaliwal et al., 2011). Higher level of disclosure is also found to have varying effects on the ESG strengths

and concern areas – indicating that companies having specific ESG concerns benefit from additional sustainability disclosures, while firms with ESG strengths experience lower valuation effects of additional disclosures (Fatemi et al., 2018). Finally, while a positive association between environmental performance and the level of discretionary environmental disclosures has been documented, the results also point towards the differences between discretionary disclosure and the disclosure done following regulatory standards, which is likely to be one of the sources of the variances between the documented differences in the results (Clarkson et al., 2008).

The literature so far has used various approaches to tackling the disclosure vs. performance issue when measuring the impact on financial performance:

(1) using only reported ESG disclosure level implying that only the quantity of the non-financial information is measured or analysed,

(2) more recently with the rise of commercial ESG rating and score provision, increasingly more studies use external ESG ratings to evaluate the quality of the actual sustainability performance, and

(3) individual self-developed methods or qualitative/quantitative analysis of the disclosed information in order to assign a relative ESG performance score.

Each approach arguably has its strengths and limitations; however, the non-standardized approach is likely one of the sources of the lacking consensus on the topic. Global evidence, summarized by analyzing ESG disclosures in an international setting covering 31 countries divided based on higher and lower stakeholder orientation, showed that the disclosures had a positive impact on lowering the cost of capital with the effect being more pronounced in stakeholder-focused countries (Dhaliwal et al., 2014). The most recent overarching meta-analysis has documented that only 26% of the sample studies focusing on only ESG disclosures discovered a positive correlation with financial performance in contrast to 53% of the studies that tackled ESG performance measures in the value generation analysis signaling the stronger effect of the “content over form” (Whelan et al., 2021).

Next, when exploring the link between ESG and financial performance, the question of whether high ESG-performance companies can also create higher risk-adjusted returns has been one of the most discussed in the ESG-related academic literature in the last decade. In addition to academic research, this subject is often studied also by asset managers and business experts, who use this evidence to make informed decisions on behalf of their clients about investments in one or alternative asset classes.

According to research, the primary reason why investors use ESG data is due to their relevance to investment performance. Other reasons, such as specific client requests and ethical considerations, come second - signaling that financial considerations still dominate the demand for ESG information over ethical reasons (Amel-Zadeh & Serafeim, 2017). Concerning corporate social performance’s impact on financial performance, academics have reached a marginal consensus. Several meta-studies find that around 90% of the academic papers or more than 2000 studies show a non-negative relationship between financial performance and ESG proving the

positive business case for ESG investing (G. Clark et al., 2015; Friede et al., 2015). Other individual studies find evidence suggesting a positive ESG impact on the company's profitability measures (Eccles et al., 2014; Velte, 2017). Also, reduced risk metrics are found to be attributed to better scoring ESG companies (Giese et al., 2019; Henisz et al., 2019). The results of a recent study, examining the relationship between ESG and financial performance in more than 1,000 research papers written in the period between 2015 and 2020, found that a mere 8% of them demonstrated a negative relationship. Furthermore, the authors confirmed that twelve of thirteen meta-analyses (comprising in total of 1,272 studies) found a positive association between some aspects of sustainability and financial performance over the time span from 1976 to 2018 (Whelan et al., 2021). This proves that the impact of the ESG is not diminishing over time so far.

Based on the mounting evidence and the largely unified results documenting the positive ESG and financial performance relationship, recently the focus of the research has been put on the quantification of the ESG factors and actual consideration of how ESG impacts a company's market performance, as well as valuation factors. The efficient market theory states that in efficient capital markets the share price shall include all the available information on security. In theory, this should serve as one of the general reasons why companies choose to disclose extra financial information aimed at providing a wider spectrum of available data for analysis leading to a higher valuation. The main disclosure reasons discussed in the literature include the firm's efforts for legitimacy and decreased regulatory burden, improved reputation, enhanced brand value, motivated employees as well as hope for enhanced financial valuation (Brooks & Oikonomou, 2018).

The extent of the non-financial disclosure across companies, however, is still far from homogenous. The level of the disclosed information varies greatly across the companies (Tamimi & Sebastianelli, 2017). Governance issues are disclosed the most, while environmental topics are rather underreported. Authors also find that larger companies, as well as companies with larger boards of directors, have greater disclosure scores. The evidence on the financial implications of the disclosures, contrary to the theory, is relatively ambiguous. It is important to understand the motives for non-financial disclosure as according to the voluntary disclosure theory it is predicted that companies with a better ESG performance would also be keen on disclosing, while those who perform worse, will likely avoid reporting. By using data on public U.S. companies for the years 2006 to 2011 authors find that strong ESG performance increases the firm's value, while ESG's weaknesses indeed provide a negative valuation impact. Besides, the authors find that there are differences in how investors perceive potential concerns of the separate ESG metrics, namely, stronger valuation discounts are given to the governance concerns, rather than social or environmental issues (Fatemi et al., 2018).

Khan et al. (2016) have been one of the first to document that materiality indeed matters – firms with a good performance on material sustainability issues significantly outperform their lower-scoring peers. Even though companies with a good score on immaterial issues do not underperform

their peers, the best performance is achieved by companies concentrating on material matters and putting less effort on immaterial areas (Khan et al., 2016).

The disclosure type also matters to the valuation. ESG performance is valued stronger if a separate ESG report (either stand-alone or an integrated report) is published by a company. Furthermore, the disclosure according to the International Integrated Reporting Council guidelines is found to yield the most positive effect on the valuation by the investors (Mervelskemper & Streit, 2017).

To sum up, this sub-chapter delves into the intricate relationship between ESG disclosure and actual ESG performance, highlighting that while increased disclosure can decrease information asymmetry, it may also contribute to greenwashing. Overall academic evidence shows a growing consensus favoring a positive relationship between high ESG performance and risk-adjusted returns making the ESG adoption worthwhile for the corporations.

1.4. Current ESG-associated challenges

Sustainability data availability and quality are among the most considerable problems, currently seen as an obstacle to a more extensive application of sustainable investments. According to European Central Bank, the endeavours in creating a common green taxonomy can only be successful if the corporate information is presented in a coherent and granular manner, otherwise, the metrics and comparisons cannot be properly used (Schnabel, 2020). This view is supported by the investors surveyed in 2020 by the EY, indicating that investor dissatisfaction with the ESG data has risen since 2018. The percentage of dissatisfied investors has increased since 2018 by 14% for the Environmental data, 20% for the Social dimension, and even 28% for the Governance factor (EY, 2020). Also, academics have recognised that data inconsistency creates challenges in proper data evaluation. Kotsantonis & Serafeim (2019) in their analysis reviewed a sample of 50 large publicly listed companies and manually collected their disclosures on employee health and safety data. The authors found more than 20 different ways which the sample companies chose to report this metric, implying that such inconsistencies may likely lead to significantly different ESG scores (Kotsantonis & Serafeim, 2019).

The data quality is also an issue mentioned when discussing the large discrepancy in the external ratings. As of 2019, there were around 500 ESG rankings, more than 100 ESG awards, and 120 voluntary ESG disclosure standards estimated to be in the market (Eccles et al., 2019). The ESG data market is growing constantly – according to a market study, at least 20% annual growth is expected for the ESG data business (Opimas Market Research, 2020). As the demand for ESG data grows with the volume of responsible investing, one of the challenges that have emerged is the variances in the ESG scores by various agencies summarized before. The problem of ESG data quality has also been highlighted, suggesting there exists a trade-off between the validity and reliability of ESG data (In et al., 2019). Authors suggest that as there is no agreed theoretical

framework, the data should be used with caution and the overall data quality shall be improved in order not to compromise the reliability of the data for the investors.

Firm-specific effects can potentially cause additional differences. When using Thomson Reuters ASSET4 ESG ratings to analyze the impact of firm size, available resources for ESG data compilation and obtainability of the ESG data on the company's score, Dremptic (2020) documented a significant positive correlation concluding that a bias towards less resourceful companies can emerge across the ratings (Dremptic et al., 2020). According to a recent comparison between Thomson Reuters, RobecoSAM, and Sustainalytics scores, there was a tendency by all three rating agencies to award higher average scores to larger companies (Lopez et al., 2020). Similar ESG rating influencing factors relate to the regional differences as, e.g., European companies tend to disclose a more comprehensive set of non-financial results than non-European firms (Morningstar Inc., 2016). Some of the ratings, such as the RobecoSAM ESG score, claim to already account for these potential biases (RobecoSAM, 2021).

As to why the differences emerge, a theory exists that the social origins of the ESG rating agencies play an important role in the set-up of their ESG measurements (Eccles et al., 2019). Exploring further authors used in-depth literature and document analysis as well as interviews to tackle the differences between two ESG data vendors – KLD and Innovest - and found that differences in company history and initial purpose created Innovest's ratings to be more financial-value driven, while KLD's implied belief in the meaning of sustainable development and higher value-added resolution led their ratings to be more value-driven. The different approaches used for ESG score compilation as described in Chapter 1.1. contribute to the problem.

All of the aforementioned aspects largely impact the set-up of the scoring process. Consequently, the ESG ratings tend to showcase a significant divergence. The divergence is confirmed by academic literature - an examination of six ESG rating agencies (KLD, Asset4, Calvert, FTSE4good, DJSI, and Innovest) has shown a lack of consensus among the issued ratings (Chatterji et al., 2016). Furthermore, the differences remained even after adjusting for the likely alterations in the definition of the score awarding principle, implying that the agencies present varying definitions of the same rating and use different measurement techniques for the same variables. Similar results have been documented when comparing the ESG ratings by six market-leading ESG rating agencies (KLD (MSCI), Sustainalytics, Vigeo-Eiris (Moody's), Asset4 (Refinitiv), and RobecoSAM) (Berg et al., 2019). On average, the authors found a correlation among the scores of 0.54, ranging from 0.38 to 0.71, assessed to be low compared to the average of 0.99 correlation coefficient among the largest credit rating agencies. The discrepancy between the scores results in less ESG impact attribution to stock prices, mixed signals sent to the companies themselves, and challenges in an empirical data application. The authors concluded to explain the divergence by three main factors – (1) scope divergence – referring to various sets of attributes used by each agency, (2) weight divergence – referring to attribute weighting in the calculation of scores, and (3) measurement divergence – when agencies use different proxies for measuring the exact attributes. As the vast majority of the ESG ratings are awarded relative to a peer group, the

proper definition and allocation are also crucial, however often not explicitly disclosed. Therefore, the peer group selection as well might lead to deviations in the actual ESG assessment (Kotsantonis & Serafeim, 2019).

Similar results were documented when analyzing the S&P 500 companies - finding a correlation for the overall ESG score of 0.46 decreasing to the lowest for the governance dimension (0.19) and the highest for the environmental measures (0.43) (Gibson et al., 2019). In addition, conclusions were drawn about the industry specifics of the lowest total correlations being present in the consumers and telecommunications segments, while the largest disagreement evolved in the governance scores of the financial industry companies. Also, the authors found that larger companies had higher ESG score divergence.

The actual implications might result not only in the investors' decision to invest or not but also have a material impact on the returns. The results of the performance analysis of two portfolios created in the US and Europe based on the assessment of two different ESG data providers show that despite the identical portfolio construction process, a difference in the cumulative performance in both portfolios of 10.0% in Europe and 24.1% in the US over an 8-year period can be calculated, stressing the importance of the divergence arising from the different ratings each company receives (Li & Polychronopoulos, 2020). The results imply that choosing a different ESG rating can significantly alter the investment universe and therefore also the expected returns.

Finally, as pointed out by a recent OECD Report 2020, there are also challenges in the capacity and knowledge of the financial institutions themselves. As the ESG and sustainability domain in the finance field is still growing, it is challenging for investors and lenders to ensure that the in-house capacity is sufficiently high (OECD, 2020).

All in all, this chapter offers exploration of corporate sustainability and the gradual shift in the terminology used around the subject illustrating the fluidity and progression of this field both in the business world, as well as in academia. By examining the factors comprising each ESG pillar, the analysis aids in understanding how ESG is currently conceptualized and measured. The exploration of the overlaps and distinctions between CSR, CSP, and ESG similarly contributes to a deeper comprehension of these interconnected concepts. The typology of ESG data providers contributes by showcasing the diversity in data collection methods, providing an insight into the potential challenges in the proxies and measurements.

The summarized analysis of the existing legislations and milestones in ESG development offers a clear timeline and description of key legislative developments that have influenced the measurement and application of ESG. It highlights the role of both global and regional initiatives in shaping the current ESG landscape.

Next, the analysis delves into the relationship between ESG disclosure or performance and financial performance, examining the existing literature and evaluating the varied effects of disclosure quantity versus quality on financial returns and corporate valuation. This presents a comprehensive understanding of how ESG's development impacts corporations, particularly in terms of performance, risk, and value. Furthermore, it outlines the current challenges in the quality

and availability of sustainability data resulting in biases towards larger companies and regional differences, prompting to explore the corresponding situation in the studied region of the CEE.

Overall, the qualitative analyses performed in the Chapter 1 collectively contribute to answering the RQ1 by tracing the evolution of the ESG concept and its measurement, and by highlighting how legislation has been instrumental in standardizing and enforcing these measurements, thereby shaping corporate behaviors and responsibilities as well as providing a financial impact from ESG adoption. The next chapter, consequently, focuses on delving into the link between corporate sustainability and shareholder value to further explain the mechanisms of how ESG adoption foster value creation.

2. ESG impact on the shareholder value concept

The aim of the corporation is to maximize value. The debate between whether it is to be done with respect to the stockholders only (Friedman, 1970) or a broader set of involved parties in the form of stakeholders (Freeman, 1984) has been one of the fundamental discussions in modern management science. With the introduction of ESG, more of the evidence leans towards the absolution of the debate suggesting that the trade-off should not be necessary and sustainable operations of companies can ensure both. Therefore, the second chapter focuses on providing an overview of the traditional shareholder value drivers as summarized in academic literature and discussing the potential impact of ESG introduction to the traditional shareholder value principles.

The first sub-chapter compiles academic insights on the academically discussed shareholder value drivers, while the second part of this chapter offers insights from bibliometric analysis as well as provides the results of qualitative and quantitative content analysis discovering ESG impact on the shareholder value determinants. A conceptual model relating ESG implications to shareholder value is suggested by the author as a result of this chapter.

2.1. Traditional shareholder value drivers

For decades, there has been an ongoing debate regarding whose interests companies shall strive to satisfy: shorter-term financial goals or longer-horizon extra-financial interests. While both terms have often been used to indicate the contradictory goals of the *raison d'être* of companies highlighted by the Shareholder theory proposed by (Friedman, 1970) and Stakeholder theory argued for by (Freeman, 1984) the introduction of the ESG concept as the variable between the goals arguably serves both ultimate beneficiaries – not only the financial goals of the legitimate owners of the company, but also the benefit of the wider network of the impacted parties – customers, society, employees and other stakeholders.

There is substantial amount of academic literature, which finds that stakeholder interest consideration does not always contradict profit maximization endeavours. So, the instrumental stakeholder theory described by Donaldson and Preston (1995) suggests that companies, which operate by considering all their stakeholders, also perform better at the “conventional performance terms” like profitability (Donaldson & Preston, 1995). The corporate social activities and practice of ethical principles aimed at satisfying the needs of the stakeholders are instruments in achieving sound financial performance (Jones, 1995). It is especially true, if considering the longer-term value that shareholders achieve from their companies.

The initial academic literature on the subject mainly stressed the financial facets of the shareholder value concept. For instance, Rappaport (1986) suggested that shareholder value is driven by the sales growth rate, operating profit margin, working and fixed capital investment, income tax, cost of capital and competitive advantage period. With time, the mere financial concentration was supplemented by more organization and external stakeholder related facets

(Rappaport, 1986). Especially, when thinking about the long-term value preservation, it was suggested that additional value drivers including reputational factors and customer's opinion as well as a more long-term strategic orientation shall be considered (Walter, 1996). Also, Jensen (2002) contrasted the competing approaches and proposed a concept of "enlightened [long-term] value maximization", which considers the company's operations that also reflect the interests of all of its key stakeholders (Jensen, 2002). Further, with respect to stakeholders, Moir et al (2007) proposed a model linking stakeholder and shareholder value suggesting that stakeholder actions, via their effect on the competitive advantage of the company, influences one of the three value drivers (1) improved performance, (2) reduced costs of capital and (3) reduced capital intensity, which ultimately translates in the changes of the share price and company's financial value (Moir et al., 2007). Complementary, Lazonick & O'Sullivan (2000) suggested that the shareholder value can be seen as a term describing corporate governance, especially, seeing it as a concept related to the decisions on profit distribution (dividends) and company's stock market performance (Lazonick & O'Sullivan, 2000).

A potential link between the concepts of ESG or corporate responsibility and shareholder's value is provided by Porter & Kramer (2011), who have elaborated a concept of shared value (M. Porter & Kramer, 2011). The theory, which focuses on the interrelation between economic and societal values, bases on three main sources of application – via dedicated products and markets, via productivity and therein achieved competitive advantage and local societal development (including stakeholder engagement). The concept has also been analyzed and elaborated by international organizations, such as the UN. An independent tool developed by the UN Global Compact and Principles of Responsible Investment offers a methodology to explain how company's sustainability efforts contribute to the overall performance. The model suggests that the shareholder value is affected by three dimensions (1) revenue growth, (2) productivity implying cost savings, and (3) a well-established risk management framework (UN Global Compact, 2020)

Finally, an all-embracing proposition on the shareholder value and its sustainability is offered by Bistrova & Lace, who have developed a hypothetical model of shareholder value measurement (Bistrova & Lace, 2010). Basing on content analysis of the academic literature, the authors proposed that the shareholder value and its sustainability is created and measured by (1) profitability, (2) capital budgeting, which directly influences the cost of company's capital, (3) accountability and ethics of the management, (4) quality of corporate governance, and (5) company's innovation capacity. In 2014, authors verified their initial shareholder value model by using stock market data for CEE countries. Ultimately, in addition to the dimensions (1) to (3), the list was amended to include (4) earnings quality, and (5) ownership characteristics.

2.2. Discovering ESG performance implications on the shareholder value creation

To examine the sources of connection between the ESG aspects and the shareholder value several methods have been applied. Firstly, bibliometric method was employed choosing co-occurrence analysis as appropriate to identify connections between the most important key words relating corporate sustainability and its impact channels on the financial performance or company's financial or non-financial value. Next, qualitative and quantitative content analysis of the scientific literature was performed to gain deeper insights on the clusters and categories relating corporate sustainability to firm's value.

The use of systematic literature selection for the content analysis in the social and environmental reporting research is relatively rare due to the large volume of the literature and the wide domain of distinct topical deviations (Vourvachis & Woodward, 2015). Consequently, it was also not applied in this case. Following the review of the existing literature indexed at the Web of Science and Scopus databases (indexed databases that scholars use to perform a bibliometric research (Rodrigues & Mendes, 2018)) according to research relevant keywords in their titles - "ESG", "environmental/social/governance" and "corporate social responsibility". The search was then restricted to only scientific articles written in English. In the first step, emphasis was placed on articles with an explicit reference to the research topic, and thus several articles revealing very limited and specific geographic evidence were excluded. Several additional articles were added to the sample by examining the cross-references to the already selected articles.

In the second step, the abstracts were screened to select those that include research focusing on ESG or corporate sustainability's impact on the financial performance or shareholder value. In the first selection phase, from 212 scientific articles published between 1995 and 2020, 94 articles were deemed appropriate for the bibliometric analysis (see Appendix 1 for the bibliography). The bibliometric analysis was performed via VOSviewer software. VOSviewer is a software tool for creating and picturing bibliometric networks. The co-occurrence network of important terms and key words extracted from the selected portfolio of scientific articles was created. The result of the analysis is depicted in Figure 2.1.

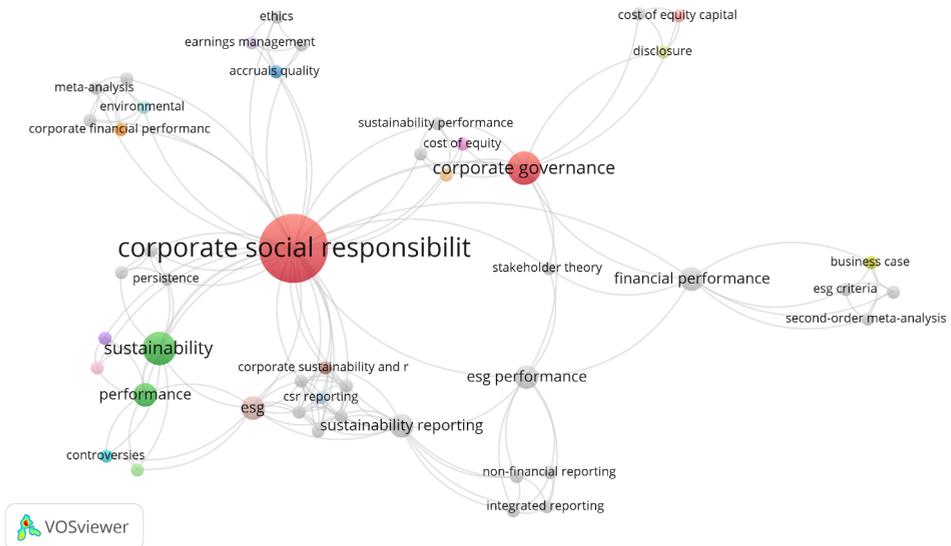


Figure 2.1. Co-occurrence analysis of the key words compiled in scientific literature, created by the author with VOSviewer software.

The results of the analysis reveal several clusters of keywords centring around (1) corporate social responsibility, (2) corporate governance and (3) financial performance. As explained in Chapter 1 of this dissertation, historically the corporate sustainability concept has evolved closely to corporate social responsibility. Recently, with the stronger development of ESG measurement and quantification, the corporate sustainability as measured by ESG factors implicitly include the majority of the CSR dimensions, thus the ESG scores can arguably be seen as a quantitative metric to measure the CSR performance of corporations (Escrig-Olmedo et al., 2019). Therefore, given the fact that the sources used for bibliometric analysis date back to 1995, it is to be expected that particularly the CSR concept links the different aspects of the corporate sustainability concept that has evolved over the years. It is likely that if the analysis would have been repeated on a sample of scientific articles covering the last decade, the central co-occurrence keywords would change to ESG or corporate sustainability.

While additional insights about the connection of i.e., CSR and reporting or financial performance have been visualized, the co-occurrence analysis fails to provide deeper insights into the exact factors how higher corporate sustainability translates into shareholder value or financial performance.

Therefore, in the second step a qualitative content analysis of the selected literature and frequency analysis was performed. Following a repeated selection of articles based on thorough abstract screening to select those that provide empirical results and robust conclusions on the ESG

impact on a company's financial or non-financial performance or another firm-related characteristic, the final selection consisted of 65 scientific articles and working papers published across academic journals from 1997 to 2020 (see Appendix 2 for the bibliography). The selected text fragments yielded 34 unique codes totalling 183 coded instances. The unique codes were unified into eleven larger categories, of which the frequencies were analysed (see Table 2.1). The definitions of the categories as also presented in Table 2.1 were developed by the author to include the various facets used in the formation of the categories.

Table 2.1

Categories, definitions, and the frequencies of the content analysis linking ESG to shareholder value (created by the author)

Category	Definition	Frequency
Financial performance	Company's performance in accounting or stock return terms	39
Reputation	The perception of company's image by the public	22
Reduced risk	Reduced level of risk associated with less volatility, lower business, financial and idiosyncratic risk.	20
Operating capabilities	Operating efficiencies of the company characterized by its productivity, competitive advantage, and effectiveness.	19
Management	Reliability, execution efficiency and decision-making power of the firm's management	17
Long-term orientation	Company's long-term vision, strategic planning and growth prospects	17
Transparency	Transparency of company's financial and non-financial information	14
Capital management	Describes company's capital policy - allocation efficiency, cost of capital, ease of capital attraction	12
Stakeholder engagement	Accountability and trust of the stakeholders (excluding employees)	11
Long-term orientation	Company's long-term vision, strategic planning, and growth prospects	11
Employees	Employee related capabilities - ease of attraction, engagement, job satisfaction	9
Customers	Company's perception by its customers	3

The frequency results of the content analysis in Figure 2.2 show that higher ESG performance has a positive impact on various company-related factors, which have a consequent positive influence on shareholder's value of the company.

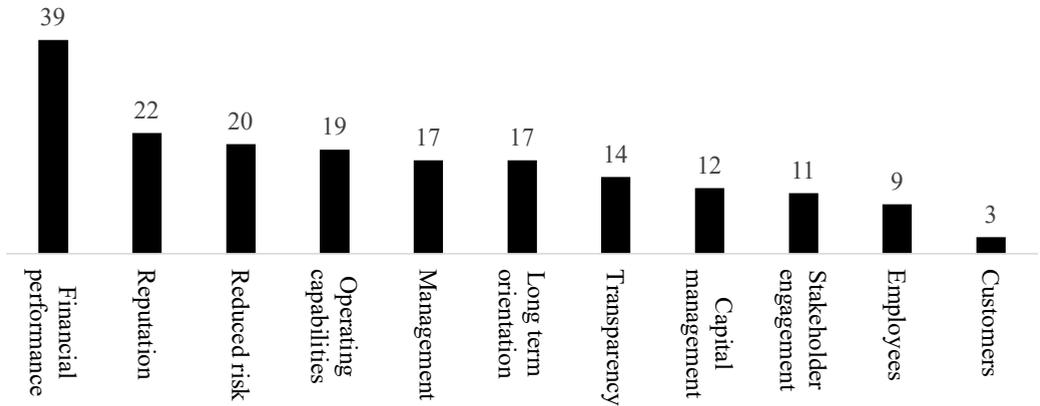


Figure 2.2. Frequencies of the ESG impact categories, created by the author.

The results show that the most notable impact from high ESG performance comes from the financial factors. Improved financial performance characterized in both - accounting terms (i.e., net profitability, return on equity) and the stock return performance (i.e., share price development) are direct input variables in the firm's value calculation, thus yielding higher value for the shareholders. The financial market performance is partly related also to one of the next most impactful factors – reduced risk. It suggests that higher sustainability companies show lower stock market volatility as well as reduced credit and business risk, which allows investors to attribute higher valuation to the company based on the risk-return trade-off.

Companies which show healthier ESG performance benefit from a better reputation and public image, potentially leading to easier attraction and retention of employees as well as higher attributed customer loyalty. These non-financial factors work as sources of competitive advantage vis-à-vis other companies leading to higher sales growth and lower costs in terms of employee turnover, which increase the firm's value in the long term. Similar positive effects arising from higher ESG performance come from other firm-level factors of a more qualitative nature - operating capabilities, higher management quality including reliability and execution efficiency, and more efficient capital management. These factors speak of the company's ability to make strategically sound decisions, efficiently allocate and attract capital and lead the company in an efficient, productive, and value-creating manner. Even though reputation, management, and operating performance factors, which have been shown to be positively linked to ESG disclosures, do not

directly translate into higher company's valuation, the efficiencies and trust in company management are valued positively by investors. Contrary, capital management has a direct link to company's value calculation via the reduced costs of equity and debt and the easier attraction of additional funds, which all directly result in a higher calculated market value of a company and, therefore also higher long-term shareholder value.

Higher transparency in terms of better disclosures goes in line with stakeholder engagement and trust factors. The stakeholders, including the financial value holders, price in the effects of company disclosures as they decrease the riskiness and uncertainty about the performance and potential incidents. Finally, higher-performance ESG companies are found to be more long-term oriented, have a more strategic approach to decisions, and, potentially consequently, have higher growth prospects. Although these results do not positively impact the firm's value in the short term, they are of large impact when considering the sustainability of the shareholder's value.

According to the content analysis performed, the most notable impact of high ESG performance comes from the financial factors. Improved financial performance both in accounting statement terms and in the stock market returns are direct input variables in the firm's value calculation, thus yielding higher value for the shareholders. The financial performance metrics as profitability have been historically noted as a key shareholder value driver (Rappaport, 1986), (Bistrova & Lace, 2016). As the results suggest, from 183 coded instances, 39 of them (21%) correspond to the direct financial implications. This stand-alone category also has the highest frequency. These results, however, fail to explain the path of causality – it is not possible to further break down why exactly higher ESG firms are more profitable. While improved accounting and financial market performance relatively provide the least explanation on how exactly the improved ESG performance translates into a firm's value, there are two other high-frequency categories revealed by the analysis which can be seen as partly qualitative and partly quantitative. Arguably one of the most compelling motives for sustainable investment is the potential to reduce the risk [30]. As the climate changes and the increasing societal pressure on the social dimensions generate significant risks for the future of the companies, it is of the utmost importance that the more sustainable companies will avoid such risk, thus evading potential harm for the shareholders' value in the long term. The results confirm this view by a relatively high placement of the "reduced risk" category. In addition, an appropriate risk management approach is mentioned as a shareholder value driver by UN Global Compact.

Secondly, capital allocation is the direct way how investors, banks, and other capital providers can foster the development and growth of sustainable companies. If lower-scoring ESG companies face mounting pressure from the capital providers, it will indirectly foster their higher-scoring peers. Hence, also the result - top ESG companies indeed have better chances of capital attraction and are more efficient at the allocation process implying a lower cost of equity and debt, thus positively influencing the long-term value for the shareholders. Both results are in line with Sassen et al. (2016), who argue that a firm's risk is an important determinant of the cost of capital, consequently, ESG has a direct impact on the company's value (Sassen et al., 2016). Also,

shareholder value researching scholars stress the importance of efficient capital policy - suggesting that shareholder value is influenced by lower capital costs and intensity, as well as efficient capital budgeting (Moir et al., 2007), (Bistrova & Lace, 2016).

One of the next key factors, according to the results, is the quality of management. This category includes not only the professionalism of the management and high perceived earnings quality but also the accountability, commitment, reliability, and trust in the executive power put into the management by the owners. The role of the management in long-term shareholder value creation and preservation has been crucial both in terms of higher accountability and better corporate governance (Bistrova & Lace, 2016) as well as strategic and long-term orientation (Walter, 1996). According to the results, it can principally be argued that the more sustainable companies have more efficient operating capabilities, which can be seen as the source of competitive advantage. In turn, superior efficiency and productivity also allow cost reduction, thus leading to higher valuation of the company. Both – Porter & Kramer (2011), as well as Global Compact guidelines, see the increased productivity as a direct driver for long-term shareholder value.

On the other hand, a large share of impact still comes from various non-financial intermediary factors. According to Hillman & Keim (2001), “building better relations with primary stakeholders like employees, customers, suppliers, and communities could lead to increased shareholder wealth by helping firms develop intangible, valuable assets which can be sources of competitive advantage” (Hillman & Keim, 2001). The results of this study support this thesis and imply that particularly the qualitative, non-financial factors, if summed up, have the greatest contribution to the value creation. Categories as reputation, transparency, stakeholder engagement, employees, and customer value signal a well-built primary stakeholder relationship (Walter, 1996). In sum, if potentially joined in a larger meta-category, particularly the various facets of stakeholder involvement and relationship management result to be the most important driver of the shareholder value.

All the factors captured as the result of analysis are not homogenous and seemingly could be divided into two parts - on the one hand, there are primary effects as increased financial performance or reduced risk, which have a direct impact on the firm’s value calculation formula and therefore on the created long-term financial value for the shareholders. On the other hand, many of the revealed impact factors can be seen as having moderating effects - meaning they do not directly contribute to the firm’s value calculation, however, have an impact on the non-financial results and therefore provide an indirect effect on the long-term shareholders’ value. Altogether the content analysis of the academic literature performed revealed eleven categories of factors, which are positively impacted by higher ESG performance. The results are broadly in line with the multilevel and multidisciplinary model of corporate social performance developed by Aguinis & Glavas (2012), who conclude that higher CSR performance is associated with such outcomes as financial performance, reputation, improved stakeholder relations, firm-specific capabilities in terms of operational efficiency, reduced risk and enhanced organization identification including

employee engagement and customer loyalty (Aguinis & Glavas, 2012). Supplementary, the content analysis additionally reveals the company-related factors such as higher management quality, long-term strategic orientation, and transparency missing in the CSR model. The management factor, however, has been previously captured by Malik (2015) while transparency in author's version could potentially be included as a sub-factor in another category such as e.g., stakeholder engagement (Malik, 2015). This alignment with the existing literature confirms that no meaningful categories have been left out.

By combining the insights from the academic literature on the long-term share-holder value creation and the impact on a company's performance from higher ESG performance, this thesis proposes to view these concepts in a joined framework, where ESG performance translates into sustainable shareholder value via the direct and indirect value drivers. Figure 2.3 provides a visual model of how higher ESG performance ultimately can be translated also in a higher long-term shareholder value.

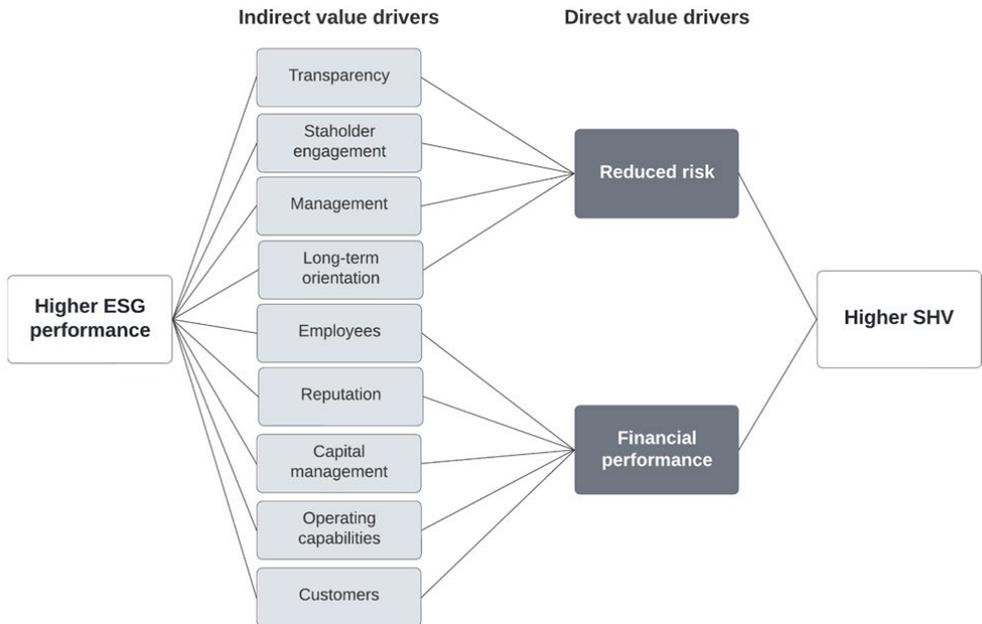


Figure 2.3. ESG implication on the shareholder value – conceptual model created by the author based on the qualitative content and frequency analyses.

The studies and analysis comprised in this chapter answer the second research question - "How does a company's ESG implementation impact shareholder value?" by identifying and analyzing the various factors that bridge ESG performance relationship to the shareholder value.

Through a comprehensive qualitative content analysis, it establishes eleven key categories linking ESG to shareholder value, shedding light on both direct and indirect value drivers. Having established the link between enhanced ESG performance and increased shareholder value, it is essential to delve into the factors that drive successful ESG implementation. In the upcoming chapters, the author will examine the key drivers and obstacles to ESG adoption, with a special emphasis on the Central and Eastern European region, particularly the Baltic states. Chapter 3 will additionally provide a region-specific background analysis.

3. CEE corporate landscape from the ESG perspective

While pursuit of increased long-term shareholder value is widely recognized as an important objective, it can be seen as even more critical in emerging markets such as the CEE countries. Given the rather low level of stock market capitalization as well as the overall less developed financial market culture, the degree of corporate disclosure and information availability, in general, is lower (Fraser Institute, 2019). In addition, higher political uncertainty, and greater risk exposure of the privately held companies hinder higher foreign investor interest in the region and therefore impose a competitive disadvantage to the companies of the more developed economies (Kocmanova et al., 2015). Nevertheless, the CEE region is also characterized by the fastest growth rates among the EU countries and over time has become a significant contributor to Europe's manufacturing and service economy (Invest Europe, 2021a).

Academic literature has consistently attributed substantial influence on ESG disclosures and initiatives in shaping the value and financial performance of companies. This effect has the potential to act as a catalyst, driving enhanced development of corporations and the investment climate, particularly in emerging markets. Therefore, this chapter undertakes to provide an insight into the (1) reasons why ESG relevance is even more crucial in emerging economies like CEE, as well as assesses the (2) current status quo of ESG implementation degree characterized by a) company mission statements analysis (sub-chapter 3.2), b) examination of ESG rating availability and its consequences on capital attraction (sub-chapter 3.3) as well as c) estimated ESG disclosure level following an examination of a sample of stock-listed companies in the Baltic states of Estonia, Latvia, and Lithuania (sub-chapter 3.4)

3.1. ESG relevance for the CEE markets

Given the rise of the corporate sustainability requirements and wider adaptation of the ESG standards, the logical question of its relevancy arises also with respect to the CEE region. Is ESG becoming a mere hygienic factor that is expected to be implemented by every market player across the globe or can it still be seen as a potential source of differentiation and competitive advantage? It has been argued that there exists a differentiation between the application of the strategic and common sustainability practices, whereas only the strategic sustainability practices are found to be positively associated with financial performance measures (Ioannou & Serafeim, 2019).

From this aspect, proper strategic ESG implementation as a source of competitive advantage might be seen as even more important in emerging economies, where investors are faced with higher uncertainty and companies must fight harder to attract investments. Earlier studies show that investors associate firms investing in sustainability measures with higher transparency and less opportunism lowering the perceived agency costs and information asymmetry (Dhaliwal et al., 2011). Decreased information asymmetry in turn facilitates easier capital attraction for the corporations, thus allowing them to grow faster and with less effort (Cheng et al., 2006).

The relationship has also been proven by Ghoul et al. (2017) – when evaluating the correlation between ESG performance and company value based on a sample of 53 countries, the authors find ESG performance to be positively related to firm value, especially in countries with weaker market institutions. Higher ESG performance is associated with better access to financing, especially in countries where equity and credit markets are weaker. Authors also document increased future sales growth for companies operating in countries having less robust legal institutions.

In the case of the CEE countries, the average performance of the legal system (Figure 3.1.) as well as the degree of stock market activity (Figure 3.2.) are generally below their Western European and Scandinavian peers. With respect to the strengths of the legal system, the Fraser’s Institute Index shows the quality of the legal system and property rights, with better index scores on a scale from 1 to 10 attributed to better quality. While the Baltic countries in this measurement do not lag significantly, the results of the remaining CEE geographies score worse (Fraser Institute, 2019).

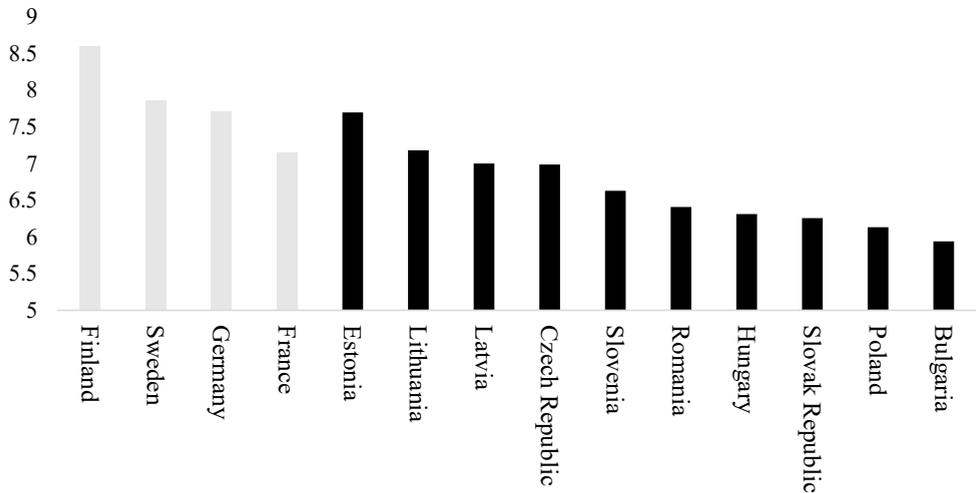


Figure 3.1. Legal system and property rights assessment on a scale from 1 to 10. Created by the author based on Fraser’s Institute Index data for 2019.

Similar is the case for the CEE stock markets, as the rate of stock market capitalization as a proportion of the GDP in the CEE countries is significantly lower than the EU average (see Figure 3.2.). Several of the CEE stock exchanges are among the smallest stock exchanges in the world and measure small-scale also in absolute figures.

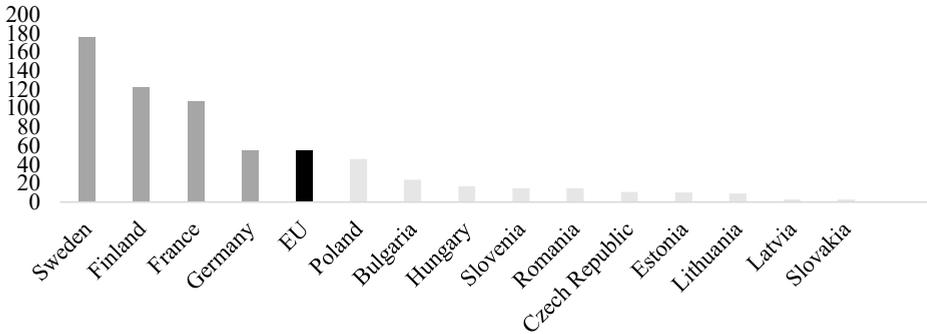


Figure 3.2. Stock market capitalization as a percentage of GDP. Source: created by the author based on CEIC data for 2020.

When examining the comparison of country-specific regulation intensity in Europe, an observable trend emerges from the data, indicating a disparity in policy implementation between Western Europe and the CEE region (see Table 3.1). The number of policies identified in Western European countries such as Germany, France, Spain, Italy, and the UK surpasses those found in CEE countries such as Poland, Hungary, Slovakia, Lithuania, and Latvia. This discrepancy suggests a potential lag in the adoption and implementation of regulatory measures related to sustainable finance and corporate sustainability. The findings align with the insights presented by the UN PRI report from 2022, indicating a lower regulatory intensity in the CEE region compared to Western Europe. (UN PRI, 2022).

Table 3.1.

Number of sustainable finance related regulations across regions. Created by the author based on UN PRI (2022).

Western Europe		Central and Eastern Europe	
Country	# of policies	Country	# of policies
Germany	27	Poland	11
France	24	Hungary	9
Spain	24	Slovakia	9
Italy	22	Lithuania	9
UK	20	Latvia	7

An examination of diversity and inclusion factors reveals further disparities between the two regions. In terms of labor force participation rate, each CEE country falls below the median observed in Western Europe, as depicted in Figure 3.3. This indicates a lower level of engagement and representation of females in the CEE region compared to their Western European peers. Similarly, when evaluating the political landscape, the proportion of seats occupied by females in national parliaments (Figure 3.4) highlights that CEE countries consistently exhibit a lower representation of women in political decision-making processes compared to Western European countries. These findings underscore the existing gaps in diversity and inclusion practices and indicate the need for concerted efforts to address these disparities within the CEE region.

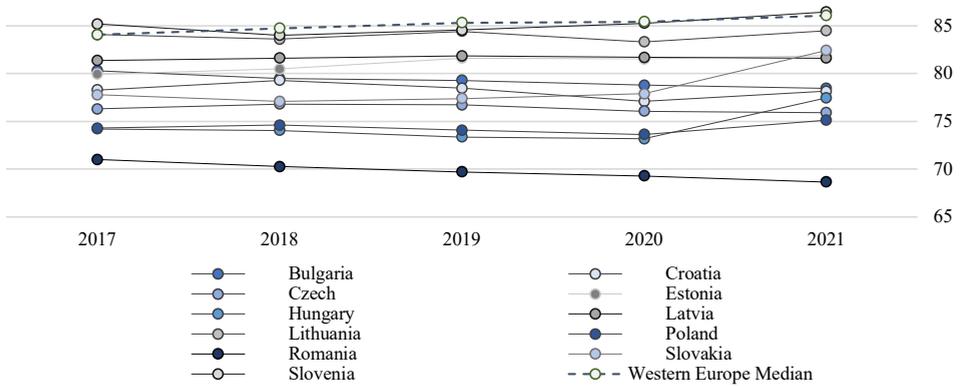


Figure 3.3. Ratio of female to male labor force participation rate (%) in the CEE countries. Created by the author based on Bloomberg data (2021).

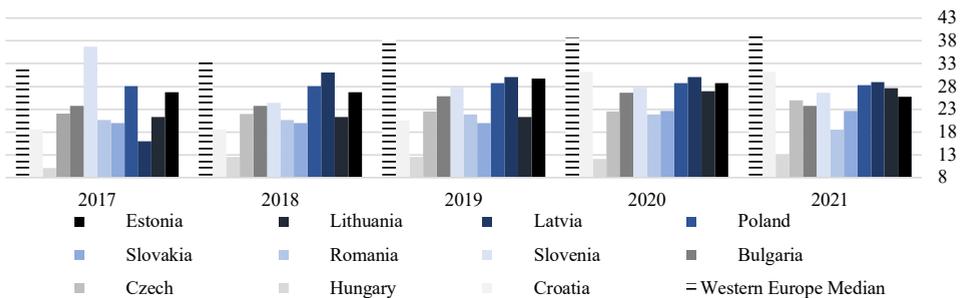


Figure 3.4. Proportion of seats held by women in National Parliament (%). Created by the author based on Bloomberg data (2021).

The only ESG facet, where multiple CEE countries outperform the remaining EU countries, currently is the environmental factor and its metrics. Given the lower level of urbanization in Central Europe and the Baltics (63%) as compared to the EU average of 75%, according to World Bank data for 2021 (The World Bank, 2021b) and the lower manufacturing output (constituting only 13% of the total manufacturing value added of the EU) (The World Bank, 2021a), the CEE countries have remained relatively light in the relative contribution to the emissions and other types of environmental harms compared to their Western European counterparts.

So, is the case, for example, when measuring the greenhouse gas level per inhabitant - the indicator that measures the total national emissions of the so-called “Kyoto basket” of greenhouse gases expressed in units of CO₂ equivalents (Figure 3.5.). Based on the annually submitted data by the EU Member States as part of the reporting under the United Nations Framework Convention on Climate Change, the results show that most of the CEE countries score below the EU average suggesting that the overall contribution per capita to the environmental pollution in terms of CO₂ emissions is lower.

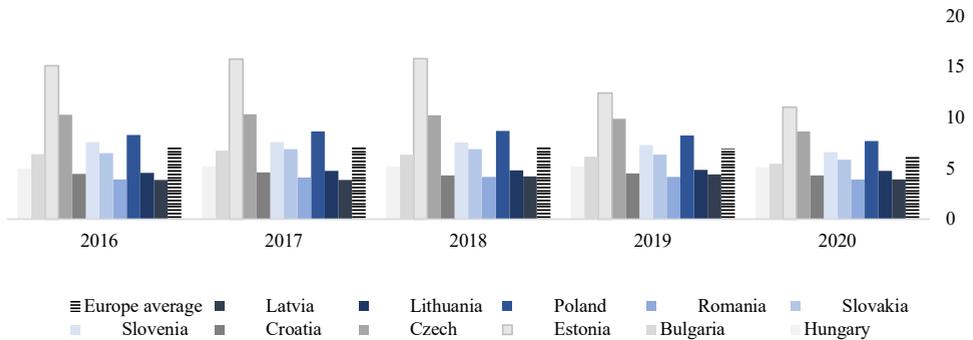


Figure 3.5. Carbon emissions per capita (tCO₂/cap) (Fos. Fuel Combust.) in the CEE countries.
Created by the author based on data of Eurostat (2021).

Also, with respect to renewable energy, the CEE region is mostly overperforming the EU average (see Figure 3.6.). Several of the CEE countries have historically used a higher share of alternative energy such as hydropower to partly fuel their economies and therefore have already been able to achieve a healthier energy mix.

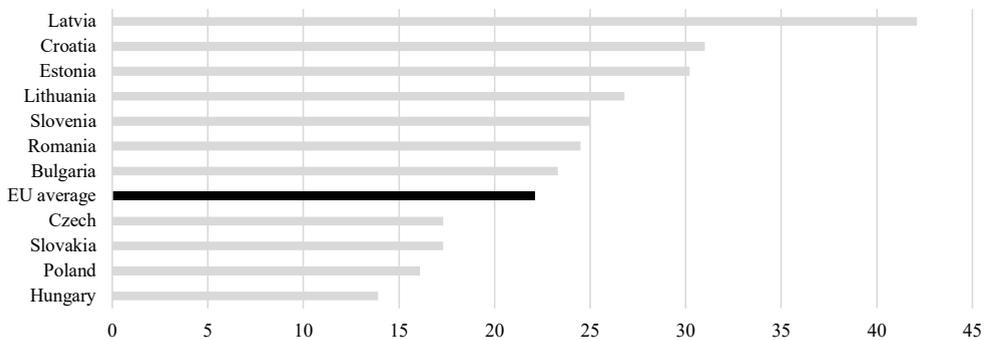


Figure 3.6. Renewable energy measured as proportion of the gross final energy consumption in CEE countries. Created by the author based on Eurostat data (2020).

All in all, it is to be assumed that the CEE region will undergo significant sustainability policy introduction on the national level in the forthcoming years motivating more and more companies to implement ESG plans and disclose their respective ESG data. It means that companies have to well develop their sustainability strategies and policies as well as implement new reporting processes and systems to be able to comply with the requirements (Baumüller & Sopp, 2022).

On the other hand, often, when policies are introduced swiftly, the companies suffer from a lack of resources and time to adequately implement the sustainability facets and processes in their strategies (Marquis et al., 2016). It can also cause a lack of a dedicated process of stakeholder involvement in the sustainability materiality decisions. The obligation to report can therefore push companies into the reporting despite potentially not being fully ready. Academic evidence, moreover, suggests that a firm's reputation improves immediately after the publication of the sustainability report (Philippe & Durand, 2011). These factors in combination can lead to selective disclosure practices – one of the most common forms of greenwashing (Yang et al., 2020). Given that the regulatory policies can be seen as a critical direct driver of greenwashing, a proper balance between the requirements and the motivational force should be aimed to be achieved from the side of the policymakers (Delmas & Burbano, 2011).

3.2. Sustainability trend in the CEE – mission statement analysis

In 2012, Bistrova & Lace verified their initial shareholder value model by using stock market data for CEE countries. As a part of their research, the authors used mission statement analysis to test whether the long-term value creation for its shareholders has also been prioritized by the companies in CEE. By analysing the mission statements of 85 listed companies from the CEE countries, the authors found that only around 30% of the sample mentioned commitment to

shareholders. Higher proportions of mentions were attributed to customers, quality, leadership, and market position.

With the global tendencies shifting in the direction of sustainability, it might be expected that the changes shall be reflected in the updates to the mission statements during this decade which provides a unique opportunity for a trend analysis based on the initial data set. Mission statements play an important role in setting the company's course toward a comprehensive sustainability strategy (Analoui & Karami, 2002). The importance of a strategically aligned mission statement can be crucial for successful sustainability performance not only for large global corporations but also for small and medium size entities (Duygulu et al., 2016). Moreover, referrals to the fundamental business drivers of the company in their mission statements are proven to influence their financial performance positively (Barth et al., 2001), thus underlying the importance that the mission statement can have on the overall business performance (Bartkus et al., 2006).

To analyze whether these factors have also been captured by the companies in the CEE region, a frequency analysis across 20 concepts was performed via text search software. The focus was put on the concepts centered around the stakeholders per se and around their interests, primarily to determine whether the interests of shareholders are becoming less important at the expense of the interests of other stakeholders in the corporate mission statements.

The results (see Figure 3.7.) indicate that the highest focus is put on sustainability-related metrics, including references to responsibility, innovations, environment, long-term orientation, and community. More than 90% of the companies had at least one reference to these topics in their mission statements. The second highest priority was consumers – more than half of the companies referred to their customers in their mission statements. References to the stakeholders were found more frequently than shareholders. Shareholder commitment and financial performance were mentioned comparatively rarely. While the categories in the analysis have been added mostly for illustrative purposes, it can be argued that all three first categories (sustainability, consumer, and stakeholders) generally relate to a wider non-financial dimension of companies on their path toward sustainable development and are constituents of the general dimensions usually comprised by the ESG factors.



Figure 3.7. Results of the mission statement analysis of CEE companies. Created by the author.

To analyze the mission statement changes over the last decade, the sample data of Bistрова & Lace (2012) used for the mission statement analysis was retrieved, and the updates to the mission statements of the companies used in 2012 were added either from the web pages or annual statements of the companies as of February 2021. By doing so, a database of the mission statements that the sample of companies had in 2012 and 2021 was created allowing the author to explore how significantly the companies have altered their purpose and reason for existence in the indicated time frame. In order to allow for direct comparison, the same companies were chosen for this analysis (“like-for-like” sample). From the previously analysed sample of 122 companies and 85 available mission statements, 70 updates as of 2021 were available due to some companies undergoing restructuring or liquidation. In the like-for-like comparison of the same companies, the following topics (as summarized in Figure 3.8.) underwent the most significant changes.

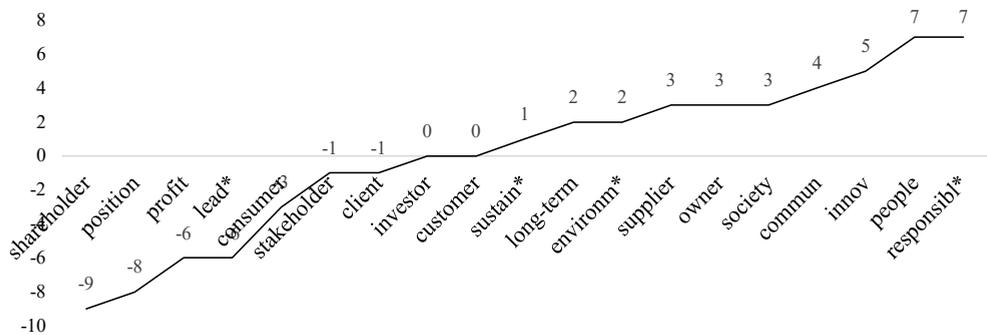


Figure 3.8. Results of the like-for-like mission statement analysis summarizing the changes in topic occurrence in the company mission statements over the period from 2012 to 2021 (count).

Created by the author.

While in 2012, the content analysis of the offered mission statements showed that a third of the companies mentioned their commitment to the shareholders, this number over the decade has decreased to only 17%. Surprisingly, the reference to shareholders in the mission statements has experienced the most dramatic decrease, followed by similar terms describing the financial orientation as the position (e.g., market position) and profit. On the other hand, the concentration has increased towards contributions to society (characterized by terms such as “people”, “society”, “community”) and sustainable operations (“sustainability”, “responsibility”, “long-term”, “environment” and “innovation”).

When putting these trends in the industry sector setting, the results in Figure 3.9. indicate that none of the sectors has shown an increase in dedication to financial matters in their mission statements. Almost all sectors followed the trend of higher sustainability focus in their mission statements. The only sector, which showed relatively controversial results to the remaining sample

was the energy sector, which showcased decreased concentration on sustainability and consumers combined with a significantly stronger focus on stakeholders and shareholders.

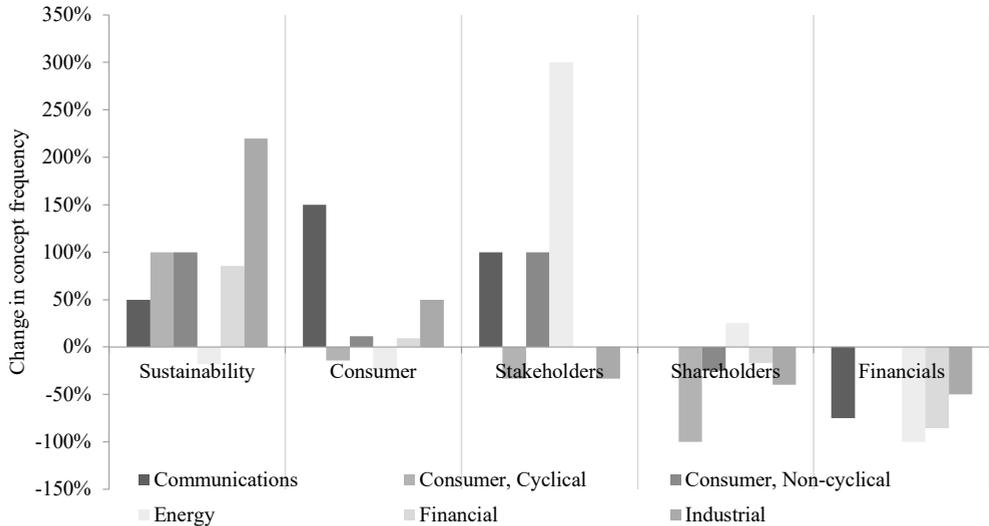


Figure 3.9. Results of the like-for-like mission statement analysis summarizing the changes in topic category occurrence in the companies' mission statements over the time period from 2012 to 2021 sorted by industries. Created by the author.

The application of the theoretical framework on the mission statement analysis allows concluding that over the last decade, the shift of the companies in the CEE region has happened in favour of a more pronounced stakeholder orientation and long-term shareholder value achievement via sustainable actions. While, as indicated by Bistрова & Lace based on the 2012 results, the companies which signaled their shareholder value commitment simultaneously had a focus on profitability and financial performance, it seems that over the decade, the focus has shifted, and companies, via their mission statements, put more emphasis on a wider contribution to society, environment, and long-term value creation via sustainable performance. The significant decrease in the mention of profitability and market focus by the companies over the decade corresponds to the trend that the long-term shareholder value is set as an ultimate goal created via high ESG results and therefore better financial performance, and not via short-term isolated focus on financial results.

3.3. ESG rating coverage in CEE and its impact on the investor behavior

While from the mission statement analysis summarized in the previous chapter, it becomes clear that the corporate sustainability agenda is also becoming more topical in the CEE region, the implications of the relatively low stock market capitalization in the regions stretch also to the sustainability aspects and show implications also on the corporations.

As discussed, the most widely spread approach in performing the ESG evaluation leans towards the independent rating agencies – by applying individual methodologies and evaluation models, the ESG performance assessment is usually expressed as a single score or rating allowing for direct evaluation and comparison (Berg et al., 2019). The rating availability, however, is currently an unresolved challenge. According to OECD, the market coverage of the ESG ratings is relatively low – while in the US approximately 25% of all the public companies have an external ESG score, only 10% of the European companies have a score available (OECD, 2020b). As the ESG rating availability, among other factors, strongly relies on the obtainable data, the percentage is far lower in the regions of Europe that lag in sustainability implementation. As such, only very few companies operating in the CEE region have external ESG scoring data available.

Recent research used a data set comprised of all European companies, which had an ESG rating from the Thomson Reuters EIKON database as of January 2019. From the total sample of 1165 companies, 32 originated from Poland, 4 from the Czech Republic, and 4 companies from Hungary, while no other CEE countries were represented in the sample at all, highlighting the largely missing data inputs for the CEE region companies (Iamandi et al., 2019). These results are supported also by Polish researchers finding that there is a large ESG reporting gap on the Polish market, with an overall low level of reporting on non-financial data. Furthermore, the authors found that the shares issued by companies with higher ESG ratings were distinguished by an over-average return rate and lower return rate volatility (Czerwińska & Kaźmierkiewicz, 2015).

With the rise of the ESG rating availability, certain trends have emerged. The most notable is that the ESG rated investment universe is dominated by large-capitalization companies. According to OECD, the market capitalization of the ESG rated companies in the EU reached 89% in 2019 in contrast to the 10% coverage in terms of the number of companies (Boffo & Patalano, 2020). While there are multiple explanations related to the data availability, more resource devotion, and investor coverage, the lack of the ESG scoring poses important limitations for the smaller capitalization companies, which drift further away from the investment considerations of the investors looking for sustainable investments.

To explore the rating availability in the CEE, a sample of the 2000 largest CEE country stock-exchange listed companies was selected. The quantifiable ESG scoring data (RobecoSAM, Sustainalytics, and MSCI) were retrieved for the sample companies listed in Bratislava, Bucharest, Budapest, Ljubljana, Prague, Riga, Tallinn, Sofia, Vilnius, Warsaw, and Zagreb stock exchanges. In addition to the ESG scores, the retrieved data were supplemented with entity industry markers

as per GICS classification, primary listing exchange, market capitalization data, three months average trading volume as well as 6- and 12-month returns. Only those CEE countries being a member of the EU were chosen due to the similar ESG disclosure requirements.

Based on the listed stock exchanges, 72% of all the rating scores available in the sample were granted to companies listed in the UK, Germany, France, Sweden, Italy, and Switzerland. Meanwhile, the remaining European countries, especially the CEE region companies have extremely low external ESG rating coverage – companies of the 11 CEE countries contributed in total only 4% of the total score count, which indicates a rather strong disadvantage to the sustainable investments that could be flowing into these geographies.

While academic evidence shows that companies in this part of Europe are strongly working towards developing their ESG disclosure practices and more ESG disclosure documentation is publicly available for the stock listed companies, the evidence suggests that the efforts are still not sufficiently appreciated (Horváth et al., 2017; Deloitte, 2020). From a maximum of three different sustainability-related scores (Sustainalytics, RobecoSAM, and MSCI), 97% of the sample companies had none. In line with the findings of Boffo & Patalano (2020), when measured by the market capitalization, however, the companies having at least one ESG rating covered 88% of the total market capitalization of the entire sample, implying the significant impact of the size on the external ESG score availability (Boffo & Patalano, 2020).

Table 3.2.

ESG score availability for the CEE stock-listed companies. Created by the author based on Bloomberg data (March 2021).

Count of ESG scores	Companies in sample	Percentage of sample
0	1947	97%
1	35	2%
2	12	0.5%
3	7	0.5%
Total	2001	100%

As summarized in Table 3.2., the most common score available for the CEE companies was the RobecoSAM sustainability ranking (available to 54 companies), the MSCI ESG score was available to 19 companies, while the Sustainalytics score was awarded to only 7 CEE listed companies. Consequently, the sub-sample of the 54 companies having RobecoSAM rating was chosen for further analysis. As noted, before, the ESG score by RobecoSAM aims to account for previously in the academic literature described biases due to differences in geography, company size, and disclosure level. The adjustments to these differences are done by comparing only those peers with similar sectoral and geographical backgrounds (RobecoSAM, 2021).

The ESG-scored sub-sample consists of 54 companies – 42 of them listed in Warsaw, 6 in Budapest, and one in Prague and Bucharest, each. The average sustainability ranking of the companies was 27.4, which is 21 points lower than the average European score indicating the still developing practice and compliance to the ESG metrics in this region.

As it is often argued that companies having no external ESG score are less likely to attract investor attention, an additional test on the trading volumes was performed. A synthetic sample of 54 CEE companies having no external ESG ratings was selected. It was attempted to create the sample possibly close to the original one - the same geographic split, industry breakdown, and market capitalization. Albeit the similar split sub-sample depicted in Table 3.3 offered significantly lower average market capitalization (169bn EUR vs 9bn EUR).

Table 3.3

CEE similar geographical split sub-sample overview, March 2021. Created by the author.

Name	# of comp.	Avg MCAP	Geographical split
ESG companies	54	168,567,820,525	42 Warsaw, 1 Bucharest, 6 Budapest, 5 Prague
Similar split w/o ESG	54	8,917,259,610	42 Warsaw, 1 Bucharest, 6 Budapest, 5 Prague

Independent sample t-tests were carried out to evaluate the potential differences in the returns and trading volume. As the first step, F-tests were carried out to determine the differences in variances of the samples. Next, Table 3.4 below shows the results of all the t-tests performed.

Table 3.4

Independent mean t-test analysis using the sub-sample of a similar company split by geographies and industries, March 2021 data. Created by the author.

Independent t-test analysis with geographical / industry sample				Two-sample t-test	
Variables	Sub-sample	Mean	Observations	t-stat	p-value
3m trading volume	ESG	689939	54	-3.85	0.0002***
	W/o ESG	84759	54		
12m return	ESG	50.87	54	2.98	0.004***
	W/o ESG	121.12	54		
6m return	ESG	34.49	54	1.63	0.107
	W/o ESG	51.25	54		

ESG: sub-sample consisting of companies that have RobecoSAM rating, w/o ESG: sub-sample consisting of companies that do not have RobecoSAM rating, *** mean difference is significant at the 0.01 level (2-tailed).

The results indeed show a significant difference (significant at 99%) in the average trading volume implying a significantly higher share turnover and consequently higher liquidity for the companies having an external ESG score. Nevertheless, as the average market capitalization rates of both sub-samples were so diverse, it is impossible to conclude whether the results are not attributable to the size premium in terms of the rating availability for the higher capitalized companies. Two additional sub-samples were therefore created to account for the possible differences in the market capitalization by removing the largest companies from the ESG sample. Two company groups (see Table 3.5) with a similar average market capitalization rate and each consisting of 46 companies were created.

Table 3.5.

CEE similar market capitalization sub-sample overview, March 2021. Created by the author.

Name	# of comp.	Avg MCAP (EUR)	Geographic split
ESG_MCAP	46	13,569,415,179	42 Warsaw, 1 Bucharest, 1 Budapest, 2 Prague
w/o ESG_MCAP	46	14,185,253,888	12 Warsaw, 8 Bucharest, 25 Budapest, 1 Prague

The differences are visible also in the geographical split, as several largely capitalized companies in the non-ESG sub-sample are listed on the Budapest stock exchange, however, a large share of them seem to lack the ESG score (in contrast, to their Warsaw-listed peers). The results of the t-tests in Table 3.6. indicate similar results to the first specification, meaning that also by removing the market capitalization effect, the trading volume is lower for the companies without the ESG scores, confirming the negative liquidity effect coming from the lack of the ESG score. No significant differences in the returns of the equities were found.

Table 3.6.

Independent mean t-test analysis using the sub-sample of a similar market capitalization size, March 2021 data. Created by the author.

Independent t-test analysis with geographical / industry sample				Two-sample t-test	
Variables	Sub-sample	Mean	Observations	t-stat	p-value
3m trading volume	ESG_MCAP	747705	46	2.00	0.002***
	w/o ESG_MCAP	123848	46		
Total 12m return	ESG_MCAP	55.64	46	1.99	0.81
	w/o ESG_MCAP	51.56	46		
Total 6m return	ESG_MCAP	36.83	46	1.99	0.19
	w/o ESG_MCAP	25.55	46		

The results underline the disadvantage of the companies which do not have external ESG scores, resulting in a lower trading volume. This finding is especially important for the companies listed in the CEE stock exchanges, as the financial markets there are underdeveloped relative to their Western European peers and lack liquidity, therefore the investors often tend to look skeptical towards the investments there.

This evidence once more confirms the importance of proper ESG implementation and disclosure that is necessary for companies to obtain independent ESG score assessments. For companies not properly disclosing non-financial information, the score attribution is less likely to result in potentially negative consequences in the capital attraction domain.

3.4. ESG disclosure level in the Baltics

Given the low level of ESG score availability across the CEE corporations, alternative methods must be applied to estimate the current status quo of ESG implementation. For the purpose of the analysis, a specific sub-sample of the CEE corporations has been chosen. The following sub-chapter, therefore, aims to provide an in-depth analysis of the ESG disclosure level by examining stock-listed corporations of the Baltic states – Estonia, Latvia and Lithuania.

As discussed in the previous chapter, the ESG rating coverage on the Baltic level is extremely low, therefore, to measure the ESG disclosure level qualitative content analysis has been performed of the information included in the sustainability reports (and their formal equivalents) for the year 2020. Given the rapid pace of development of corporate sustainability and its regulatory requirements, this section aims to additionally provide evidence from a time perspective, also examining the data as of 2022.

This analysis is based on a sample of thirty-eight companies listed on the NASDAQ Baltic stock exchange as of August 2022, including 32 prime-listed companies and 6 secondary or alternative market-listed companies that published dedicated ESG or CSR reports in their annual disclosures. Compared to the initial sample procured in 2020, 3 companies were delisted, and 5 new companies were stock listed. However, three companies from the prime list were excluded due to the absence of their 2021 annual reports. This sample has a comparability of 85% with the 2020 sample, and includes 16 Lithuanian, 17 Estonian, and 5 Latvian companies.

Given the previously reported low coverage of the corporate sustainability evaluations of the companies operating in the Baltic countries, the ESG disclosure score computation approach adopted initially from Roca & Searcy (2012) was applied. Similar approach has been used by Bakar et al. (2019) and Al-Tuwaijri et al. (2003). The approach is broadly in line with Bloomberg's disclosure score calculation method. The method relies on content analysis screening through the disclosures and cross-checking the inclusion of the specific measures and factors by the specific companies. While in the 2020 study, the overall checklist consisted of 106 factors – based on the NASDAQ ESG Reporting guidelines, GRI Reports, NASDAQ Corporate Governance Code, and UN SDGs, in 2022 the maximum obtainable score had increased to 119 due to new indicators and

measures expected to be reported by the companies (i.e., EU taxonomy related information, whistleblowing policy, etc.). Qualitative content analysis was performed on the non-financial reports of companies for the year 2021 as well as the reports and disclosures in the regulatory stock-exchange filings and available on the web page of the stock exchange. Information and sustainability disclosures available elsewhere were excluded from the analysis for the sake of comparison purposes. Given the differences in the reporting form the reports analyzed included Sustainability Reports, ESG Reports, Social Responsibility and Governance Reports, Non-financial Reports as well as specific sections in Management Reports of the annual disclosures.

The split between the E, S, and G metrics was found to be approximately similar – 35 indicators corresponding to the environmental factors, 45 indicators revealing information on the social facet, and 38 indicators reporting on the corporate governance practices. One point was added to the checklist for each case the company had reported on the specific ESG indicators.

Correspondingly, the ESG disclosure score was calculated by dividing the sum of individual disclosure items by 119 (the max score according to the checklist) in 2022 sample and by 106 in 2020 sample. Given that the computation method does not provide information on the quality or performance of the specific disclosures, the result must be interpreted as the relative degree of ESG transparency rather than an overall level of ESG performance or corporate sustainability achievement. The result is expressed in percentage terms to allow for easier comparability.

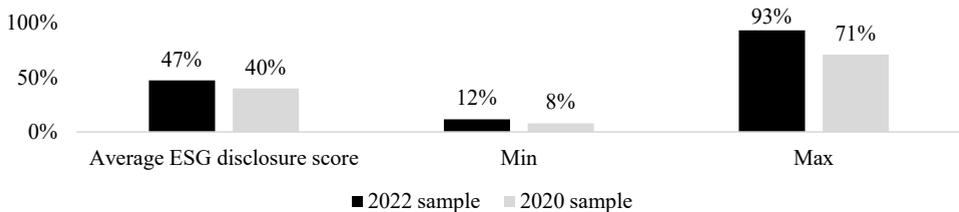


Figure 3.10. ESG disclosure score in the Baltic public listed companies – comparison between 2020 and 2022 data. Created by the author.

By evaluating the total reported information volume against the maximum attainable transparency level, the percentage of the disclosed ESG information was obtained. As visible in Figure 3.10., the average ESG disclosure score had improved by 7 p.p. from 40% in the 2020 sample to 47% in the 2022 sample. While there are still companies that disclose insufficient non-financial information (12% minimal disclosure level), there is also a significant improvement in the best performers – one corporation achieving even 93% transparency level. The results of the study reveal that in line with expectations, Baltic stock-listed companies have improved their overall ESG affinity and are indeed more transparent in their corporate sustainability achievements.

When split between the industries, as depicted in Figure 3.11., the highest ESG disclosure level is achieved by companies in the utility sector, identically as noted in 2020. The average level of disclosure in this sector has increased from 61% in 2020 to 63% in 2022. The lowest disclosure scores demonstrate companies in the real estate segment – presenting only half of the transparency level achieved by their peers in the utilities segment.

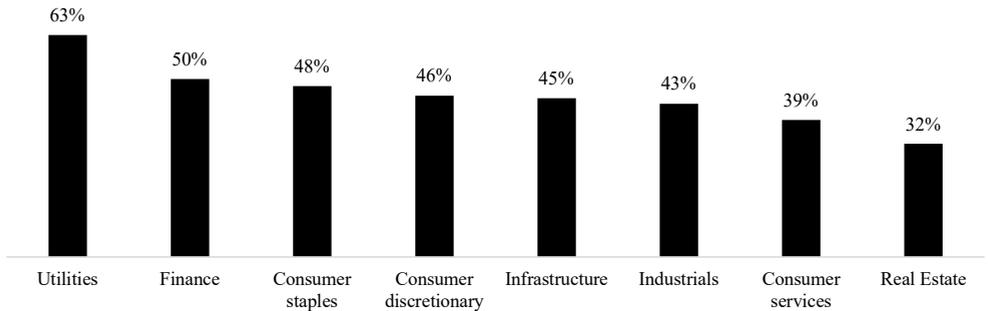


Figure 3.11. Average ESG disclosure level in the Baltic stock listed companies by industries (from max 100%). Created by the author.

The results across the pillars as explained in Figure 3.12. have remained consistent with the patterns observed in 2020 – the highest transparency level is achieved across the governance pillar (60%), followed by social disclosures at 48% level and environmental pillar of 31%. The average disclosure level has increased since 2020 across all the ESG factors.

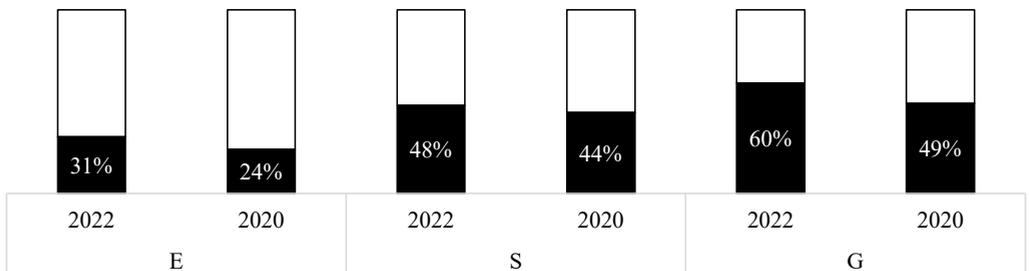


Figure 3.12. Disclosed ESG information level by factors in the Baltic stock listed companies (% of 100%). Created by the author.

While the disclosures in the corporate governance pillar are strongly driven by the requirement for the stock-listed companies to publish a dedicated Corporate Governance Report, the environmental pillar is still relatively underrepresented driven by more complex data measurement. Nevertheless, with the overall trend of higher ESG transparency in the Baltic region, also improvements in environmental data disclosure have been documented. The specific improvement areas relate, for example, to emission level measurement (57% of the sample companies report on their emission levels at least in Scope 1 and 2), as well as more quantified information on water consumption, waste generation levels, etc. All in all, however, particularly the n availability remains the largest pitfall for the Baltic corporations confirmed by the vast number of companies disclosing insufficient environmental data (Figure 3.13.).

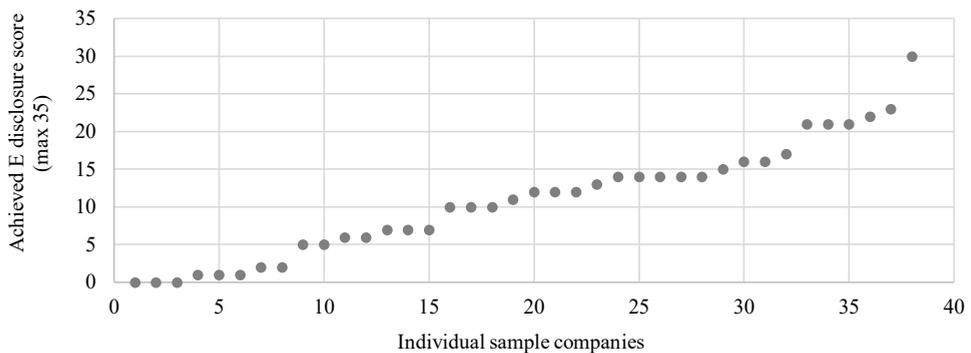


Figure 3.13. Environmental disclosure level across the Baltic listed companies (from max thirty-five points). Created by the author.

Overall, the results show a moderate level of ESG disclosure across the stock-listed companies of the Baltic countries once again signaling the need for additional focus on this topic for the examined companies. Nevertheless, the positive trend of increased corporate sustainability focus is confirmed by both – mission statement and ESG disclosure analysis.

Stock exchanges are generally in a unique position to contribute to a wider implementation of ESG practices in company reporting standards and therefore higher overall transparency of the capital markets (Bizoumi et al., 2019). Sectoral specificity and emphasis on the material disclosures in the stock exchange-issued guidelines shall help to promote the focus on the right sustainability drivers and, by doing so, to increase the ESG disclosure value for the investors.

To conclude this chapter, it is vital to recognize the significant role ESG factors play in shaping the corporate landscape in CEE. ESG considerations are of particular importance in emerging economies like those in the CEE, due to their unique challenges, including relatively low stock market capitalization, less developed financial market culture, political uncertainties, and heightened risk exposure. However, these challenges are not a blockade but rather an opportunity

for the region, which boasts some of the fastest growth rates among EU countries and contributes significantly to Europe's manufacturing and service economy. Through analyzing company mission statements, scrutinizing ESG rating availability and its impact on capital attraction, as well as assessing the level of ESG disclosure within a sample of Baltic states' stock-listed companies, the author has provided novel scientific insights on the current state of ESG implementation in the region filling the so far unfulfilled gap in the academic literature. It is envisaged that a greater commitment to ESG practices can act as a catalyst for improved corporate development and investment climate in these emerging markets, ultimately driving an enhanced competitive positioning on the European level, therefore it is important to understand through which drivers can higher ESG adoption be achieved. Chapter 4 will next follow up with an extensive overview of the potential drivers as well as empirical insights into the challenges. Chapter 5 will next analyze the driver relevance from organization life cycle perspective.

4. Factors impacting ESG adoption

The degree of ESG disclosure and performance are studied to be affected by multiple factors. A wide range of scholars have contributed to the growing body of evidence from theory perspectives up to market-tested and validated results aiming to explain the underlying mechanisms and effects describing the factors impacting ESG performance and disclosures. The factors impacting the adoption can broadly be summarized in two cohorts, of which the external factors (summarized in sub-chapter 4.1) include industry-related specifics, societal expectations, and regulatory environment, while the internal factors (comprised in sub-chapter 4.2) cover the company's intrinsic attributes that drive the ESG adoption from within the organization, such as business model related factors, corporate governance attributes and firm-level specifics. The exploration of drivers is initially conducted in broad terms, without an explicit focus on different stages of the organizational life cycle.

In addition, certain factors and obstacles have been found to negatively impact a wider ESG adoption in the corporate world, therefore empirical evidence on the barriers is also discussed in this chapter. To conclude the fourth chapter, sub-chapter 4.3 offers a compilation of empirical studies that substantiate primary drivers within the unique regional context of the Baltic countries.

4.1. External factors affecting ESG adoption

4.1.1. Society expectations

One of the theories widely associated with corporate sustainability adoption is the Legitimacy theory. Legitimacy theory is developed from the concept of organisational legitimacy, which has been explained by (Dowling & Pfeffer, 1975) as “a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part”. Based on the Legitimacy theory companies are seen as continually trying to ensure that they act within the bounds and norms of their respective societies. Therefore, companies are expected to voluntarily implement and disclose the activities that contribute to the expectations of the communities and society they operate in (Deegan, 2002). As the theory is based on perceptions of the expectations of an abstract stakeholder group, the disclosure has to follow as the form of notifying the communities about the activities achieved within the company (Cormier & Gordon, 2001). In addition, as the expectations of society can swiftly change over time with new market developments, economic conditions, and innovations, the companies are expected to be flexible and responsive to the changing expectations they are faced with. Therefore, the importance of regular public disclosures becomes even more pronounced (Deegan, 2002). Legitimacy theory, as captured by variables related to public or social visibility, can be used to explain the adoption and disclosure of ESG-related information, via higher visibility leading a company to adopt higher levels of ethical practices and ESG disclosure (Reverte, 2009).

The social contract – an abstract concept showcasing the relationship between society and organization – additionally foresees that acting according to the interests and expectations of society is crucial for ensuring the long-term survival of the companies. In the context of ESG, it would mean that companies should be prone to highlight the stakeholder interests in sustainability performance rather than the pure financial outcomes (Schaltegger et al., 2019). Consequently, stakeholders' and market participants' expectations can be seen as one of the primary ESG disclosure drivers.

Practically, the global tendency in favour of greater sustainability cannot be denied. It follows via several channels, consumer behavior being one of them. While consumer behavior as a direct ESG driver is currently relatively underexplored in the academic literature (Arvidsson & Dumay, 2022), several studies have proxied this factor as a “global trend”. This is also in line with the CSRD as an important goal of increased sustainability transparency is to ensure consumer trust. The global trend of higher society's demand for sustainability cannot be underestimated – a report from The Economist Intelligence Unit has found that the demand for sustainable products globally has increased by 71%. While the increase has been especially prone in the wealthier economies, the trend is visible also in the more developing countries. The results also show that consumers see corporations as responsible ones for driving the national sustainability agenda (The Economist, 2021). In particular, the younger generations are driving fundamental and enduring change in consumer behavior, redefining expectations for the product quality and perceived value of the purchase. Trust remains fundamental to building and sustaining a corporate reputation in the eyes of the customers. A report by First Insight has found that Gen Z consumers' preference to shop for sustainable brands has increased by nearly 25% in line with their willingness to pay more for sustainable products (uplift by 42%). The results show that nearly 90% of Gen Z consumers said that they would be willing to spend an extra 10% or more on sustainable products (First Insight, 2020). A global Deloitte survey dated 2019 has found that 50% of the participants have switched products or services because a company has violated their values (Deloitte, 2021). Customers also show a greater willingness to choose products from companies that are CSR-oriented (Du et al., 2013).

It can be argued that in the modern environment that is largely defined by wide information flow via instant social media channels, corporate reputation has become more important than ever. Global executives on average attribute 63% of their company's market value to their overall reputation (PwC, 2021). Such a view has been confirmed by a recent Bloomberg Law survey finding that a significant majority of 83% of the surveyed lawyers who advise clients on ESG-related matters selected company reputation as a primary driver of client decisions to prepare ESG disclosures (Bloomberg Law, 2021). ESG incidents can reduce the trust and loyalty that stakeholders place in a company causing irreparable damage to the company's reputation (Garcia et al., 2017). Also reputational factors can be a strong determinant of a company's sustainability related disclosures (Philippe & Durand, 2011).

The reputational effects can be amplified via media - a theoretical framework that considers the media as an influential third party that forms and reflects public opinion about ESG issues essentially attributing certain pressure has been developed (Burke, 2022). The aggregated factor of society's impact via consumer groups that can be amplified via reputational factors and media have also been noted as an ESG driver (Aguinis & Glavas, 2012).

Finally, it has been documented that associations contribute to the corporate sustainability topic via information and best-practice sharing playing an important role in the educational efforts. Academic evidence suggests that members of business associations are more likely to conform to the patterns that are present in their represented associations, ultimately confirming that associations can play an important role in shaping and influencing their members' social performance (Besser & Miller, 2011).

4.1.2. Regulatory and compliance effect

The second theory frequently cited as a cornerstone in understanding the differences in ESG disclosures is the Institutional theory. It explains that corporations are affected by a broad set of societal structures such as regulations, governmental and non-governmental organizations, and bodies monitoring the behavior and activities of the companies (DiMaggio & Powell, 1983). Campbell (2007) has offered a viewpoint that particularly the institutional factors and norms can be used to explain the behavior of social responsibility of companies.

All in all, multiple academic studies have employed these theories to explain the influences of country-level characteristics on corporate behavior in terms of ESG disclosure. Using a sample of companies from forty-two countries over a seven-year period Ioannou and Serafeim (2012) focus on understanding whether companies operating in differing institutional set-ups show differences in corporate social performance. The results confirmed significant cross-country non-financial disclosure deviations attributed to distinctive institutional, cultural, and political factors (Ioannou & Serafeim, 2012). A similar study has tested the ESG disclosure score level using a worldwide sample for a period of 2005 to 2012 trying to understand whether country-level differences measured as the existing legal framework, level of corruption, labor market indicators as well as social facets such as social cohesion and equal opportunities can explain the ESG disclosure level and has confirmed the previously found results (Baldini et al., 2018).

Consequently, legislation is undoubtedly one of the key drivers fostering wider ESG adoption across corporations. The effect of sustainability regulations and policies in the EU context is especially meaningful as it has a double driving force – on the one side motivating corporations to set measures and report on their sustainability performance, and, on the other side, moving the financial investors and lenders to request ESG related information from their portfolio companies. It has been approved also by recent financial market participants surveys - legislation is indeed found to be one of the key drivers of sustainability factor implementation in investment decisions – i.e., 91% of the surveyed investors admitted regulatory demands being the strongest reason for

ESG implementation (Barnett Waddingham, 2022). Similarly, it holds true when judged from the corporation perspective (Daugaard & Ding, 2022).

As discussed, the number of global regulations has been on a steep increase, especially driven by the European Union economies – as of 2019 there were at least 176 accumulated sustainability-related regulations in comparison to 59 regulations in Asia (UN PRI, 2022). When examining the specific CEE exposure to those, it becomes clear that sustainability legislation intensity is currently still higher in Western Europe.

In addition, while the legislative requirements currently cover mostly larger entities (see chapter 1.2), various facets of the laws indirectly spillover also to smaller entities. Such an example is the new regulation fostering sustainability in corporate supply chains proposed by the European Commission. It foresees that entities will have to ensure compliance with certain ESG requirements across the entire supply chain, thus companies that will want to continue doing business with corporations compliant with the new regulation will have to ensure the respective disclosures themselves (Deutsche Bank, 2022). This approach is largely in line also with the so-called Green Public Procurement (GPP) Directive that encourages the EU member states to use their economic power to procure goods and services in an ESG compliant way. Academic research in this area suggests that such indirect regulations affecting certain procurement procedures and willingness to engage in a contractual business relationships can be seen as an important ESG driver, particularly to smaller companies that are not exposed to direct ESG disclosure requirements themselves (Lăzăroiu et al., 2020). Therefore, it can be concluded that ESG will remain an increasingly important factor in business partnerships and procurement decisions.

All in all, based on the review of scientific theories, academic research, legislative documents and relevant business sources, external factors such as market and society expectations, as well as regulations, are found to be important drivers of ESG adoption and disclosure across corporations and help to explain the differences in the variety of corporate sustainability performance across organizations.

4.1.3. Industry factors

The earlier literature has found that industry-specific factors can provide additional explanatory power when discussing ESG performance (Waddock & Graves, 1997). As industries can be subject to varying regulatory constraints, authors have proposed that both – informal industry norms, as well as formal requirements, can play a role in the differences in ESG adoption across companies operating in different fields of activities (Aragón-Correa et al., 2016). Arguably, it can be concluded that certain industries that are more prone to being exposed to certain ESG-related risk factors and causing more negative externalities (i.e., companies having extensive production processes resulting in higher resource depletion, global corporations having increased risk of social norm compliance across the supply chain, etc.) should be more engaged in ESG disclosures to mitigate the negative effect of the industry specifics. Significant differences in transparency on both the Social and Governance dimensions among certain industry sectors of the S&P 500

companies have been documented (Tamimi & Sebastianelli, 2017). In addition, corporations operating in sensitive industries that are subject to systematic social and environmental issues are more likely to achieve a superior ESG performance, even when controlling for the firm's size and country (Garcia et al., 2017). While unified national-level regulations and materiality assessment can reduce the industry-level differences in ESG performance, for the corporations that are not falling under certain regulatory thresholds the industry-level differences can still act as substantial ESG adoption impacting factors (Avetisyan & Hockerts, 2017).

Finally, the competitive intensity of the industry sectors constitutes another driver of ESG performance as highlighted by Campbell (2007). CSR has also been found to be used as a competitive strategy that allows companies to differentiate themselves from foreign competitors leading to a higher degree of CSR engagement (Flammer, 2015b). In addition, an increase in competition is associated with superior CSR performance with firms in more competitive conditions showing above-average environmental performance (Fernández-Kranz & Santalo, 2010). Finally, higher intensity of rivalry and CSR of competitors can have the power to increase firm's CSR performance (Hawn & Kang, 2013).

On the other hand, it has to be noted that with a wider expansion of ESG-related activities, the industry and competitive landscape will likely lose their relevance in explaining ESG adoption. Sustainability practices have been found to converge within an industry over time (Ioannou & Serafeim, 2019). The most considerable impact on the convergence is associated with the adoption of sustainability by the industry's market leaders. By adopting common practices that are likely in line with the industry peers companies can foster their legitimacy (DiMaggio & Powell, 1983).

4.2. Internal factors affecting ESG adoption

4.2.1. Business model related factors

CSR-related activities have been found to correspond also to a set of strategic activities that can create additional market opportunities and contribute to the competitive advantage achieved by companies (Porter & Linde, 1995). The authors argue that "properly designed environmental standards can trigger innovation that may partially or more than fully offset the costs of complying with them". Consequently, ESG-compliant business model of a company can act as a source of innovation and competitive advantage of the company (Porter, 2004).

It is found that particularly these companies that can integrate ESG-compliant strategies in their business models are expected to achieve the largest impact on shareholder value (Ioannou & Serafeim, 2019). In addition, companies putting the material ESG issues at the center of their business model and focusing on innovations in products, processes, and business models that prioritize those concerns can derive a substantial competitive benefit suggesting that forming the business model around the sustainability facets can be seen as a distinct strategy for companies to employ to achieve higher value (Eccles & Serafeim, 2013). Therefore, a considerable share of companies is revisiting the business models and adopting them to gain the advantage of the

sustainability-related outcomes – i.e. innovative circular-economy-based operational models (Antikainen & Valkokari, 2016) or offering unique corporate purpose statements that consequently aid not only in their performance vis-à-vis their peers but also ensure benefits in employee engagement and attraction (Gartenberg et al., 2016). They define a unique set of high-purpose firms that are characterized by high engagement among the employees and a purpose-driven management style and find that such companies also perform better financially. Based on the propositions from social identity theory and signaling theory, it has been documented that firms' corporate social performance positively contributes to a company's reputation and therefore also finds it easier to attract new employees (Turban & Greening, 1997). The employee attraction and retention factors have been named as one of the core focus areas of large corporates as of 2022; a study has also confirmed that companies leading in ESG measures have an advantage in these measures compared to the lower-scoring peers (The Conference Board, 2022). The employees as the key driver of ESG engagement is also relevant to early stage and start-up companies – as noted by the World Economic Forum study, 27% of the companies mentioned employees as the key stakeholder demanding ESG implementation (World Economic Forum, 2022).

Overall, purpose-led companies are gaining importance in the current corporate landscape. Given the multiple positive outcomes associated with sustainable and ESG-enforcing business models, it can be concluded that more and more companies will deliberately align their values and business models to achieve higher purpose attainment. In addition, new organizational categories of companies i.e., impact start-up companies are emerging in the market and adopting innovative strategies to create positive impact within a for-profit framework (Gidron et al., 2021), thus business model related factors is likely to be recognized as relevant ESG-driver also in the future.

4.2.2. Size and resource availability

Following the Legitimacy theory as captured by the implied higher public visibility, numerous studies have highlighted that social responsibility disclosure is linked to the company size.

The research on organizational legitimacy implies that larger and more visible organizations experience more pressure to conform to societal expectations (Powell & Bromley, 2015) larger companies are also the most visible to the public and are likely to be under the most scrutiny (Suchman, 1995). It has been documented that there is a positive relationship between social performance and both - the age and size of the company (Moore, 2001). Larger and more profitable companies are more likely to have the financial resources necessary to optimize the sustainability facets of their operations, therefore they are also more likely to achieve higher ESG disclosure levels (Artiach et al., 2010). All in all, the overwhelming share of academic evidence shows that large companies are more likely to disclose ESG results than small ones (Daugaard & Ding, 2022; Dremptic et al., 2020; Lozano, 2015).

The size of the company in the set-up is largely bound to resource availability. Firms that are faced with limited resources that can be invested in CSR activities are also less likely to achieve high levels of ESG performance and transparency. Studies show that CSR investments are costly,

therefore company's resource base and capabilities acquired with time increase the ability of companies to afford CSR investments (Habib & Hasan, 2019; Russo & Perrini, 2010). Moreover, companies that face fewer financial constraints and are performing better financially have more resources to spend on ESG-related activities and therefore also achieve higher ESG performance (Hong et al., 2012).

4.2.3. The role of company's management

CEO effect

The next firm-level determinant, which has been studied to affect ESG adoption, is the company's leadership (Baldini et al., 2018). The first strand of literature notions the importance of the chief executive officer (CEO). It bases on the Upper echelon theory stating that organizational decisions and ultimate outcomes largely depend on the managerial background attributes and therefore their characteristics directly influence the performance and strategic decisions taken by the companies (Hambrick & Mason, 1984). Based on the Upper echelon theory, academics frequently have used stability and change in the CEO role as a proxy for the board and top management team (Quigley & Hambrick, 2015). More focused - as CEOs are usually the ones with the highest ability to impact sustainability agenda and therefore also ESG outcomes of an organization, various characteristics and personal traits such as confidence, ideology, and values have been associated with ESG performance development, particularly from the side of CEO (Grace & Gehman, 2022). A recent study shows that CEOs promoted from outside the company, holding an engineering degree and an MBA, bringing along long-year experience as well as being in the company for an extended period of time are running the organizations showing the best ESG performance (Villalba-Ríos et al., 2022).

CEO incentives can positively contribute to ESG performance (Velte, 2020). It is also shown that higher CEO power enhances the ESG disclosure effect on firm value, suggesting that stakeholders associate higher CEO power with a greater commitment to ESG disclosure. Additionally, research has demonstrated that CEO compensation tied to ESG metrics can incentivize CEOs to prioritize sustainable practices and positively influence the overall ESG performance of their organizations (Li et al., 2018). Finally, the "CEO effect" is found to be a strong ESG determinant across a variety of other factors suggesting that particularly the focus on the key leader of the management board might be worthwhile when considering the ESG drivers of an organization (Grace & Gehman, 2022).

Board diversity

The second lens through which the company's management is examined in relation to ESG performance is via the analysis of the entire board structure. While historically the primary focus was put on the board's diversity impact on the firm's financial performance (Reguera-Alvarado et al., 2017), with the rise of CSR dedication, the academic literature has started to investigate also the diversity's impact on the non-financial performance.

The importance of board diversity historically has been attributed to the Resource dependence theory (Pfeffer & Salancik, 1978). The theory suggests that companies operating in the same external environments are interdependent, thus fighting for the same resources. In order to increase the chances of survival in the dynamic market conditions, the company should establish links with other players operating in the same environment and thus increase the chances of obtaining the necessary resources. The board of directors or the management are the primary actors that can establish these links, therefore, companies having management with a diverse set of skills, connections, and network, have a better chance of obtaining the resources that can turn out to be important for the survival of the company. The key gains ensured by the board member linkages are (1) advice and guidance, (2) legitimacy, (3) access to information and (4) to resources and support from the other actors in the environment. All of them are amplified given a higher diversity among the board members. Companies with a better board diversity that gain from increased guidance (1) and legitimacy (2) are argued to engage in more extensive disclosure of non-financial information. Several authors such as Hillman et al. (2000), Rao & Tilt (2016), Williams & O'Reilly (1998) have connected the board composition to the Resource dependence theory suggesting that a firm's board members can have a significant impact on the benefits the company is gaining from its leadership.

Diversity refers to any attributes that individuals use in order to differentiate themselves from other people (Williams & O'Reilly, 1998). According to diversity researchers, the general term can be divided into two parts – the observable diversity as race, age, and gender as well as the non-observable diversity as educational background, expertise, professional characteristics etc. (Milliken & Martins, 1996). The typical characteristics studied in the academic literature include both diversity dimensions - gender (Hillman et al., 2007), age, nationality as well as functional dimensions including occupational background, tenure, and education (Knippenberg et al., 2004). Recently, by improving corporate governance standards, also the independence of the directors has been used as a differentiator in academic papers (Kang et al., 2007).

As the company's board of directors is one of the main stakeholders accountable for the company's ESG choices, it also holds significant power in influencing the extent and quality of the company's non-financial disclosures and performance. Next to individual characteristics of the board members, in particular, the diversity of the board has been proven to influence the scope of the ESG disclosure.

The research largely supports the hypothesis that board composition has a strong impact on the CSR performance and CSR reporting level of the companies (Rao & Tilt, 2016). While generally suggesting that more qualitative exploration via interviews would benefit a deeper understanding of the subject, they also conclude that particularly gender diversity is not studied enough so far to draw meaningful conclusions about the gender impact on the CSR reporting outcomes.

Several Europe-based studies have been performed recently, mostly however, covering Western European countries and so far, providing no evidence on the CEE countries. Female presence on the management board of companies is found to increase ESG performance, as

measured by Asset4 Thomson Reuters ESG scores in Germany and Austria (Velte, 2016). Similar results about the positive gender diversity – ESG relationship are found for French companies (Yaseen et al., 2019), stock-exchange-listed Italian companies (Cucari et al., 2018), the audit committees of public Spanish companies (Bravo & Reguera-Alvarado, 2019) as well as supervisory boards of German enterprises (Dienes & Velte, 2016). Corporate sustainability is also positively related to internal corporate governance mechanisms for French companies (Crifo et al., 2019).

Also, global studies using international data extracted from the Refinitiv database on over 23 thousand companies from 37 countries, find that firms with a better board gender diversity exhibit higher corporate sustainability performance (Kamarudin et al., 2021). Interestingly, it is found that in highly competitive industries, the positive relationship between board gender diversity and corporate sustainability performance is weakened.

Other studies examining non-European countries include a sample of US listed companies finding that gender, tenure, and expertise diversity are the main drivers for improved ESG scores (Harjoto et al., 2015). Also, nationality and educational background diversity of the board of directors is found to impact the corporate sustainability disclosure level (Harjoto et al., 2018), so is the relative proportion (at least 3) of the females on the board (Fernandez-Feijoo et al., 2012). It has to be noted that certain studies find contrary results and fail to document a correlation between board diversity and ESG (Bakar et al., 2019).

4.2.4. Ownership

As different owners might have various objectives and decision-making horizons concerning the priorities and focus areas of companies and therefore also the ESG-relevant agendas, academic research has confirmed the ownership type to be a key differentiating factor (Barnea & Rubin, 2010). The ownership structure of the company can materially impact the ESG score - private businesses focus significantly more on material ESG aspects and therefore are able to reduce negative incidents (Li & Wu, 2018). A significant, positive connection between sustainability ratings and ownership by institutions and foreign investors is found, while ownership by managers is negatively associated with companies' social performance ratings (Soliman et al., 2013). Additionally, the influence of family ownership on ESG rankings is examined by (Rees & Rodionova, 2015). By using a sample of almost 4000 companies from 46 countries the authors find that family ownership as well as closely held equity are associated with worse ESG performance. The results hold true across the liberal markets examined by the authors as well as in coordinated market economies.

When evaluating up to 700 NYSE listed companies, it has been documented that institutional ownership has a negative impact on the level of information asymmetry also in terms of the ESG on the stock exchange listed companies (Siew & Balatbat, 2016). Overall, stock exchanges are in a unique position to spread the sustainability message and put additional motivation to the companies to disclose their ESG results. Several examples of ESG guidelines have been created

for listed companies especially focusing on the degree of sectoral specificity and emphasis on materiality endorsed by international sustainability standards like the SASB's industry standards (Bizoumi et al., 2019).

Regarding state-owned enterprises, a report conducted by PwC reveals that state ownership is correlated with better reporting on sustainability targets – showing a significant difference in the average ESG scores between the state-owned companies (SOEs) and companies without state ownership (PwC, 2015). As summarized by OECD, around 25% of the largest global companies are state-owned and thus it should be expected that SOEs themselves are held accountable and run according to exemplary standards of transparency and disclosure in areas relevant to ESG (OECD, 2020a). According to OECD approximately 25% of the world's largest companies are state owned. The contribution of the corporations in the state oversight in terms of the business generated and the employment is therefore so meaningful that also their approach to sustainability should be at a high level and serve as an example to the private sector peers (OECD, 2020a). Regarding the public and social value creation, SOEs play a central role in taking care of whether the growth in the value is achieved in a way that is environmentally and socially sustainable. Globally SOEs are most dominant in strategic sectors such as energy, minerals, infrastructure and utilities, thus corresponding to an array of usually large and meaningful market players (PwC, 2015). Nevertheless, in many countries more social function enterprises such as cultural institutions, hospitals and public service providers are incorporated as state companies, albeit usually heavily subsidized by the government.

The ESG implementation in SOEs is somewhat implicitly given – in contrast to private corporations usually aiming at profit maximization, SOEs must keep up a sound balance of their financial and non-financial goals ensuring the fulfilment of the delegated public policy priorities. The sustainability targets, especially in terms of the social functions, are therefore even overlapping with the state delegated functions. Environmental initiatives, on the other hand, often require significant financial resources and long-term thinking in terms of the short-term costs versus long-term benefits. In many cases, such thinking is more challenging for the privately held corporations, thus theoretically SOEs could serve as instrument for the governments to drive the environmental agenda (Hsu et al., 2021). With respect to the corporate governance perspective, OECD efforts to develop best-practice corporate governance in the state-owned sector have been increasingly present over the last decade. The OECD guidelines on Corporate Governance for SOEs first developed in 2005 and revised in 2015 provide recommendations to ensure SOE transparency and competitiveness from the perspective of sound corporate management and oversight.

Proper incentivization is frequently the key to ensuring that sustainability standards are supported throughout the organization, including its highest decision-making bodies. Frequently, the effectiveness of a country's sustainable development practices across the SOE landscape relies on proper policy and regulatory motivation as well as incentivization. According to recent OECD research – “two-thirds of the 28 countries surveyed have made material progress in recent years in national practices concerning the integration of sustainability-related values into government

policies with regard to the SOE sector” (OECD, 2020b). Interestingly, the approach for such incentivization differs by country – from a sample of 28 countries over the time period of 2013-2018, the most frequently used form adopted by 11 countries was the integration of sustainability aspects into government policies and expectations, while the direct board obligation requirements were chosen only by six (OECD, 2020b). The literature provides some evidence on the positive correlation between the state ownership and higher ESG scores (Hsu et al., 2021). Also, OECD’s analysis based on Thompson-Factset’s rating of around 6,600 listed companies show that on average SOEs tend to score minimally higher on the ESG ratings than private corporations (OECD, 2020b). Other evidence reveals that large SOEs disclose more sustainability information than small SOEs. In addition, a slight indication has been documented that having a public policy assignment negatively impacts environmental sustainability disclosures (Argento et al., 2019).

Finally, with the rise of the sustainable investing trend, a growing body of financial investors declares the inclusion of non-financial risks and opportunities in the financial investment evaluation process (van Duuren et al., 2016). The degree of ESG factor inclusion in the investment evaluation process varies greatly on a scale from negative screening or exclusion criteria to a moderate level of non-financial risk evaluation and finally to ESG opportunity recognition and value derivation (Schramade, 2016). The ultimate form of ESG driven investments is also known as impact investing – a form of investment when investors are mostly focusing on the positive non-financial impact created via ESG factors of the investment objects.

The specific long-term and active relationship between the financial investors and the companies, ensures that the private equity (PE) and venture capital (VC) companies are particularly well suited to integrate and improve the ESG standards in their portfolio companies (Invest Europe, 2021b). The effect of these activities can be substantial – in the time frame between 2003 and 2019 the PE industry has contributed to the region’s growth approx. EUR 29 billion of capital spread across 4,300 CEE companies allowing the companies to increase the skill level, knowledge and know-how. In addition, PE and VC investments are especially important to the smaller and medium size enterprises throughout CEE (Invest Europe, 2021a).

Banks and asset managers, on the other hand, can stimulate the companies to improve their sustainability standards by ensuring that a certain level of ESG performance and disclosure has been achieved to allow for financing or investing. In this way, indirect pressure is exerted on the companies to improve their sustainability endeavours and consequently also financial resilience (OECD, 2020b). The banks and asset managers therefore not only achieve higher compliance with the regulatory standards imposed by the European Green course initiative but also arguably lower their exposure risk to certain risks coming from non-financial factors.

There are several drivers fostering the wider adoption of sustainability frameworks for the financial market players. Besides the aforementioned regulatory pressure, there is a significant influence exerted by the asset owners, who can request certain level of ESG standards and disclosures to be ensured in their portfolio. A study performed by S&P, which surveyed 194 credit risk professionals employed in banks and other financial institutions, reported that 86% of the

respondents indicated that increased demand of the investors is pushing the ESG factor integration in the credit risk analysis. 83% of the respondents noted that they believe that the role of ESG factors in the credit risk assessment is integral (S&P Global Market Intelligence, 2020). All in all, a higher creditworthiness is a rather strong factor pushing the companies towards sustainability improvements.

Several global and regional studies allow to estimate the current level of ESG compliance by the financial investors. So, for example, EY global institutional investor survey reveals that 98% of the institutional investors surveyed are assessing company performance using ESG factors, thereof 72% perform a methodological approach in this assessment, which indicates a significant increase from 32% mark in the prior year. Furthermore, 43% of the respondents admitted that company's nonfinancial performance has frequently played a pivotal role in the investment decision-making during the 2019 (EY, 2020). It has to be noted, however, that the global studies often lack comparability to the developing markets. A regionally closer experience to the CEE region is captured by the Deloitte Central Europe PE survey (Deloitte, 2020). With respect to the ESG dimensions, 62% of respondents agreed that consideration of an ESG strategy can amplify the investment returns. When applied practically, 57% of respondents revealed that their companies always perform ESG evaluation as part of due diligence, while 28% of the respondents agreed to the statement with respect to certain companies or industries most likely to be at risk. Only 6% of the respondents suggested that they see no reason in performing ESG evaluation before doing an investment. Data availability and quality are considered the main obstacles hindering wider ESG adoption. It is likely that as the financiers will put a higher pressure on the data gathering from their portfolio companies, the companies themselves will struggle with providing sufficient data (Morrison & Foerster LLP, 2020)

4.3. Assessing the drivers and obstacles of ESG adoption in an empirical setting

The previous chapters have provided a theoretical overview of the internal and external factors fostering wider ESG adoption and improving corporate sustainability performance. Next, an overview of several empirical studies relating to the specific Baltic region will be explored to provide novel insights to the wider conclusions of academic literature.

4.3.1. Regulation – case study of Latvian SOEs

The SOEs in Latvia were chosen as a practical case to analyze with regard to the regulation as a driver for sustainability disclosure. Given the amendments of 8 December 2021 to the Law on Management of Public Capital Entities overseeing the management of the SOEs in Latvia, new requirements with respect to sustainability reporting were introduced allowing to form a basis for this case study. Starting in 2022 SOEs exceeding certain size thresholds are supposed to publish a non-financial statement (essentially a sustainability report) within their annual reporting. Given the

rather short notice for the requirements as well as the significant resources, commitment, and strategic process usually necessary to implement ESG way of thinking into the corporate strategy, it is unclear how the SOEs cope with the new requirements, therefore the following sub-chapter provides some insight into this case study.

Overall, the portfolio of the SOEs in Latvia is sufficiently diverse. Among the 73 entities in the total portfolio as of the end of 2020, it includes not only large and profitable energy sector players, transportation and logistics companies, stake holdings in telecommunication enterprises and the national airline, but also less independent public hospitals, cultural institutions like theaters and orchestras and educational service providers. The size differences are also notable – ranging from companies with 94 thousand EUR to 773 million EUR revenue in 2020 (Cross-Sectoral Coordination Centre, n.d.).

On 8 December 2021, amendments to the Law on Management of Public Entity Capital Shares and Capital Companies entered into force in Latvia suggesting that large companies (according to the criteria of the Law on Annual Accounts and Consolidated Annual Accounts) must prepare a nonfinancial statement for the financial year 2021 starting from 2022 (Latvian Parliament, 2022). Of the 73 entities, 19 SOEs fall under the law amendments of 2021, whereof 8 of them did not have previous ESG reporting practice. In addition, 12 other SOEs exceeded the reporting threshold by at least one dimension (revenue, balance sheet sum, and employees), thus should theoretically also consider a more extensive sustainability disclosure forming the total sample of 31 companies. To provide insights for this case study, a survey was created and electronically distributed to 31 SOEs that either fall under the aforementioned law amendments or exceed the size thresholds by at least one dimension. The evaluation was addressed directly to the executive-level decision makers or sustainability officers to ensure that the responses reflect the opinions of the people generally aware of the topic. The questionnaire (see Appendix 4), which was open for responses from April 19, 2022, to April 28, 2022, consisted of 10 open and closed questions focusing on (1) ESG disclosure maturity, (2) responsibilities and involvement of the management board, as well as (3) experience of the ESG implementation and any obstacles encountered. The survey was offered on a no-name basis to ensure that results are maximally truthful and unbiased. In addition, to be able to better interpret the results four in-depth interviews with SOEs were held.

As from 2015, Cross Sectional Coordination Centre operating under direct authority of the Prime Minister, is responsible for the coordination of corporate governance of SOEs in Latvia, operating in a partially centralized SOE governance coordination model, where sectoral ministries in parallel ensure direct oversight (Cross-Sectoral Coordination Centre, n.d.). An additional unstructured interview about the topic was therefore held also with the CSCC representative. In the survey 21 responses were received, corresponding to a response rate of 68%. The average revenue of the surveyed SOEs reached 107 million EUR employing on average 1356 employees. The industries of the respondents included transportation, energy, infrastructure service providers, healthcare, and culture.

The degree of the sustainability implementation and overall corporate sustainability maturity across Latvian SOEs is diverse – it is also visible in terms of voluntary disclosure practices implemented so far. While all the SOEs in one way or another have certain non-financial targets and obligations set by the public policymakers, the transition to dedicated ESG reporting in many cases is still rather challenging. When asked to evaluate the degree of sustainability implementation in their companies, the respondents on average estimated themselves at 6.1 out of 10. Of 21 responses, 8 indicated ESG reporting before the regulatory requirement was set signifying the proactivity in this domain. Four companies were preparing the report for the first time in 2022, while 9 companies had not decided yet on such practice implementation.

From the companies that were exposed to the swift changes from the law amendments in the late 2021 and had not done ESG reporting before, all of them documented lack of proper preparation time as the key challenge. The results in Figure 4.1. show that in addition to the time pressure, companies had difficulties in obtaining the necessary data and suffered from a lack of a dedicated process in place to ensure such reporting.

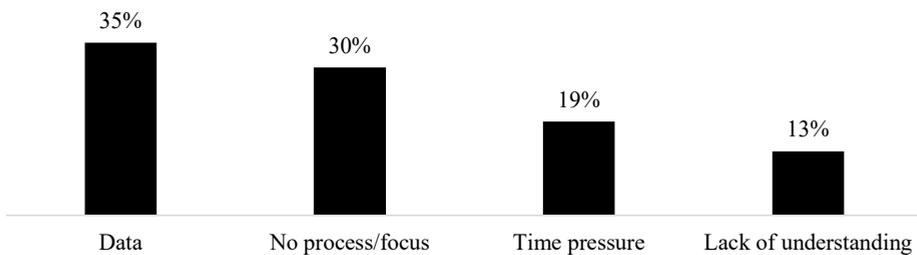


Figure 4.1. Challenges associated with ESG reporting based on a sample of Latvia's SOEs.
Created by the author based on survey results.

In line with a structured process implementation, materiality assessment and stakeholder dialogue are key elements ensuring that the sustainability approach is meaningful and value adding not only to the corporation itself, but also to its external stakeholders. The emphasis on the material ESG factors ensures the right focus and prioritization. With the help of stakeholder dialogue companies can then discover which of these factors are also important for their stakeholders. Lack of such activities, on the other hand, fosters a lack of prioritization and raises the concern of selective disclosure practices – a common form of greenwashing. Materiality assessment and stakeholder dialogue can also form an essential part of the preparation for the sustainability practice introduction in the company, thus even for companies that have not engaged in ESG reporting yet, it would be logical to perform these activities prior to compiling a disclosure. The results of the study suggest that only half of the respondents have taken these steps (52% performed a materiality assessment while 43% went through a stakeholder dialogue). The concern emerges from these companies that are publishing their sustainability reports, however, have not taken these preparatory steps - 17% of the companies with an ESG report have not performed materiality

assessment, while even 42% have not implemented comprehensive stakeholder dialogue practice (Figure 4.2.).

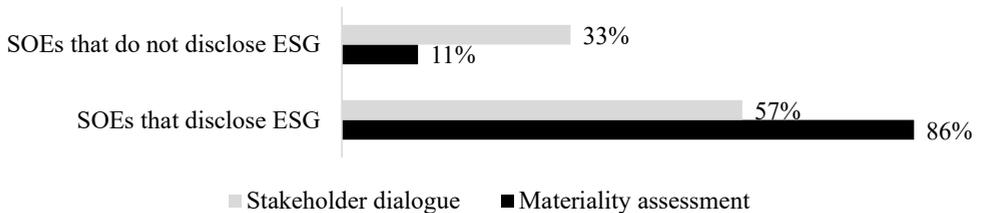


Figure 4.2. The split of SOEs based on the performed materiality assessment and stakeholder dialogue. Created by the author based on the survey results.

All in all, with a lack of materiality assessment and stakeholder dialogue as well as a limited focus of the company leadership, SOEs might face a risk that the sustainability reports generated include a random selection of activities and data, essentially also posing a risk of greenwashing. The lack of unified reporting guidelines creates a situation when companies choose to disclose the data available rather than creating a balanced sustainability approach. Given that data collection was mentioned by 33% of respondents as one of the key challenges for the reporting, it adds to the concern that companies might engage in the disclosure of the easily available data and avoid the rather harder assessable topics. To analyze the process of how the sustainability disclosure has been performed, a content analysis was performed using the answers to the open-ended question asking to describe the process of the last ESG report preparation. The answers indicate that many companies tend to choose one of the internationally approved reporting standards (such as GRI, Nasdaq ESG Reporting guidelines, or UN SDGs). With respect to the process – a dedicated responsible person (i.e., ESG officer) was mentioned by 4 companies, while 4 other companies had a project team set up for this process. Two companies specifically mentioned the finance team to be responsible for this process, while one SOE had engaged an external consultant.

With respect to the future, 52 % of the surveyed SOEs confirmed that proper ESG targets have been set for the year ahead, while an additional 19% reported having targets for selected sustainability dimensions. As disclosed in one of the open comments, it might be challenging to understand the direct line of differentiation between the public policy assignment targets (especially with respect to society inclusion and public service provision) and the social aspects of the ESG targets. Similar concerns were raised with respect to the partly overlapping requirements of the Corporate Governance disclosure and the Sustainability report. Given the regulatory framework, the Corporate Governance Codex, and the additional recommendations from the CSCC, the requirements can be overlapping. A suggestion from five companies included a wish for additional seminars for public companies on sustainability management issues structurally explaining the differences between the corporate social responsibility, sustainability, corporate

governance, environmental protection policies, and ESG as an overarching concept. Given the specific public policy assignments that the SOEs face, it is of high importance to understand and align the priorities across the specific ESG factors. While some of the aspects, most commonly covering the S and G dimensions, could create an overlap with the assigned public policy priorities, the environmental factors, on the other hand, frequently require higher short-term investment in favour of larger longer-term benefits. The integration of sustainability favouring priorities in the government policies could therefore be a logical step to ensure this alignment (OECD, 2020a).

As admitted by the majority of the policy change affected SOEs, without the external motivation of the legislation change, they would not have published the sustainability report in 2022. Thus, it can be confirmed that particularly the policy change is an important driving force of the ESG disclosures across the SOEs. With respect to the SMEs and other SOEs currently still not engaged in the ESG disclosures, the companies should take reasonable time for preparation to ensure sufficient time to find a balanced sustainability practice implementation.

4.3.2. Board diversity impact on Baltic stock listed companies

To empirically test whether the board diversity metrics explain differences in ESG disclosure volume in the Baltic context, a sample of stock-listed companies of the Baltic region was utilized. The sample included forty-three companies listed on the NASDAQ Baltic stock exchange as of October 2020 – thereof all (32) companies listed on the prime list, as well as 11 additional companies which have chosen to include non-financial or ESG reports as part of their stock exchange disclosures. As there are no specific requirements with regards to the form of the reporting, the reports analyzed include ESG reports, non-financial statements, sustainability reports, and similar non-financial disclosures published on the webpage of the stock exchange. Most disclosure documents screened were for the latest financial year except for two ESG reports for year 2017 / 2018 belonging to companies disclosing bi-annually. Reports and information available on the company websites, but not submitted to the stock exchange, were not included in the analysis. The final sample included nineteen companies from Lithuania, 16 companies from Estonia, and 8 Latvian companies.

Employing the previously in Chapter 3.4 described ESG disclosure score computational method based on Roca & Searcy (2012), the ESG disclosure score was computed based on a checklist of ESG metrics included in the NASDAQ ESG guidelines as well as reported by the companies additionally. Board diversity was measured by the board size and female representation on the boards. While other studies use additional diversity metrics such as the average age of the board members, ethnicity, and tenure, this information is insufficiently disclosed in the reports of the Baltic companies, and thus was omitted from the analysis. To allow for the differences in the corporate governance structure among the sample companies, the board size variable (BSIZE) was measured as the sum of the members of management and supervisory boards.

To test the gender diversity hypotheses (companies having female board members have higher ESG disclosure scores), binary variables were created for having both – female members on the

supervisory board, management board and a combined variable of having at least one female representative in any of the boards. Finally, to control company-specific metrics, firm size (SIZE) was proxied as the market capitalization (measured as of 21 October 2020 and count of employees) and profitability (PROF) was proxied by the return on equity for the financial year of 2019. The companies in the sample analyzed were rather diverse. The size variations in the sample were very evident as the market capitalization of the companies varied from 6.82 million EUR to 1610 million EUR, while the profitability in terms of ROE ranged from -360% to 40%.

The average disclosure score for the listed Baltic companies calculated was 40%, while it varied from a minimum of 8% to a maximum of 71%, suggesting the wide range of the non-financial disclosure volume. The board size variable suggested that the average total board member count is 7.51 with a maximum of fifteen members in both management and supervisory boards. In addition, the board diversity variables describe that on average only 17% of management board members and 12% of the supervisory board members are women. To account for the differences in companies, which might not have formed supervisory boards, the variable W% shows that on average of all board members, only 16% of them are female. The variable SB presents a binary measure of whether the company has formed a supervisory board – the mean value of 0.7 noting that 70% of the companies in the sample indeed have one.

To put these results in a perspective, it makes sense to compare them with the average female board participation in other countries and regions. To do so, the data of companies having ESG disclosure scores on Bloomberg were retrieved for two samples – firstly, for companies headquartered in CEE countries (Poland, Czech Republic, Estonia, Lithuania, Latvia, Romania, Hungary, Slovakia, Slovenia) and a sample of Western / Northern European countries, which are argued to have higher ESG compliance (Germany, France, Austria and Sweden). The Bloomberg disclosure score similarly as per the methodology applied here ranges from 0 to 100 and measures transparency instead of performance. Thus, the higher the disclosure score, the more information companies disclose in their annual and sustainability reports as well as press releases and third-party research. As the calculated scores for the Baltic companies are not directly comparable due to potential differences in the metrics measured and wider data sources used for Bloomberg scores, they shall not be directly compared.

Table 4.1

Board gender diversity comparison. Source: Bloomberg data, author's calculation

	Baltics	CEE	Western Europe
ESG disclosure score	n.d.	34	42
Count of companies	43	46	354
AVG females on board	16	16.59	34.08

The comparison in Table 4.1. shows that the Baltic countries have on average slightly fewer female board members than the CEE country sample. However, the overall level is relatively close. Relatively to the companies headquartered in the more developed European countries, the proportion is twice as low, indicating that the CEE region still lags in forming sufficiently gender-diverse company boards. In addition, the fact that only forty-six companies listed on CEE stock exchanges have a Bloomberg ESG disclosure score once more signals the gap in the data availability.

Table 4.2. shows the Pearson correlation matrix for the chosen variables. All board diversity variables correlate positively and significantly (5% significance level for gender and 10% significance for board size) with the ESG transparency score, providing the first indication in favour of the developed hypotheses of this research. Contrary to previous academic research, there is no statistically significant relation between the profitability of the company and the ESG score. Nevertheless, the data confirms the firm's size has a positive and at 5% significant correlation to the transparency volume. The company's size also seems to correlate with the percentage of female members on the supervisory boards (weakly significant at 10%). Logically, the board size variable is strongly and significantly correlated to the gender balance, as larger boards have more options for women's inclusion.

Table 4.2.

Pearson correlation matrix. Author's calculation.

	ESG	PROF	SIZE	BSIZE	WSB	WMB	W%	SB
ESG	1							
PROF	-0.131	1						
SIZE	0.319**	0.131	1					
BSIZE	0.283*	0.149	0.289*	1				
WSB	0.351**	0.151	0.261*	0.374**	1			
WMB	0.338**	0.091	0.093	0.576***	0.495***	1		
W%	0.361**	0.159	0.213	0.456***	0.878***	0.798***	1	
SB	0.181	-0.118	0.06	0.549***	0.423***	0.234	0.288*	1

*ESG: ESG disclosure score, PROF: profitability measured by ROE for FY2019, SIZE: firm size measured by market capitalization rate at 21.10.2020, BSIZE: total number of members on the management and supervisory board in the reporting year, WSB: percentage of women on the supervisory board, WMB: percentage of women on the management board, W%: percentage of women on both boards, SB: dummy variable equal to 1 if the company has a supervisory board. * correlation is significant at the 0.10 (2-tailed) ** correlation is significant at the 0.05 level (2-tailed); *** correlation is significant at the 0.01 level (2-tailed)*

Next, in order to determine whether there is a significant non-financial disclosure score difference between the companies having female members on their boards, independent sample t-tests were carried out to evaluate the potential effect and its statistical significance. As the first

step, F-tests were carried out to determine the differences in variances of the samples. Next, Table 4.3. shows the results of all the t-tests performed.

Table 4.3.

Independent t-test analysis. Computed by the author.

Variables	ESG score			Two-sample t-test	
	Mean	Variance	Obs.	t-statistic	p-value
WM in MB or SB	0.45	0.03	28	1.708	0.09
No WM in MB or SB	0.36	0.03	15		
WM in MB	0.47	0.02	20	1.963	0.056
No WM in MB	0.37	0.03	23		
WM in SB	0.48	0.03	17	2.144	0.038**
No WM in SB	0.38	0.02	26		
Board size <7	0.35	0.02	19	-2.457	0.018**
Board size >7	0.47	0.03	24		

* mean difference is significant at the 0.10 (2-tailed) ** mean difference is significant at the 0.05 level (2-tailed); *** mean difference is significant at the 0.01 level (2-tailed)

Out of the three gender-driven specifications, the results show that only female representation in the supervisory board has a significant impact (significant at 95%) on the differences in the ESG scores. The results imply that companies that have a female representative on the supervisory board have on average higher non-financial disclosure score of 48% in comparison to companies that do not have females represented on their supervisory boards at 38%. To ensure that the significant difference does not come from the effect of having a supervisory board in the first place, a t-test is performed to compare the results of the companies having a supervisory board in place with those that do not. The t-stat value of -1.34 (critical two-tail value 2.04) implies that there is no significant difference between the two groups, thus it signals that the effect rather comes from having a female supervisory board member.

Next, a t-test is performed to check for the mean differences between companies of different board sizes. The sample is split based on the board size average (7.51) into a group of companies having less than 7 board members and companies having seven or more board members. The results show a significant difference (significant at 95%) to mean ESG transparency score of 35% for companies with smaller boards and 47% for larger-board sized companies.

The results of examining the Baltic stock-listed company data largely are in line with the Resource dependence and Upper echelon theory suggesting that larger, more diverse boards bring supplementary skills-sets, agendas, and values to the company's actions and therefore are also more likely to devote more attention to the sustainability questions. In addition, the data support the view that female participation in the company's decision-making bodies indeed shows a larger company's dedication to non-financial activities and their disclosures.

4.3.3. Financial investors

Financial investors have been proven to have significant power to impact the ESG adoption. Based on the regulations they must comply with themselves; they act as multipliers by implying similar obligations to their investment companies.

To obtain a more qualitative view on ESG factor application by the financiers in the Baltic region, a study of the financial investors, assets managers and banks was performed based on a sample of financial market participants operating across the Baltic region. A survey (see Appendix 3) was created and digitally distributed to 56 financial investors, asset managers and banks with their primary operational markets in Lithuania, Latvia and Estonia. The survey was addressed directly to the investment managers or executive level decision makers to ensure that the responses reflect the opinions of the persons generally meeting the investment decisions as a part of their daily work routines. The survey, which was open for responses from January 4, 2021 to January 24, 2021, consisted of 15 open and closed questions focusing on the Baltic investor's opinion on (1) ESG factor importance in their investment evaluation process, (2) the methods and practices applied in the evaluation process, as well as (3) current obstacles in ESG implementation. The survey was offered on no-name basis to ensure that honest and non-biased results are obtained. In addition, to be able to better explain the results as well as capture any remaining thoughts and sentiments, four in-depth interviews with different types of entities (a bank, two private equities and one venture capital company) were organized. 37 responses were gained revealing a response rate of around 66%, which considering the total size and number of financial institutions and investors can be considered as a representative sample for the region. The sample split according to the operation types is presented in Table 4.4.

Table 4.4.

Sample split of the Baltic financiers. Created by the author.

Operation type	Count	Percentage of sample
Asset management company	10	27%
Venture capital fund	9	24%
Bank	5	14%
Private equity fund	11	30%
Early-stage investment fund	2	5%
Total	37	100%

Due to the diverse type of operations, the sample companies showed a wide discrepancy in terms of operation size – the average investment ticket of 4.29 million EUR was indicated ranging from a minimum of 0.05 million EUR to 20 million EUR. While all the banks and 75% of the asset managers surveyed had loans issues or investments made into more than 40 companies, the majority (52%) of the PE and VC funds reported having more than 15 companies in their portfolio.

The first section of the survey aimed to estimate the sentiment of the investors towards the sustainability inclusion in the financial decision making. When the respondents were asked to reveal an opinion on which financial market players should consider ESG information in the investment evaluation process, two clusters emerged.

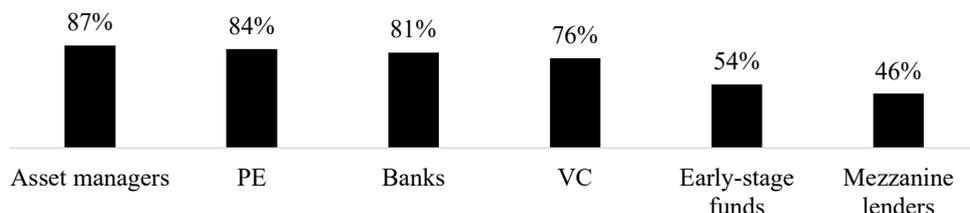


Figure 4.3. Share of respondents who believe that ESG factors should be considered by the mentioned type of investors. Created by the author based on survey results.

As depicted in Figure 4.3., the vast majority named asset managers (87%), PE funds (84%), banks (81%) and venture capital funds (76%). The share of proponents was relatively smaller for the second cluster - early-stage funds (54%) and mezzanine lenders (46%). In addition, it was commented by some of the respondents that ESG factors should be considered by all those financiers, who have obtained such a mandate from their capital owners. When asked about their own experience in ESG due diligence, 81% of the respondents answered positively, whereof 46% perform ESG evaluation for all their investments and 35% do that in limited scope or for companies representing specific industries. The remaining 19% told that due to varying reasons it has not been done so far, but it is in their plans. None of the respondents believed that there is no value in ESG factor implementation in the investment evaluation process.

The large share of ESG-integrating financiers and generally the positive sentiment towards the ESG inclusion goes in line with the previous conclusion that capital owners can be one of the primary drivers ensuring that certain level of ESG compliance is achieved by the investment portfolio (Eurosif, 2016). As highlighted by a recent study about investment funds in Latvia, even after more than a decade after the first risk capital funds were launched in Latvia, the funding is still largely dependent on local or international public resources (government, EU funds, EBRD etc). As found out at the time of the study, there were no VC funds in Latvia without public capital (Matisone & Lāce, 2017). This finding partly explains the results – as a significant share of the sample companies manage capital, which is based on public resources, they have an implied requirement of at least a high-level sustainability risk evaluation in their investment process. In addition, the results of the survey imply that also the private capital managers are similarly minded.

As depicted in Figure 4.4., when asked about the drivers directly, however, most of the respondents (70%) cited global tendencies as the main reason to perform ESG evaluation. Regulatory requirements and attempt to lower the risk (each selected by 35%) came next.

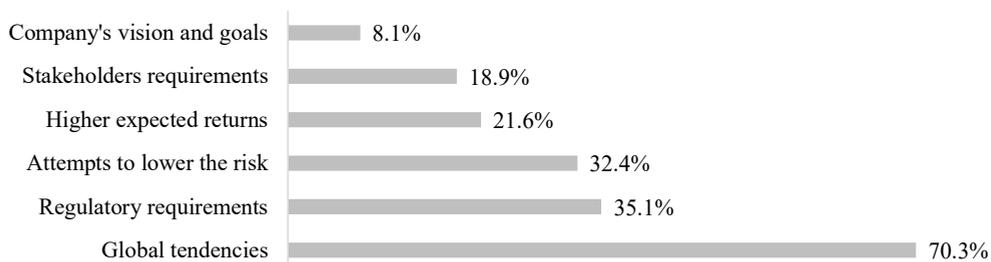


Figure 4.4. Share of respondents, who selected the corresponding option as a driver for their ESG inclusion. Created by the author based on survey results.

In line with the previous answers, 73% of the respondents believed that ESG performance can be a value driver for the investment. Interestingly, that among the 27%, who considered that ESG factor implementation does not add any value, 80% of the respondents still admitted performing the evaluation. This implies that there are investors, who even though consider the sustainability metrics before investment, still are not sure about the value added of this process and potentially just follow the set-out guidelines or general market trends. This result comparatively is more positive than reported by Deloitte for Central and Eastern Europe investment funds, where only 62% of the respondents considered ESG factors as a value driver (Deloitte, 2020b). As further explained in one of the in-depth interviews, if previously the ESG factors were mainly viewed as a source of potential risks or mismanagement, a slow shift is happening in the market to view the sustainability factors as a source of opportunity and potentially higher return. The finding generally goes in line with the global evidence as summarized by e.g. (Eccles et al., 2019)

When asked about specific factor importance, 49% respondents indicated that all three (E, S, and G) factors are equally important to them when evaluating an investment opportunity. Additional 35% voted for the environmental factor and 14% for the governance factor. Only one respondent (2.8%) mentioned the specific social domain potentially suggesting that the social dimension is yet still the least evaluated as of now.

An important section of the study concentrated on the obstacle determination allowing to potentially explore the ways how to solve them in a meaningful manner by the policy makers. With respect to the current ESG challenges, only 16% of the respondents believed that there are no current obstacles in ESG data application in the investment process. The majority (65%) cited data quality issues, lack of ESG awareness (46%) and insufficient knowledge (19%) as well as lack of materiality focus (16%).

Also globally, data availability, which goes in line with the general ESG application by the invested companies, is one of the most commonly cited obstacles in ESG application. With respect to the Baltic companies, the situation is even dimmer given the fact that only a handful of companies have an external ranking ESG score available, most of which are rather large, publicly

listed or state-owned companies, which mostly are outside of the investment scope for the local financial investors (except certain largest banks and a slight share of the asset managers). The lack-of-data barrier is supported by the survey results, which suggests that around 86% of the respondents are not satisfied with the volume and quality of non-financial data that the companies can offer. The largest gap seems to occur specifically in environmental data. Several respondents additionally indicated that the information is not sufficiently quantifiable or numeric as well as that a general ESG data infrastructure should be developed to improve this aspect. Interestingly, that from the 14%, who indicated that there is sufficient data availability, the vast majority (85%) are asset managers, which can be explained by the fact that these funds usually face a different kind of investment universe than locally operating banks and financial investors mainly due to the geographical exposures - while local asset managers usually have the opportunity to invest in stock markets globally, the banks and investors work with the local, most often privately-held and frequently also SMEs, thus also the ESG data universe available to them is more limited. The lack of proper benchmark data has been found as another meaningful obstacle by the literature – as the privately held, mostly SMEs can hardly be comparable to the global listed peers, the financial investors are frequently struggling to understand the reasonable level of the metrics measured (Kotsantonis & Serafeim, 2019). Also, as noted by several respondents – due to the different reporting approaches, industries and materiality, the ESG data among the portfolio companies are rarely comparable, leading to an overall benchmarking problem in the market. Arguably, with the new regulations coming into force, this problem shall be at least partially lifted.

Correspondingly to the poor level of general data availability, when asked about the ESG data sources used, 87% of the respondents admitted using in-house research data. While 22% had used Bloomberg as a sustainability data source, other data providers such as RepRisk, Sustainalytics, Refinitiv, and MSCI were applied on very rare occasions (on average 1 to 3 respondents had used them). Furthermore, these external databases had dominantly been used by banks and asset managers, while PE / VC majorly rely on their own in-house research and external consulting companies.

Another key topic frequently mentioned in global investor reports is the confusion about the materiality of the specific indicators attributable to companies from different industries. Also, 51% of the survey respondents indicated that materiality is an important topic that the financiers have at least on a high level discussed with their investment companies. Nevertheless, the lack of focus on material issues by the companies was cited as a serious obstacle by 16% of the respondents.

Finally, while it is difficult to precisely measure the extent of ESG factor importance, the authors tried to estimate this figure by asking the respondents to appraise the approximate weight that sustainability factors cover in the overall investment evaluation process. The average result of the sample in a scale from 1 to 10 turned out to be 3.9 (median score of 3) corresponding to a weight of 0.39 in the decision-making model suggesting that even though there are various obstacles in the ESG implementation and differing views on the value added, a significant portion of the investment decisions already lies outside the scope of pure financial matters.

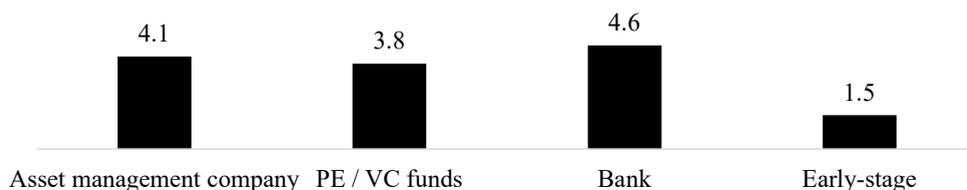


Figure 4.5. Average weight ESG factors play in investment evaluation measured in scale from 1 to 10. Created by the author based on survey results.

When dividing the scores into the operation type subgroups (Figure 4.5.), in line with the assumption, the results show that banks and asset management companies currently put the most effort on the ESG factor inclusion, while PE / VC funds and early-stage funds are slightly below. Particularly high the result is for banks, which means that already now there are companies in the Baltic countries, which most likely cannot obtain bank financing due to the non-financial factors. Along with the finding that 46% of the respondents believed that an important obstacle for ESG inclusion is the lack of sustainability knowledge of the companies they invest in, a general undertaking from the policy makers point of view should be to raise the awareness and educate companies about the meaning of ESG factors and their implications.

All in all, the study confirms that financier's impact on the ESG adoption in the Baltic countries is already present and likely to grow in its strength over the forthcoming years.

4.3.4. Ownership and management

Finally, to obtain an overall perspective of the further drivers and hindering aspects of ESG adoption, a study was performed combining corporations of various sizes and ownership backgrounds. A country-specific approach was chosen to ease the comparability. A questionnaire (see Appendix 5) was distributed electronically to 200 medium and large companies operating in Latvia including the hundred revenue-wise largest companies. To obtain possibly unbiased answers, the survey responses were collected anonymously. The questions were sent electronically to either board members or designated sustainability officers if the company had publicly assigned one. The answers were gathered in a time frame between 5 October 2021 to 14 December 2021.

First, the questionnaire asked to disclose the demographic data of the company size, ownership type, gender diversity in the management and supervisory board as well the year of establishment. Obtaining this data was important to draw conclusions on the potential differences the given factors might have on the ESG adoption practices. The core part of the questionnaire consisted of twenty multiple-choice and closed-end questions focusing on (1) the degree of ESG awareness, implementation status and disclosures, (2) reasons and responsibilities with respect to the sustainability of the operations, as well as (3) observed obstacles in ESG implementation journey. In addition, the study was seeking to capture the estimated degree of importance of ESG in the company's agenda as of now, which might consequently allow to repeat such studies to measure this score over time or geographies.

In addition, to better explain the results as well as capture any remaining opinions and sentiments, three in-depth interviews with companies of differing ownership types (a SOE, subsidiary of a wider international group and locally privately held company) were organized. In the survey 74 responses were received revealing a response rate of around 30%. The sum of the total revenue of the companies included in the data set reach up to 12 billion EUR while the total employee count reach 68 thousand thus allowing to conclude that the sample represents a considerable share of the medium-large enterprise universe of the economy and around 20% of the revenue reached by all the corporations operating in Latvia in 2020 (Central Statistics Bureau, 2021). Diversity and inclusion are important elements of proper corporate governance guidelines as recently summarized by the Latvian Corporate Governance Code (Advisory Board for Corporate Governance, 2020). In addition, as elaborated before, according to the academic board member diversity can have a material impact on the non-financial disclosure level and quality. The statistics on the board structure show that slightly below half or 45% of the companies have no female representatives in their management boards. From the remaining ones – the average women proportion in the decision-making body is 43%. All in all, it can be concluded that a significant share of Latvian companies is still missing out on a proper implementation of this factor.

While according to the local law, establishment of supervisory boards is not a mandatory requirement for limited liability companies, the majority or 58% of the surveyed companies have supervisory board in place. Based on the Latvian Corporate Governance Code's Principle # 9 at least half of the members are suggested to be independent. Based on the results, 28% of the sample companies have ensured that it is the case, which is a relatively positive result. Only 15% of the companies have no independent members on their advisory boards indicating that the full potential benefits of having this type of decision body in place are not fully realized (see Figure 4.6.). From the companies that have a supervisory board around a half have no female representatives. The

average proportion of females in the supervisory boards across the companies that have one in place is 22% (around one female to four men).

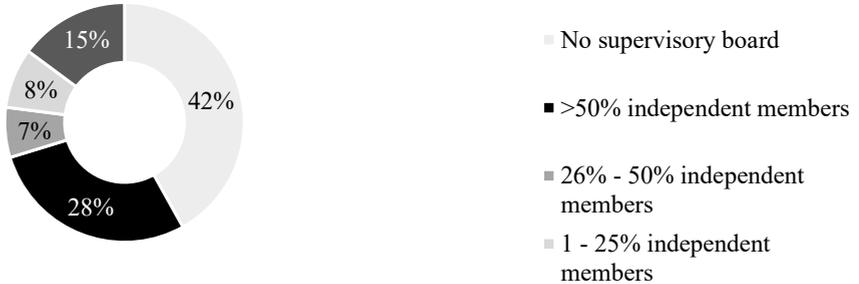


Figure 4.6. Supervisory board composition of the sample companies. Created by the author based on survey analysis.

Of all the companies questioned, the vast majority, or 82%, indicated that the company's leadership is aware of the ESG concept in general. When asked to evaluate the current degree of ESG factor implementation in company's operations, the average score in a scale of 1 to 10 turned out to be 5.45 (median of 6). The indicated score above the mid-line shows that generally the cohort of the mid to large size companies operating in Latvia are in the course of sustainability implementation and follow the global trend in this aspect. The approach of self-evaluation is contradictory to an independent review of ESG disclosures or publicly shared information. It allows the author to deeper explore the drivers and barriers behind the decisions that companies are making in relation to their sustainability policies. While it might be argued that companies might tend to exaggerate their success and achievements, the aggregation of the data might aid in limiting such effects.

Only 56% of the respondents report that the ESG topic is within a direct responsibility or oversight of the management. It signals that potentially the ESG topic is still not among the top priorities of the company executives. Contrary to the Latvian data, internationally, there is a growing trend of including ESG measures in the annual management incentive plans. Based on global data for overall performance assessments, 63% have already factored ESG into annual incentives and 41% have done so for long-term incentives (Willis Tower Watson, 2020).

Interestingly, while the differences in ESG scored based on the industry classification are not significant, the results differ substantially based on the ownership type (see Figure 4.7.). The stock-listed companies, potentially as a result of stock exchange requirements, have the highest level of ESG implementation (average score 8), followed by international company branches (score of 6.7), where sustainability strategies are usually cascaded down from the global HQ and state-owned

companies (6.3). The poorest performance is assessed by the companies owned by locals.

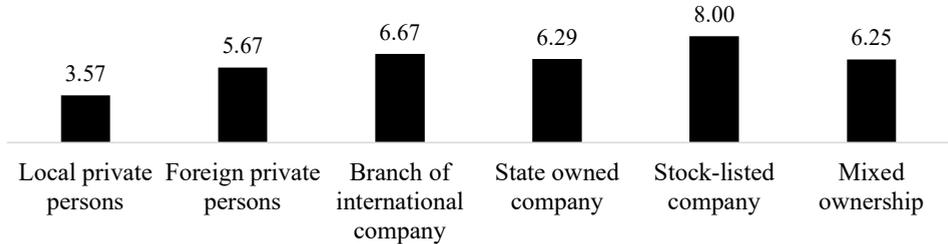


Figure 4.7. ESG self-assessment of the corporations across ownership (scale out of 10). Created by the author based on survey results.

Consequently, it would appear that ownership is one of the key drivers that can have a material impact on the ESG adoption across companies in emerging countries like Latvia. This result is also in line with previous studies (Barnea & Rubin, 2010; Soliman et al., 2013). When asked about the matter, the companies themselves confirm this assumption. While global tendency towards sustainability is mentioned as the main driver (selected by 52% of the respondents), owners' requirements come close second (40%). Other often mentioned motivators include management board initiatives and attempts at risk reduction practices (each mentioned by 30% of the respondents). Also, the qualitative interviews confirm that the pressure from the owners often accelerates the speed of ESG adaptation, while the disbelief in the value of ESG by the owners hinders proper sustainability policy development.

Also, the diversity of the management board and the existence of supervisory board seem to create a difference in the self-assessed ESG level. As depicted in Figure 4.8., companies having no females in the management board seem to rank themselves lower (on average 4.59), while companies having at least one female in the management board score 6.29. A similar positive effect on the ESG assessment of 4.56 versus 6.23 is implied from the existence of a supervisory board.

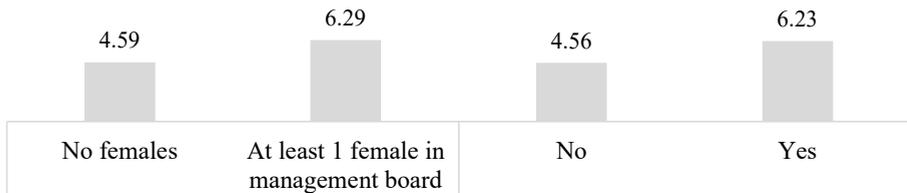


Figure 4.8. Average self-assessed ESG implementation score (out of 10). Created by the author based on survey results.

With respect to the ESG disclosure, the practices are still developing and are behind Western European and US large corporates as more than a half or 52% of companies make no disclosures on their sustainability progress. Only around one in ten companies (11%) choose to use internationally recognized reporting formats or principles (i.e., GRI, SDG, etc.), while a wider share of the respondents (37%) reports their sustainability results in an informal manner – as a section in the annual report or disclosures on the webpage. The main motivators behind the disclosures are the global tendencies and peer pressure from competitors (22%), requests of the owners (16%) and decision to perform sustainability reporting due to management preferences (9%). As suggested in one of the follow-up interviews, companies might choose to present selected data, which are easier traceable or show more favourable results, to formally have the reporting in place. If there are no mandatory requirements, this approach, however, might lead to a lack of focus on the material areas, selective reporting leading to greenwashing concerns as well as difficulties in data comparison.

According to the results (see Figure 4.9.), most of the companies have more established policies for the social and governance factors – especially focusing on the safety and satisfaction of the employees, donations, and corporate governance principles. In addition, for several of the most popular S and G metrics there is a gap between the number of companies that have a formal policy in place and the number of companies that actually measure and disclose the respective data. Interestingly, the environmental factor is approached differently – while only less than one third of the sample pay attention to the environmental impact, almost all companies having a formal policy in place, also measure the actual data.

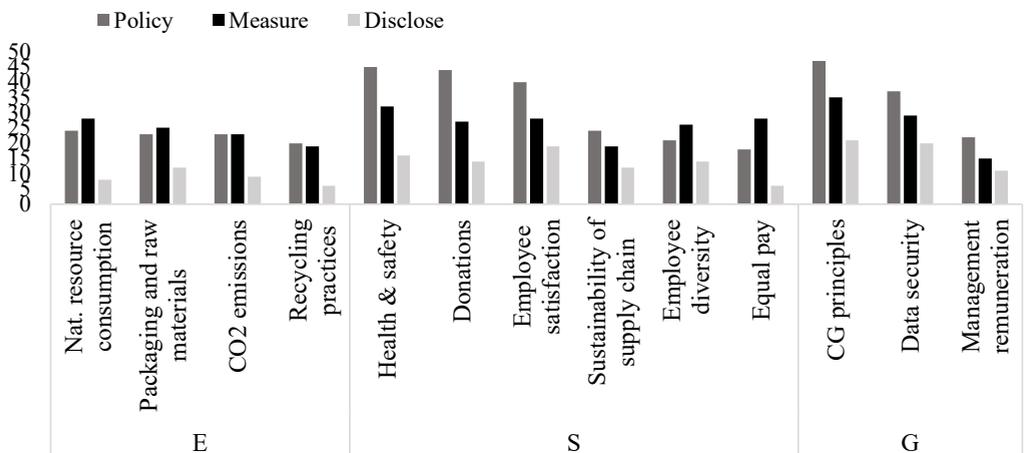


Figure 4.9. Approach to specific ESG factors - policy, measurement, disclosure. Created by the author based on survey results.

Given the pronounced focus on the specific S and G metrics as well as the relatively low application of internationally accepted reporting standards, consequently, it can be concluded that for the vast majority several important steps (i.e. setting the material sustainability focus areas, involving stakeholders in the prioritization, etc.) have been left out and companies more or less choose to disclose the information that is easily reportable or measurable and avoiding areas, which are more complex or where favourable results are not achieved yet. The results of the study confirm this concern. At times when corporations and investors are spending more resources on sustainability issues, the question of which sustainability issues are financially material has become crucial in understanding whether companies are managing their resources efficiently (Rogers & Serafeim, 2019). Several academic papers have reported that only an industry-specific approach to materiality yields economically significant results, meaning that businesses improving their performance on material sustainability issues outperform competitors with declining performance on material sustainability issues (Khan et al., 2016). The results of the survey show that 72% of the respondent companies have not performed the materiality assessment leading to an overall situation when the sustainability priorities can be unclear.

In addition, 60% of the respondents in the Latvian survey admit that they have not performed a stakeholder dialogue to understand the ESG matters that are important for their stakeholders. It can be argued that only then, when a corporation is focusing its attention to the factors that are significant for its stakeholders as well as are of material impact for the specific industry where the corporation is operating in, the optimal level of sustainability can be achieved. While stock-listed companies show better results on the completion of these steps (75%), the privately held companies perform significantly worse (see Figure 4.10.).

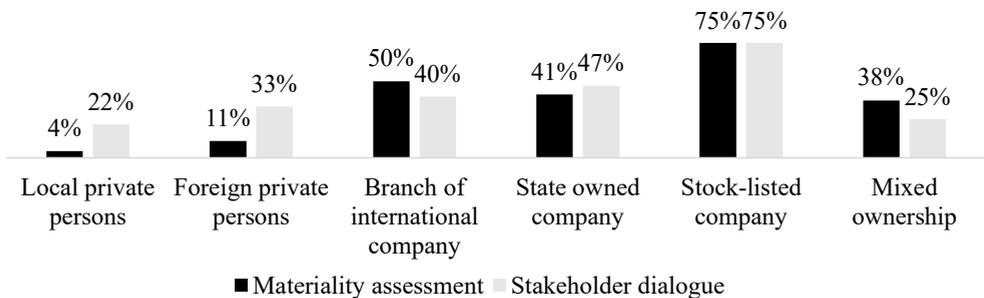


Figure 4.10. Share of companies having performed materiality assessment and stakeholder dialogue. Created by the authors based on survey results.

Overall, given that most of the questionnaire respondents so far have not focused their attention on these two important steps in the sustainability path, appropriate educational measures should be suggested. Based on the additional explanation gained in the in-depth interviews, companies

struggle to understand the value of these assessments or do not have a clear view on what would be the best way to practically organize the stakeholder dialogue. With respect to further challenges or reasons that hinder proper sustainability practice implementation (see Figure 4.11.), 46.3% mention lack of motivation. In combination with difficulties in measuring the ESG factors (mentioned by 31.3%) as well as the costs associated with more sustainable actions and operations (29.9%), these obstacles do not seem to be unresolvable.

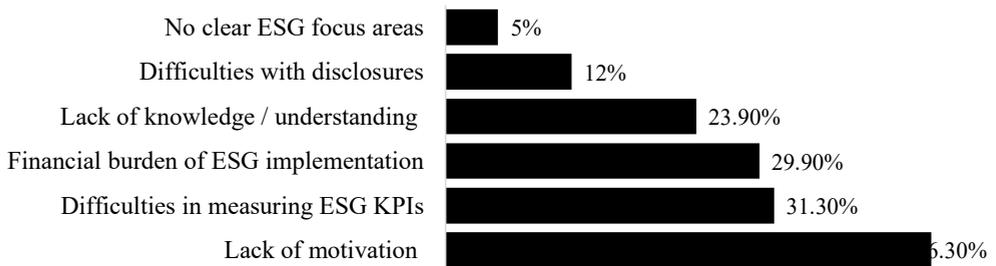


Figure 4.11. Challenges in ESG implementation. Created by the author based on survey results.

While the previously suggested educational measures could tackle the shortcomings in knowledge and understanding (23.9%) and difficulties with disclosures (12%), the lack of motivation calls for broader measures along the lines of certain regulations, positive enforcements or incentives (i.e., certain tax benefits, lower interest rates from banks, discounts for participation in associations etc.) for the companies that act on the sustainability initiatives. Also, the sustainability practice polishing for the SOEs could serve as a positive benchmark and role model as also suggested by (OECD, 2020a).

Finally, when comparing the ESG self-assessment with the estimated sustainability importance for the way forward, the results once more confirm the perceived lack of motivation (see Figure 4.12).

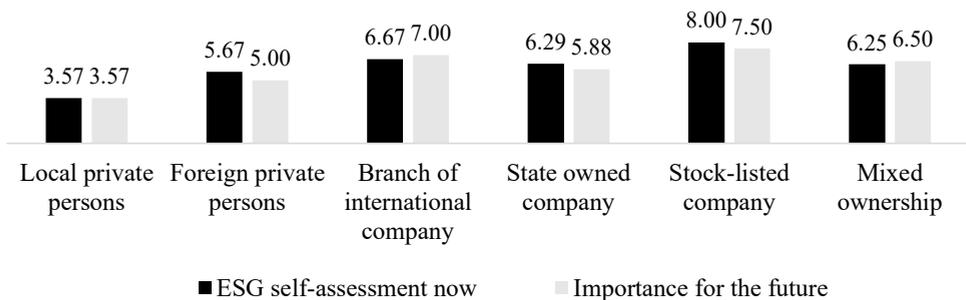


Figure 4.12. ESG self-assessment today vs estimated importance in the future. Created by the author based on survey results.

The average estimated future ESG importance score of 5.3 (out of 10) is even lower than the average estimated ESG implementation score as of today of 5.45, signaling that the majority of companies estimate that their focus on the sustainability matters will even slightly decrease. This result is direct opposite to the most global data (i.e. (Deutsche Bank, 2021)), which suggest that companies tend to expect higher focus on the ESG elements in the future.

Overall, the results of the summarized empirical studies in Chapter 4.3. provide additional insights to the academic literature allowing the author to determine and confirm the set of factors affecting ESG adoption in corporations. In addition, the empirical results additionally have offered the insight that particularly the regulatory and ownership factors as well as management team characteristics (such as diversity and existence of supervisory board) could be important in explaining the differences among various levels of ESG adoption.

An overview of the compiled list of the internal and external ESG drivers as recognized from the literature and the empirical studies is depicted in Figure 4.13. It differentiates between the 7 main drivers and 24 indicators explaining each of the main drivers. Four of the drivers (ownership, organization, management, and resource base) can be associated with firm-internal factors, while the remaining three (society, regulation, and industry) correspond to external market factors.

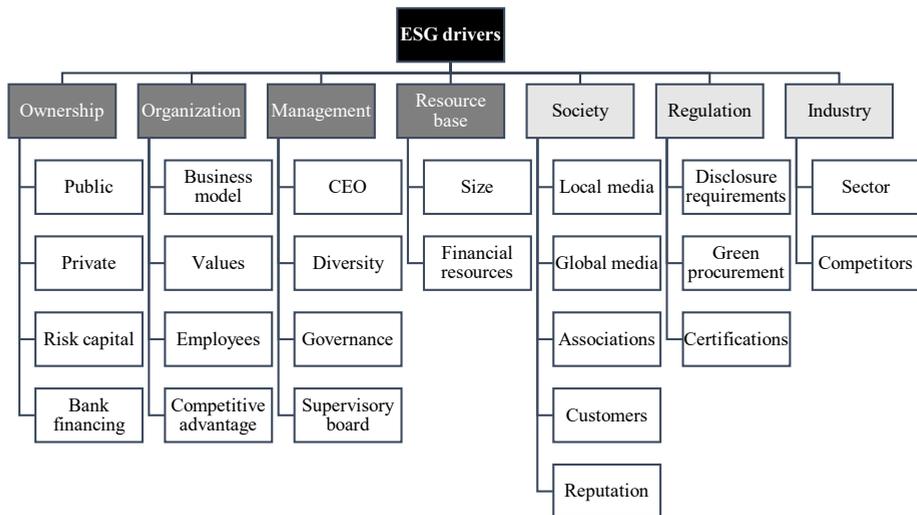


Figure 4.13. Overview of ESG drivers. Developed by author based on literature.

In terms of barriers – it has been recognized that several hurdles impede ESG implementation, ranging from a lack of standardization in ESG data collection and reporting to insufficient comprehension of ESG concepts among top executives and workforce, which in turn can lead to limited dedication to sustainability implementation and reluctance to embrace change. Another significant roadblock that further constrains ESG adoption is resource scarcity, encompassing

financial, human, and technical resources that corporations so far do not prioritize likely due to the trade-off between the long-term perspective of such an investment and short-term costs. This limitation often results in a slower adoption of sustainability disclosures by both companies and investors. The insights and results encompassed in Chapter 4 therefore allows to answer the RQ3 - *What are the drivers and barriers impacting effective ESG implementation?*

As the next step, a conceptual framework linking the ESG drivers to the shareholder value is proposed. It builds on the conceptual model of the link between higher ESG performance and its impact on shareholder value by adding additional facet of ESG drivers. Figure 4.14. provides a visualization of the proposed relationship. For the sake of clarity, only seven key drivers (without the 24 indicators) are included in the visualization.

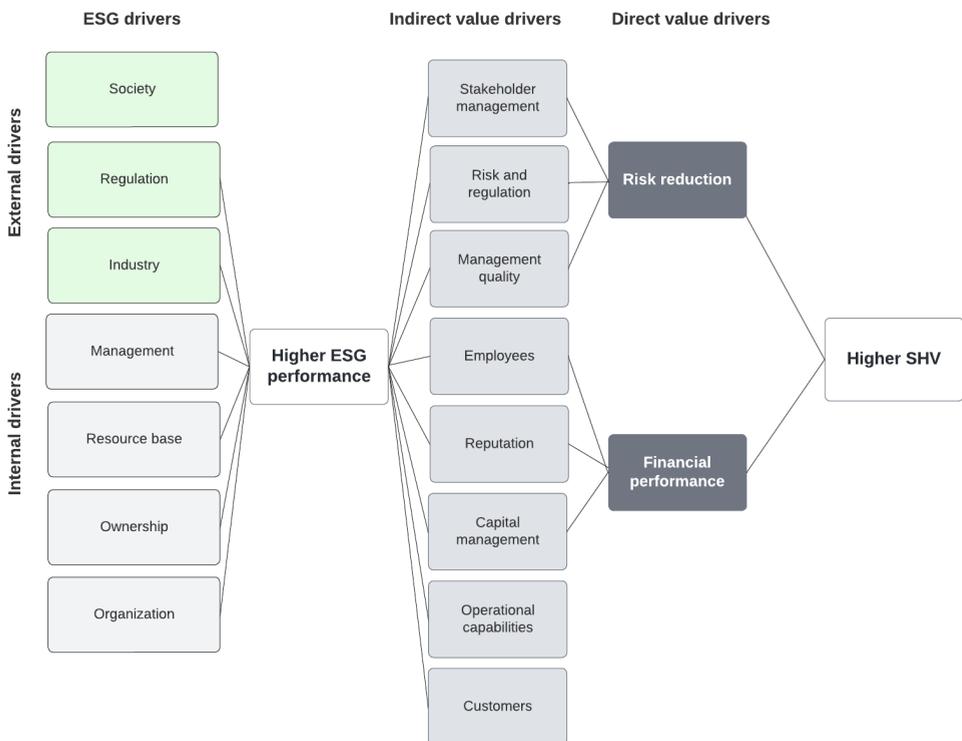


Figure 4.14. Framework elaborating connection between ESG drivers, value drivers and shareholder value. Developed by author.

While Chapter 2 delved into the relationship between enhanced ESG performance and shareholder value, Chapter 4 followed up with an in-depth examination of the key factors that drive ESG implementation. The latter was achieved by drawing upon the existing academic literature and supplementing it with empirical studies focused specifically on corporations in the Baltic region.

The scientific novelty of this research lies in the combination of both academic research and practical, market-based studies. This has allowed the author to construct a comprehensive framework that captures the relationship between the drivers of ESG performance and shareholder value. The conceptual framework not only builds on the existing academic literature, but it also incorporates real-world insights from companies operating in the Baltic region. This approach provides a more nuanced understanding of the ESG landscape and how it affects shareholder value.

Based on the proposed conceptual model, it can be derived that a combination of internal factors such as size, resources, and business model characteristics, as well as company's management and ownership type as well as external drivers such as global market trends, society requests, competitors' behavior as well as regulatory requirements are necessary to drive higher ESG performance.

While the drivers of ESG performance and shareholder value can vary greatly from company to company, it is important to consider the possibility of generalizing these factors. Previous academic research suggests that a company's resource base may play a crucial role in determining the size of resources available for ESG activities. On the other hand, empirical studies point to ownership and management characteristics as having a significant impact on the differences among corporations. These factors appear to be closely linked to the various stages of an organization's development.

Therefore, with these insights in mind, the next chapter explores the drivers of ESG performance based on the company life cycle model. This approach aims to shed light on how these factors change and evolve as a company matures and provides a more nuanced understanding of the ESG drivers.

5. Drivers of effective ESG implementation across company life cycle stages

Based on the assumption for hypothesis that different ESG drivers are relevant for companies at different corporate life cycle stages, the final chapter of this Thesis is dedicated to the corporate life cycle theory and linking it to the ESG drivers. Sub-chapter 5.1 provides a baseline of the corporate life cycle theory – discussing multiple definitions and variations offered in the academic literature, exploring the differences characterizing individual development phases as well as summarizing offered measures for assessing the stage the company belongs to. The second sub-chapter provides an overview of the existing academic literature and empirical evidence linking corporate sustainability decisions with specific development phases of the corporations. Based on academic literature, a conceptual model relating ESG drivers to corporate life cycle stages is developed. Next, expert opinion is summarized by the AHP method to quantify the impact of different ESG drivers across diverse corporate life cycle stages. Finally, sub-chapter 5.3 offers an empirically derived and tested model of ESG drivers at different corporate life cycle stages and discusses its application areas.

5.1. Corporate life cycle theory

Corporate life cycle theory initially stems from organizational science literature. The theory of the corporate life cycle predicts that all organizations go through a similar pattern of development. Each stage of the described cycle predicts certain financial implications, focus areas, environmental and market factors as well as managerial decision-making facets that underline the respective development stage. The corporate life cycle stages can also be seen as an elaborated version of the product life cycle model that is commonly used in other economic and managerial areas such as marketing and microeconomics predicting a path how a newly introduced product or phenomenon is reaching a maximum impact and then gradually declining (Mueller, 1972). While there is a wide variety of definitions describing the corporate life cycle model, a commonly used version by Dickinson splits it in two parts by telling that “(1) Business firms are evolving entities and (2) the path of evolution is determined by internal factors (e.g., strategy choice, financial resources, and managerial ability) and external factors (e.g., competitive environment, macroeconomic factors)” (Dickinson, 2011).

5.1.1. Definition of company life cycle

While several similar definitions have been used in academic literature, there is no consensus with respect to a clear characterization of the life cycle by a specific number of stages. Given that the approach of classifications and proxies used for estimation differ significantly, the life cycle concept has been extensively discussed in academia. Academic research tends to divide the firm's

life cycle into periods that are illustrious by firm-related characteristics such as the degree of risk or uncertainty, asset size, and investment opportunities (Gulec & Karacaer, 2017). While all are based on a similar theoretical background, there is a wide variety of assumptions with respect to the specific life stage phases. The certain specification of the number of phases ranges from three (Anthony & Ramesh, 1992) up to ten (Adizes, 2004). Table 5.1. provides a high-level overview of the specifications of the life cycle model by selected academic authors.

Table 5.1.

Overview of the life cycle model specifications. Developed by the author, based on academic literature.

Authors	Number of stages	Life cycle stages
Downs (1967)	3	Struggle for autonomy, rapid growth, deceleration
Lippit and Schmidt (1967)	3	Birth, youth, maturity
Anthony and Ramesh (1992)	3	Growth, maturity, decline
Kath and Kahn (1978)	3	Primitive systems, stable organization, elaborative supportive structure
Smith, Mitchell, and Summer (1985)	3	Inception, high growth, maturity
Black (1998)	4	Introductory, growth, maturity, decline
Richard L. Daft (1999)	4	Entrepreneurial stage, collectivization, standardization, refinement
Mintzberg (1984)	4	Formation, development, maturity, decline
Jawahar and McLaughlin (2001)	4	Start-up, emerging growth, mature, decline - transition
Miller & Friesen (1984)	5	Birth, growth, maturity, revival, decline
Kazanjian & Drazin (1990)	5	Conception, development, commercialization, growth, stability
Gort and Klepper (1982), Dickinson (2011)	5	Introduction, growth, maturity, shake out, decline
Greiner (1972)	5	Founding phase, guiding phase, decentralization phase, coordination phase, and cooperation phase
Greiner (1994)	5	Creativity, direction, delegation, coordination, collaboration
Hanks (1990)	5	Start-up, expansion, maturity/consolidation, revival/diversification, decline

Galbraith (1982)	5	Proof of principle, model shop, start-up volume production, natural growth, strategic maneuvering
Churchill and Lewis (1983)	5	Existence, survival, success, take-off, resource maturity
Lester, Parnell & Carraher (2003)	5	Existence, survival, success, renewal, decline
Scott and Bruce (1987)	5	Inception, survival, growth, expansion, maturity
Chen Jiaze (1995)	6	Gestation, survival, high-speed development, maturity, recession, and the metamorphosis
Flamholtz (1990 and 1995)	7	New venture, expansion, professionalisation, consolidation, diversification, integration, decline - revitalisation
Torbert (1974)	8	Fantasies, investments, determination, experiments, predefined productivity, openly chosen structure, foundational community, liberating disciplines
Adizes (1989)	10	Courtship, infancy, go-go, adolescence, prime, stability, aristocracy, recrimination, bureaucracy, death

Arguably, the most frequently represented versions of the life cycle consist of five stages. The empirically tested version of Lester et al. (2003) comprises multiple versions of the five-stage models and consolidates them into a single five-stage model based on observations by Hanks (Hanks, 1990). The most extended version offered by Adizes (1979) comprises up to ten separate phases forming a company's development path divided into five initial sub-stages of growing followed by the consequent five sub-stages of gradual aging. The life cycle begins at the pre-establishment (courtship) phase of an idea or business model generation, develops towards the prime phase – the peak of organisation's wellbeing in terms of profitability and performance – and declines towards the ultimate phase of closure or bankruptcy (Adizes, 1979).

In terms of choosing one form of the model for further application, the academic evidence is divergent, suggesting that each application area might benefit from a various degree of specificity. The findings of various scholars speak in favor of both – less detailed versions of the life cycle model, such as Anthony and Ramesh's (1992) life cycle classification procedure as well as more extensive versions such as Adizes (1979). Given the foreseen application area of clear life cycle stage distinguishment, a four-stage model of the organizational life cycle proposed by Black (1998) was used for further elaboration with an aim to understand the key differentiators in each of the stages.

5.1.2. Stages of life cycle

Introductory phase

In the initial phase, the advancement of the company is contingent on the recognition of the market of the product or service offered. Based on the product introduction's success the growth rate of the company can be either moderate or rather fast. Management or, in many cases, the founders of the company are focusing on the transformation of the initial ideas into real viable products (Gulec & Karacaer, 2017). As firms in the introduction stage of the life cycle lack an established customer base, founders usually focus on acquiring it by either offering a unique product, filling an existing gap in the market, or gaining a competitive advantage via an innovative business model (Jovanovic, 1982).

Additionally, the organizational form and structures of the enterprise are yet to be established – in most cases still being very informal with a centralized decision-making process. The power in most cases is centralized in the hands of the founders. The business still undergoes exploration of the market and its characteristics. On the other hand, the operating risk due to the significant uncertainty is very high (Hanks, 1990).

Firms in the introduction stages have limited resources and resource combinations (Dickinson, 2011). Companies tend to allocate their resources to developing new services and products to gain a comparative advantage in the following stages (Gulec & Karacaer, 2017). Younger firms are in greater need of stakeholder support given their need for external resources and recognition (Jones, 1995). The key components of firm value at this stage are assets in place and growth opportunities, thus firms should focus their efforts to invest in projects that have positive net present value (Myers 1977). In terms of size, companies in the introductory phase are relatively small – both in terms of balance sheet figures and revenues as well as operational cash flow figures (Black, 1998). Dickinson (2011) has provided empirical evidence that frequently both - the introduction (start-up) and decline stage companies - are associated with negative earnings per share, return on net operating assets, and profit margin drawing certain similarities between companies in the early and late stages of their development. From a theoretical perspective, firms are more dependent on external financing in the earlier stages of the life cycle as they have not had time to accumulate internal funds and reduce their borrowing constraints. Therefore, in the initial stages of a company's life cycle, investments are typically financed by outside equity (such as business angels or early-stage venture capital) or founders' own resources, while borrowing from banks is hardly available (Grabowski & Mueller, 1975). Due to the firms at the earlier stage of the life cycle being relatively small and unknown, they are less closely followed by banks and their analysts. Hence, these firms might suffer from substantial information asymmetry leading to a potential equity mispricing (Myers & Majluf, 1984). According to Nickel and Rodriguez (2002), introduction and decline firms cannot raise capital unless investors are properly compensated, therefore also implying that the borrowing and equity costs are high (Aharony et al., 2006). Empirically, Helwege

& Liang (1996) have shown that the argument holds true and young firms are financed mainly by insiders, business angels, and venture capital.

Academic literature and business practitioners tend to differentiate between companies in the introductory phase in separating start-up companies from the general domain of the young enterprises. A strict generally acceptable definition does not exist; however, academics tend to refer to start-ups as a specific form of enterprises being new, small ventures in early life cycle stage operating mainly in sectors associated with high level of innovation and impacted by advanced technologies (Kariv, 2013). Recently a growing consensus on innovation as a key differentiating factor has been noted, while simultaneously highlighting the need for more precise and universally measurable definitions of innovation (Ehsan, 2021). For the sake of the further research, the thesis focuses on the wider scope of the companies in the introductory phase without the dedicated focus on the start-up companies corresponding to specific additional characteristics in terms of high-tech industries or innovations.

Growth

The companies that have been able to overcome the initial challenges of the early life cycle stage continue their development into the growth stage. At the growth stage, the still relatively young firms have usually grown to have a portfolio of new products and in parts also further technological advancements. Firms need to maximize growth in the early stages to create permanent cost or demand advantages over competitors and to survive, similarly as noted in the product life cycle (Wernerfelt, 1985). The organizational theory proposes that growth firms are still faced with greater information asymmetry due to the ongoing product development and market movements. Moreover, this information imbalance often necessitates a more sophisticated approach to the internal communication and external stakeholder engagement activities, thereby adding another layer of complexity to the operational facets of the companies undergoing the growth stage (Barth et al., 2001).

Firms at the growth stage usually notice visible sales growth generating positive operating cash flows and profit (Habib & Hasan, 2019). Richardson (2006) proposed that a firm is more likely to undertake relatively large, growth-oriented investments in the growth stage to ensure that the company's resource base is sufficient for building up its capabilities and increasing capacity. Additionally, these firms often experience significant investment needs, which can present unique challenges in terms of capital management and allocation, necessitating more developed and thorough strategic financial planning. Although growth firms usually experience significant increases in sales and in the number of products, they are increasingly faced with intense market competition, therefore, companies tend to invest more in product modification and improvement rather than in product differentiation (Hay and Ginter, 1979).

Speedy growth is associated with new challenges in the internal organization. To meet the increasing product demand, the capacity and capabilities of the company have to be increased leading to expansion in the employee base. Adelino et al. (2014) have found that particularly the

young firms create the majority of new jobs in the economies signaling the importance of growth firms in the overall economies. Formal systems usually tend to emerge in the organization leading to wider departmentalization of the company and specific function emergence (Hanks, 1990). On the other hand, the delegation at the growth stage is usually still emerging and significant power and functions are still kept within the initial team of either the management or the founders (Adizes, 1979). Based on the company type and industry, the organizational structure at this stage can still vary between informal and already formally defined, thus underlining the diversity and adaptability inherent in growth-stage firms. Such variation reflects the importance of context-specific strategies, aligning organizational structure with industry norms, competitive pressures, and the unique characteristics of the firm itself (Benbasat et al., 1980).

In terms of financing, the growth stage is usually where the founders' team, if it has not already happened before in the introductory stage, is supplemented with external finance inflow. Prior studies suggest that venture capitalists and private equity funds provide not only access to finance, but also mentorship, strategic guidance, network access, and other non-financial support leading to considerable benefits for the companies that choose to onboard external equity partners (Hellmann & Puri, 2002). While at the growth stage companies have usually already managed to decrease the level of uncertainty, the cost of borrowing is still high (Aharony et al., 2006). In determining the value of the company, growth opportunities still remain one of the key factors, while dividends are usually still foregone at this stage due to priority investments in the growth-ensuring areas (Black, 1998). Furthermore, growth firms are more likely to receive coverage in the business press (Bentley et al., 2013), leading to an increased need for good reputation management. Given the heightened public scrutiny, these companies must also be vigilant about their corporate social responsibility practices, as their actions and policies in this regard can significantly influence public perception and brand image (Carroll & Shabana, 2010). Consequently, growth firms have increased incentives to reduce information asymmetry via voluntary disclosure to aid the attraction of strategic partners, customers, and investors (Hellmann & Puri, 2002).

While it cannot be characterized as a general case, there are certain growth companies that choose to pursue a public listing at the high growth stage. Honjo (2021) find that fast-growing firms in highly valued industries are more likely to go public earlier than in other industries affected also by the right market conditions. Authors also find that firms that rely on external equity financing at the start-up stage are more likely to go public earlier than others.

Maturity

Firms at the maturity stage are associated with slower or moderate growth rates in revenues and capital expenditures (Berger & Udell, 1998). Investments are more likely to be directed toward the maintenance of assets in place (Richardson, 2006). To ensure relevance to the market and serve the well-established customer base, companies might focus more on product differentiation strategies meaning that companies frequently choose to emphasize the advantages of their product in comparison to the competitors (Hay & Ginter, 1979). As a strategic reaction to the threat from

rivals, mature firms can exploit tactics to work on unique reputation and brand image that cannot be imitated easily by focusing on the uniqueness of business models or products (McWilliams et al., 2002).

In terms of internal organizational set-up, companies having reached the maturity stage are usually formalized and sufficiently bureaucratic (Hanks, 1990). The reached complexity and size of the organization usually require the introduction of additional control mechanisms – both internal and external if required to be done by the shareholders. The problems encompassed by the Agency theory characterized by diverging expectations of the shareholders and management might become prominent at this stage leading to a greater need for additional control mechanisms and management systems. Moreover, it is essential at this stage to ensure that these new control mechanisms and systems are designed and implemented effectively, as this can play a key role in managing potential conflicts of interest, promoting transparency, and maintaining the trust of shareholders thus reducing the Agency problems the corporation can face (Grabowski & Mueller, 1975).

Over time, as firms continue to innovate and become more mature, they begin to accumulate profits and have higher retained earnings in their capital mix (DeAngelo et al., 2006), leading to more frequent dividend payouts (Fama & French, 2001). The maturity stage is also most commonly characterized by the highest level of profitability. As mature firms usually have the necessary assets in place and encounter less uncertain operating environments compared to the other stages of the life cycle, the cash flows and profitability can be maximized (Dickinson, 2011). However, mature firms also need to be cautious about complacency and should remain committed to strategic reinvestment and sustained innovation, as these are essential to maintaining long-term competitiveness and profitability, especially in the markets that are constantly changing and developing (Tushman & O'Reilly, 1996).

From the financing perspective, mature firms have had a longer existence in the market, thus they are more closely followed by analysts and investors experiencing less information asymmetry and being perceived as generally less risky, therefore opening a new array of financing opportunities (Myers and Majluf 1984). At the maturity stage, firms tend to re-balance their capital structure, gradually substituting debt for internal capital following the pecking order theory (La Rocca et al., 2011). Hence, financing needs at this stage are supplied either through internal sources, if the company's resources allow it, or acquired externally by either private equity funds, individual investors or banks (Berger & Udell, 1998). The maturity stage is also the one most associated with companies going public via a stock listing (Pagano et al., 1998). While on one hand the public listing is associated with additional bureaucracy in terms of disclosure requirements and structures, on the other hand, it can also be perceived as an optimal way of control transfer and increasing the bargaining power with banks (Rajan, 1992). Public firms tend to take advantage of further growth opportunities following the stock exchange listing and their assets in place increase (Loderer et al., 2017). In terms of organizational structures, companies become more formal and less flexible. This transition often requires more sophisticated governance structures and processes

to effectively manage the growing complexity and scale of operations, as well as to meet the heightened compliance requirements associated with being a publicly traded entity (Fama & French, 2001)

Rydqvist and Hogholm (1995) have indicated a connection between the life cycle stage and the likelihood of companies engaging in merger and acquisition activity. By using the earned and contributed capital mix as the proxy for the firm life cycle stage, Owen & Yawson (2010) find a highly significant and positive relationship between the firm life cycle and the likelihood of becoming a bidder. This suggests that firms in more advanced stages of their life cycle, equipped with greater financial resources and advanced managerial capabilities, are more likely to pursue growth and diversification strategies through mergers and acquisitions (Jensen, 1986).

Decline

The decline stage can be characterized as a period when revenues and profitability decrease leading to underutilized production and servicing capacity (Black, 1998). The causes of the decline can be either external such as a decline in the entire industry and impact of market forces (Miller & Friesen, 1984), or internal, such as limitation in the innovation, inability to adapt the offered product to the market needs or loss of relevant vision and business strategy (Adizes, 1979). The decline stage can occur at any age of the corporation, though mostly it is associated with more established and older companies having developed structures and internal bureaucracies that are frequently excessively bureaucratic (Hanks, 1990). Davis & Stout (1992) argue that in general old firms are prone to suffer from “organizational inertia” - a state where a company heavily relies on safe and established structures and revenue channels, while suffering from a lack of engagement and drive towards new business strands. This, in turn, leads to sales declining at an accelerating rate reflecting the companies’ inability to adapt to changing business environments.

As firms approach their decline, they become more rigid in exploiting benefits from the assets in place and increasingly inert in terms of recognizing new growth opportunities and, hence, suffer a decline in firm value (Loderer et al., 2017). Firms in the decline stage have more downgraded resources and resource combinations. The organization can be caught in a repeating cycle of insufficient resources to achieve substantial change which results in the lower appeal of its products and a further decrease in the resources, financial stability, and customer perception (Miller & Friesen, 1984). In this stage the preference is to cut the cost to avoid excessive inventory levels impacted by the decrease in the product demand, therefore also reducing the supply chain, i.e., the number of distribution centers (Hay & Ginter, 1979).

Usually, companies approaching their decline tend to be bigger and more liquid than the other stages (Gulec & Karacaer, 2017). They have a high proportion of retained earnings in their capital structure (Owen & Yawson, 2010) allowing the companies to pay out dividends (Fama & French, 2001). However, it is important to note that these firms must try to maintain a careful balance, ensuring that the distribution of dividends does not impede their ability to reinvest and innovate as necessary to prevent stagnation and to revitalize their business model. In terms of additional

financing, firms with a long operating history are better known by investors and financiers in the markets, thus ensuring a higher degree of information availability about the firm and lowering the cost of capital (Easley & O'hara, 2004). However, these firms also bear the responsibility of maintaining this trust through transparency, strong financial management, and consistent performance, as any perceived discrepancies or contradictions can adversely impact their market credibility and increase their cost of capital (Myers & Majluf, 1984).

While generally, companies in the decline phase are less likely to make many acquisitions owing to organizational inertia (Shimizu & Hitt, 2005), it can be seen as one way for companies to achieve a life cycle extension. In some of the organization life cycle model specifications this stage is separated as an additional stage of revival (Miller & Friesen, 1984) and is characterized by a renewed focus of the organization on the exploration of new possibilities either internally via innovations and new product / market development or externally via engagement in the merger and acquisition activities. To ensure the preservation of the accumulated social and financial capital, often the new business lines or directions are kept separately. If the organization can successfully undergo the revival stage, it can experience further growth or become stabilized in maturity stage again (Jirásek & Bílek, 2018). This transformation, however, necessitates strong strategic leadership, an adaptive culture, and the ability to realign resources and processes in line with new market realities and business goals (Kotter, 1995).

5.1.3. Measuring the life cycle stage

Despite the various stage specifications offered by the academic literature, the life cycle theory proposes that firms inevitably evolve and transition from one phase of development to another (Hanks, 1990). While initially it was theorized that companies follow the stages in a more or less linear pattern similar to the product life cycle paths, Miller & Friesen (1984) noted that corporations due to their complexity, contrary, may exhibit faster changes from one phase to another, in certain cases also jumping over to later stages very fast or even returning to previous ones. The competitive advantages and disadvantages may change over time, impacting the respective development patterns (Helfat & Peteraf, 2003). A key reason explaining this difference between the product and the corporate life cycle is the significant impact that internal company factors such as managerial decisions and chosen strategy as well as external factors such as market environment, macroeconomic factors, and competition, can have on the corporate evolution pattern (Dickinson, 2011).

The triggers and factors impacting the moves along the life cycle stages are diverse. Certain empirical indicators such as value, rareness, imitability, and substitutability of firm-specific resources as the sources for sustained competitive advantage are necessary to ensure a firm's growth (Barney, 1991). The heterogeneity in these capabilities and resources that companies have forms the internal factors impacting the specifics of the corporate development path.

Dynamic resource base theory introduced by Helfat & Peteraf (2003) expands this view by stating that the capabilities necessary for corporate growth follow similar development over time

and therefore by themselves form the “capability life cycle” necessary to ensure a corporation’s transition into another life cycle stage. Companies may face internal or external threats as well as encounter opportunities in different life cycle stages.

Appropriate determination of the life cycle stage helps the company’s leadership and decision-makers to select the appropriate strategy angles distinctive to the life cycle stage (Adizes, 1979). Measuring the company’s life cycle stage is not trivial – neither academically, nor empirically. Understanding the stage of the life cycle for a corporation is more complex than doing a similar task for an industry or product since a corporation forms a combination of countless overlapping, but distinctive product life cycle stages (Dickinson, 2011).

Given the evidence on the non-linear development pattern of the corporations, even basic measures such as time since the corporation’s inception are misleading as some of the companies grow considerably faster than others reaching certain financial sizes with considerable variance (Miller & Friesen, 1984). While other studies suggest using stock exchange listing year as the proxy for the time period when companies have reached a certain maturity, Faff et al. (2016) claim that such an approach would disregard the private companies and strongly rely on the shareholders’ decision to take the company public.

Also, absolute financial measures offer limited explanatory power given that external factors such as the country of incorporation and the respective market size can significantly impact the potential that the corporation can achieve in terms of the absolute financial size (Faff et al., 2016). Similarly, other univariate absolute measures such as financial strength are poor determinants of the overall life cycle stage given the considerable differences in the relative profitability potential across industries and specific companies. Overall, such univariate metrics contribute little to the overall determination of the respective life cycle stage and therefore have to be used with caution (Habib & Hasan, 2019).

Several studies, nevertheless, use specific financial metrics to estimate the life cycle stage. Mueller (1972) proposed a formal theory that corporations have a relatively formal life cycle underlined by their dividend payout decisions. The proposed causation stems from considerations of a value-maximizing company looking for an optimal dividend policy which based on the growth opportunities would suggest retaining all earnings in the quick growth phase and paying out all the earnings once a firm has reached its maturity stage and has limited alternative innovation driving investing opportunities. This theory is in line with a more recent suggestion from DeAngelo et al. (2006) offering to measure the life cycle stages as the proportion of the retained earnings of total assets or equity. Companies with higher retained earnings share corresponding to higher ratio value reflect the firm’s maturity, while a lack of retained earnings relative to the total balance sheet value signals the growth stage.

Multiple other contributions to academic literature similarly imply that corporate life cycle stages are strongly related to strategic and financial decisions. Investments and equity issuance decrease with the firm life cycle’s stage (Faff et al., 2016). Debt issuance and cash holdings, on the other hand, rise in the introduction and growth stages and decline in the mature and decline stages

of the firm's life cycle. Similarly, also takeover activity using the earned and contributed capital mix relation has been found to signal the association between a firm's life cycle assessment and the likelihood of becoming a bidder (Owen & Yawson, 2010). Moreover, these patterns underscore the complexity and interconnectedness of strategic and financial decision-making in firms, highlighting the crucial role of the firm's life cycle stage in shaping these decisions and the potential outcomes (Miller & Friesen, 1984).

While it has become increasingly clear that no single measure can offer a universal categorization proxy, authors tend to deploy certain combinations of the variables for life cycle classification purposes. Arguably, the first authors offering a systematic approach for the classification have been Anthony & Ramesh (1992) – splitting the life cycle into growth, maturity, and decline and classifying the firms into the life cycle stages by measuring and combining four variables: (1) sales growth (2) capital expenditure (3) annual dividend payment and (4) years since firm's establishment. The life cycle phases are accordingly characterized by:

- 1) Growth – a young company with low dividends, high sales growth, and high capital expenditure.
- 2) Maturity – a mature company with medium dividends, sales growth, and capital investments.
- 3) Decline – an old company with high dividends, but low sales growth and investments.

Several categorizations have been based on this initial approach by Anthony & Ramesh (1992), such as Yonpae & Chen (2006) offering a similar composite scoring based on quintiles, and Aharony et al. (2006) using extended dividend payout ratio (including the sale of common and preferred stock) and proxy variables measured as proportion of the total asset value of the company correcting for the potential differences in the size of the firms.

A differing approach is offered by Dickinson (2011) suggesting a life cycle proxy based on cash flow linking this relevant accounting information to the constructs of the academic theory. The method relies on the cash flow pattern examination across the net cash flow from operations, cash flow from investing activities, and cash flow from financing activities arguing that “the combination of cash flow patterns represents the firm's resource allocation and operational capabilities interacted with the firm's choice in strategy.” In total, the life cycle phases are characterized by either positive or negative cash flow at the respective stage forming eight combinations compressed into five life cycle stages as depicted in Table 5.2.

Table 5.2.

Cash flow - corporate life cycle linking model proposition by Dickinson (2011)

	Introduction	Growth	Mature	Shake-out	Decline
Operating	-	+	+	-/+/+	-/-
Investing	-	-	-	-/+/+	-/+
Financing	+	+	-	-/+/-	+/-

With respect to the value relevance, earnings and accounting performance are predicted to be more value-relevant in the mature stages, while cash flows are more value generating in the early stages of inception and growth (Black, 1998). This indicates that the life cycle stage of a firm can significantly influence the factors that are most pertinent to the firm's value creation.

Besides the quantitative methods, there are also qualitative and combined assessments for understanding the life cycle. Adizes suggests using an assessment questionnaire for the company's management to judge the company's respective life cycle stage. The assessment questionnaire, next to a standard quantitative assessment of employee count, location, and industry, includes a set of more subjective questions relating to risk-taking attitudes, general financial performance and market position, decision-making processes, and leadership (Adizes, n.d.). Also, other authors like Cao Yu et al. (2009) have used questionnaires to determine the life cycle of companies.

All in all, limitations are present and documented with respect to all of the previously summarized approaches – i.e. the univariate measures such as DeAngelo (2006) suffering from too extensive generalization, multi-variable approach such as Anthony & Ramesh (1992) requiring multiple-year observations and arguably not fully reflecting the necessary life cycle separations, and, finally, Dickinson's methodology of only accounting for the signs of the cash flow, not the absolute impact as well as potentially suffering from cash flow management patterns impacting the timing of the cash flow classification. Hence, no consensus measure is found to be superior to others. In addition, there are gaps in the literature with respect to privately held companies, confirming that existing studies have mostly focused on the examination of publicly listed companies (Habib & Hasan, 2019).

5.2. ESG drivers at different company life cycle stages

This chapter aims to explore the drivers and factors that contribute to ESG adoption for companies in different life cycle stages. There are various drivers that can impact how a company approaches sustainability, and, furthermore, at different stages of the corporate life cycle, different drivers may be more critical. Therefore, this chapter will summarize the existing academic literature on the ESG decision correlation to corporate life cycle stages. A conceptual model based on the academic literature is expected to be derived as a result of this review, which will serve as the basis for developing and testing a set of drivers for the specific sample of the Baltic companies

and arriving at a model specification tailored to the Baltic region corporations. In this endeavor, it will be vital to acknowledge the interplay of factors such as regulatory environment, societal context, stakeholder expectations, and firm-specific characteristics, as these can influence both the motivation and the capacity of firms at different life cycle stages to adopt and implement ESG practices (Aguilera et al., 2007).

5.2.1. Combining corporate life cycle stages with corporate sustainability decisions

Each new corporate development stage is associated with certain challenges and changes that corporations have to consider and undergo to ensure a successful transition to the next life cycle stage (Adizes, 1979). In case organizations fail to adapt to the changes, they are faced with a higher risk of deferred development and failure. Structures and patterns that are suitable at one stage of development may be unproductive and even detrimental in succeeding life cycle stages (Hanks, 1990). In line with the changes in organizational structures and financial decisions in terms of investments, reporting, financial planning, and dividends, a strand of academic literature has concluded that the respective life cycle stages and transitions between them have an impact also on the corporate governance mechanisms and social responsibility actions (Habib & Hasan, 2019). The adoption of financial policies based on the life cycle stages also includes effects on ESG disclosure practices (Atif et al., 2022).

The existing evidence includes a study by Habib and Hasan (2019) analyzing the impact of the corporate life cycle on social responsibility actions for US companies over an extended period covering 1991 to 2013. Their results state that companies in the maturity stage exert higher investment in CSR activities (Habib & Hasan, 2019). Regional evidence from Egypt similarly shows a significant relationship between corporate sustainability and firm life cycle stages (Gamal et al., 2022). Authors find a significant explanatory power stemming from the respective life cycle stage and corporate sustainability practices suggesting that companies should aim to base their ESG decisions centered on their life cycle stage to ensure long-term value and growth. Similar results suggest that CSR engagement is correlated to the life cycle stages as measured by certain financial constraints in each of the development phases (Zhao & Xiao, 2019). Finally, CSR activities are found to differ significantly across the life cycle stages and are measured as lower before and after the maturity stage (Diebecker et al., 2017). Their results show that the free funds available increase CSP during the growth, maturity, and decline stages, while ownership concentration lowers the CSR investment level overall. To sum up, it can be concluded that corporate sustainability correlates to the corporate life cycle stage. This underlines the importance of a dynamic approach to corporate sustainability, recognizing that different stages of the life cycle present distinct opportunities and challenges for integrating and advancing sustainability objectives within the firm (Orlitzky, 2014).

Life cycle theory, when applied practically, provides the organization with relevant action recommendations and assessment of focus areas. Hence, understanding the essence of the life cycle can aid corporations in employing valuable resources optimally to gain a competitive advantage

(Adizes, 1979). In terms of ESG, stakeholders have different corporate sustainability expectations for firms in various life cycle stages. The demands are driven not only by the regulatory implications considerably targeting larger and more mature companies, but also by customers, partners, employees, and other crucial stakeholders that, in contrast to the mainstream current regulations, might exert certain pressure also in the earlier stages of the life cycle.

The literature so far has rather focused on single ESG drivers that could be applicable to corporations at specific stages of the life cycle. In addition, while a considerable share of the existing literature on the domain dates back several decades, when the ESG definition had not been formalized, the CSR, CSP, and ESG in this review can be perceived as substitutes. Therefore, there is a clear need for further research that specifically explores the interrelationships between ESG drivers and the corporate life cycle stages in the contemporary business context, recognizing the evolved understanding and application of ESG principles. The remainder of this sub-chapter provides an overview of the fragmented academic evidence summarizing ESG factor relevance at certain life cycle stages.

Resource base

One of the key determinants of the potential investment in the ESG measured CSR activities stem from resource availability. Resource base theory suggests that differences across corporations can be explained by the set of resources including human capital, financial resources, reputation, physical and intangible assets, etc. that companies have acquired and possess at various stages of their life cycle. Based on the bundle of resources a company has, it can establish capabilities, build skills and engage these resources in various activities (Barney, 1991).

The corporate behavior is often impacted by the financial and economic environment the company is facing. Such aspects as the overall financial health of the company, the economic cycle in the market as well as the competitive intensity may impact the resource split the corporation is choosing. Also, certain conditions have to be ensured that the company is ready and willing to act in a way that is socially responsible (Campbell, 2007). Furthermore, Campbell finds that the direct factors are mediated by institutional influences such as regulations, peer organizations enforcing corporate behavior norms, associatory behavior among companies themselves as well as stakeholder dialogue. In terms of life cycle theory, this study suggests that even though companies having larger resource availability generally are more likely to engage in CSR activities, institutional and market factors can act as drivers to enhance such behavior also for less resourceful companies.

Firms in the earlier stages of development are faced with limited resources that can be invested in CSR activities. Studies show that CSR investments are costly, therefore company's resource base and capabilities acquired with time increase the ability of companies to afford CSR investments (Habib & Hasan, 2019; Russo & Perrini, 2010). When moving along the life cycle stages, CSR activities become affordable, thus mature firms tend to participate in this type of activities more eagerly (Miller & Friesen, 1984). In addition, companies that face fewer financial

constraints and are performing better financially have more resources to spend on ESG-related activities, thus size and resource availability are likely to be stronger drivers in the later stages a of the company's development (Hong et al., 2012).

Organizational factors

Despite the potential challenges in resource availability, the data shows that the sustainability agenda is relevant also for start-up stage companies. According to World Economic Forum data, a vast majority of surveyed start-ups (68%) integrate ESG in their business strategy from day one of their operations (see Figure 5.1.).

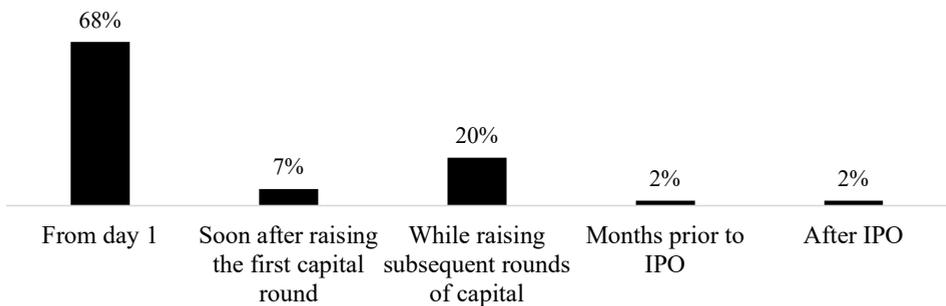


Figure 5.1. Timing of ESG strategy. Created by the author based on World Economic Forum data for 2022.

Thus, the current tendencies in the market as supported by World Economic Forum data, show that there are sufficient early-stage companies, whose deliberate choice for a more sustainable business model or organizational attributes, can be an ESG driver starting from the early stages of a company's development. In line with purpose driven behavior and corresponding business model, an additional organizational factor impacting sustainability adoption is employee attraction and retention. It has been named as one of the core focus areas of large corporates as of 2022 (The Conference Board, 2022), as well as found to be an important driver of ESG engagement for start-up companies (World Economic Forum, 2022).

In addition, a strand of literature examining the marginal benefit of engaging in CSR activities finds that substantial early investments are increasingly crucial for establishing barriers to entry to potential competitors. CSR engagement can help companies to build a good corporate image and improve corporate reputation (Fombrun & Shanley, 1990), which can then be beneficial for companies in earlier life cycle stages to achieve new customer groups, gain competitive advantage, and aid in external resource attraction, thus concluding that the marginal benefit of CSR investments is higher for younger firms. Consequently, certain market positioning benefits, such as a wish for competitive advantage, can be more pronounced for earlier-stage companies. As sustainability practices converge within an industry over time (Ioannou & Serafeim, 2019), the impact is potentially diminishing after a longer time of active operations in the market. Therefore,

it suggests the strategic importance for early-stage firms to prioritize and embed CSR activities into their business models as a competitive tool that can drive differentiation, market positioning, and long-term value creation (Hart, 1995).

Society

Larger firms usually associated with a more pronounced exposure to media and public visibility reach higher levels of CSR involvement (Reverte, 2009). Given their size and public visibility, these larger firms also bear a greater responsibility for demonstrating ethical and sustainable business practices, as their actions can have broader societal impacts and set industry benchmarks. On the other hand, other evidence shows that also younger companies can benefit from a positive reputation boost in terms of ESG-compliant activities in attracting customers and boosting visibility (World Economic Forum, 2022). This suggests that early incorporation of ESG practices can play a vital role in shaping the corporate identity of younger firms, positioning them as ESG-conscious companies and helping them gain traction in an increasingly sustainability-focused marketplace.

Similarly, it can be argued for companies in the maturity stage of the life cycle. At this stage, the company's resource base is reaching its peaks and slowly diminishing. Market challenges and a low level of innovation can endanger opportunities and reduce profitability. Firms at the maturity stage can be more inclined to engage in CSR initiatives to create reputational capital and unlock new opportunities in order to avoid entering the decline phase (Zhao & Xiao, 2019). Therefore, it is probable that reputational factors can act as an ESG driver at multiple stages of a company's development.

With respect to customer demand, while several studies (i.e. (Du et al., 2013)) have shown that customers show a greater willingness to choose products from companies that are CSR-oriented, the majority do not indicate clear distinguishment between the difference in expectations depending on whether the company is a start-up or a large corporation. Thus, it can be assumed that customer expectations apply equally to companies in all life cycle stages.

Finally, according to academic literature, membership in associations and business clubs can have an impact on firm's willingness to engage in corporate sustainability activities. Consequently, these associations and activities they are undertaking can play an important role in shaping the way how their members perceive and act on the social and environmental practices (Besser & Miller, 2011). Given that such memberships are potentially more impactful for younger, recently established companies, associations are likely to be an important ESG driver particularly in the first stages of the corporate development and rather lose its relevance when approaching the maturity.

Ownership type

In respect of ownership structures and external financing, younger and smaller companies can gain from CSR activities in terms of higher visibility in the market allowing them to employ their

ESG factors for higher legitimacy and easier access to external financing, which is especially challenging in the early life cycle stages (Udayasankar, 2008).

During the growth stage, companies usually tend to enjoy an increased level of profitability, thus theoretically companies would have more resources to invest in the ESG activities. Nevertheless, companies are equally encouraged to continue their investments to capitalize on business expansion possibilities and maintain their relative position vis-à-vis their competitors (Black, 1998). Additionally, businesses in the growth phase see a wider impact from their stakeholders, thus ensuring healthy ESG performance can help companies in their stakeholder relationships including their owners and investors (Habib & Hasan, 2019). Prior studies suggest that particularly the growth-stage companies are most frequently faced with new investors supporting the expansion. In addition, venture capitalists and private equity funds provide, not only access to financing, but also mentorship, strategic guidance, network access, and other non-financial support (Hellmann & Puri, 2002) leading to a consideration that they could well be seen as corporate sustainability drivers. This implies that these types of investors, who often have a broader perspective on sustainability and market trends, can play a pivotal role in embedding ESG principles in growth-stage companies, thus shaping the firms' long-term sustainability trajectories.

For maturity-stage companies a significant, positive connection between sustainability ratings and ownership by institutions and foreign investors is found, while ownership by managers is negatively associated with companies' social performance ratings (Soliman et al., 2013). In addition, financing needs at this stage are supplied either through internal sources, if the company's resources allow it, or acquired externally by either private equity funds or banks (Berger & Udell, 1998). The maturity stage is also the one most associated with companies going public via a stock listing (Pagano et al., 1998). Thus overall, it could be expected that more formal, institutional ownership patterns in the later stages of the corporate life cycle will be more relevant than any ownership impacts in the earlier life cycle stages.

Management

The corporate governance facet of the ESG decisions is found to be more pronounced in the later phases of the corporate life cycle. Proper CG set-up and professional management team are found to be helpful in terms of solving agency problem (McColgan, 2001), thus companies having more complex organization structure and more refined management body can benefit from higher transparency and clearer governance rules by reducing opportunistic behavior and conflicts of interest. The same holds true for a higher degree of the board diversity given that later life cycle stages are also usually associated with more sophisticated management set-ups.

With respect to the CEO role – it is to be expected that the largest single impact could potentially be achieved in the earlier life cycle stages due to the absence of more formal corporate governance practices and elaborated management teams. As the organizational form and structures of the enterprise in the start-up phase are usually underdeveloped – there is a centralized decision-

making process and the power in most cases is centralized in the hands of the CEO or founders (Hanks, 1990).

Regulation

As discussed in the previous chapters, a particularly important ESG driver is legislation stimulating with reporting requirements not only the investors (Barnett Waddingham, 2022), but also effectively motivating the corporations (Daugaard & Ding, 2022). As summarized in Chapter 1.2, the current EU regulatory landscape in terms of disclosure obligations and mechanisms is dominantly relevant for larger (and thus usually more mature) companies, nevertheless, certain aspects are also indirectly relevant for smaller and younger entities.

A particular role can be attributed to certain procurement procedures requiring companies to reveal their ESG data in the competing procedures, thus procurement corresponding to the “green practices” can be seen as a potentially relevant ESG driver for particularly earlier-stage companies that are not directly exposed to the ESG disclosure requirements (Lăzăroiu et al., 2020). Nevertheless, in the introductory stage, companies may not have the resources or capacity to participate in larger green procurement initiatives, therefore it is likely to be a more important driver in the later development stages.

With respect to sustainability-related certifications, the market is constantly growing and has not yet reached its saturation level meaning that currently, the wish for obtaining industry-relevant sustainability certification can be seen as equally relevant to corporations across all corporate life cycle stages.

Industry

An increase in competition is associated with superior CSR performance (Fernández-Kranz & Santalo, 2010). A similar impact is also documented by a study exploring that higher intensity of rivalry and CSR of competitors increase firm’s CSR performance (Hawn & Kang, 2013). While no direct relationship with life cycle stages has been documented, it could potentially be assumed that industry specifics would overrule the certain life cycle stage, thus belonging to a certain sector would not differ based on the company’s development stage but rather from the specific industry.

With respect to the pressure by competitors, it is more likely to be an ESG driver in the growth and maturity stage of the corporate life cycle. Mature, well-established companies are usually associated with stronger market positions. Nevertheless, they are likely to face stronger competition coming as well from the established market players as well as new entrants. To preserve the market share, companies may feel competitive pressure to excel in the field of corporate sustainability to appeal to the customer demands, thus using ESG as a source of competitive advantage. Equally, if the competitors are showing strong ESG performance, certain peer pressure can occur to other market players. This competitor pressure can drive companies to improve their ESG performance and prioritize sustainability initiatives, as they strive to maintain their market position and meet the evolving expectations of their stakeholders.

Overall, as can be seen from the academic, regulatory, and business literature when combining ESG decisions with the life cycle stage, so far literature has less differentiated between the multiple stages of the corporate life cycle. Often, the tendencies are overlapping or unclear. Especially, the two stages of a business's life cycle – maturity and decline – are frequently not separated as mutually exclusive. A company can move between the two stages and return based on certain market conditions and specific company events (such as engagement in merger and acquisition activities or internal product or market expansion activities). Therefore, after the initial round of discussions with experts, it was decided to develop the set of drivers for three key corporate life stages – introductory, growth, and maturity, where the differences can be distinguished the clearest. This approach would also be in line with the proposal by Smith, Mitchell, and Summer (1985) suggesting the distinction between the three following life-cycle phases – inception, high growth and maturity. It is expected that by focusing on these distinct stages, it will become possible to identify and analyze the specific drivers and challenges associated with ESG decision-making, enabling a more targeted and nuanced understanding of the relationship between corporate life cycle stages and ESG practices.

Based on the compilation of the literature a conceptual model (see Figure 5.2.) was developed suggesting the expected relevant ESG drivers and indicators in each of the three life cycle stages of companies.

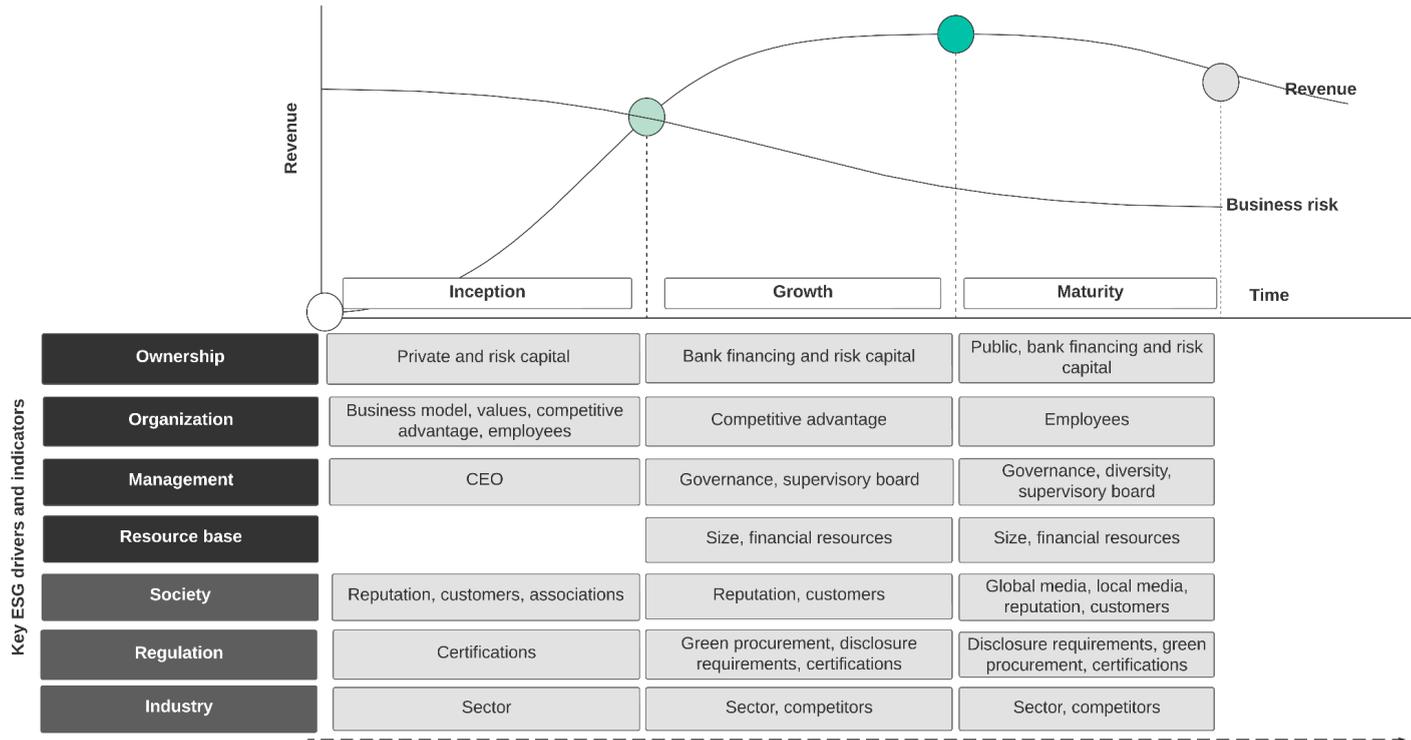


Figure 5.2. Conceptual model of ESG drivers based on corporate life cycle stages. Created by the author based on review of academic literature.

On the left side of the model, the seven key drivers are compiled consisting of the four firm-internal drivers (ownership, organization, management, and resource base) and the three market drivers (society, regulation, and industry). Based on the summary of the literature the relevant indicators are selected for each of the corporate life cycle stages (inception, growth, and maturity).

The conceptual model developed suggests the relevant ESG drivers for each stage of the corporate life cycle, however, it does not currently indicate the importance or weight of each factor. Furthermore, in its current form it is based on the expertise of the author and academic literature. The purpose of the model is to serve as a guide for companies, policymakers and financiers seeking to find the relevant ESG drivers for companies at different life cycle stages. To achieve this, a tested model that takes into account the importance and weight of each ESG driver is necessary. This model will provide a more comprehensive and effective tool for companies to use in their sustainability efforts, allowing them to prioritize and allocate resources to the most impactful ESG drivers.

The approbation of the model follows in the next chapter. In addition, the method chosen will allow estimating the magnitude of each of the drivers examined, allowing the author to understand the key ESG drivers relevant at each of the three corporate life cycle stages.

5.2.2. Methodology

To examine the key drivers of the ESG implementation at various life cycle stages of a company, the analytical hierarchy process (AHP) approach was applied.

AHP is an effective method applied in complex problem-solving settings and was developed by (Saaty, 1980). It assumes that any complex problem can disintegrate into numerous sub-problems in terms of hierarchical levels. By understanding the more complex problem and splitting it up into the relevant drivers or attributes, the choice and prioritization follow from a set of experts (Dyer & Forman, 1992).

The AHP method practically relies on pairwise comparisons following the judgments of experts to derive priority scales. Comparisons are made using a scale that embodies the strength of the difference expressing how much more, one comparable option dominates another with respect to a given attribute. Based on these scales, intangible prioritization and weights are derived via mathematical computations (Saaty, 2008). AHP, therefore, is a useful technique for measuring intangible factors that per se cannot be expressed numerically (Whitaker, 2007)

(Saaty, 1980) introduced AHP as a decision-making tool helping to solve unstructured problems in economics, social, and management sciences. The approach has been applied by scholars studying topics like critical success factors, measuring prioritization sequences, and seeking ways of assigning numerical values and weights to otherwise hardly measurable properties (Darko et al., 2019). It has been widely adopted in research papers in areas such as education, social and political studies, engineering, industry, government studies and, manufacturing (Vaidya & Kumar, 2006). In the sustainability area, AHP method has been used by scholars researching ESG

drivers for investors (Sood et al., 2022), prioritizing sustainable city indicators (Chan & Lee, 2019), and sustainable development drivers (Szabo et al., 2021).

A scale of intensity suggested by Saaty (see Table 5.3.) is used to capture the relative importance or the weight of all factors included in the analysis. If a factor has a subfactor (sub-criteria) it is denoted as the parent factor, otherwise, it is called a leaf factor. The total addition of all the attributed weights to the parent factors sums up to 100%, similar to all the leaf criteria below one parent factor. The differences in the weights show relative importance.

Table 5.3.

AHP scale based on Saaty (1980)

Intensity of importance	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation
2,4,6,8 can be used to express intermediate values		

Pairwise comparisons of factors within the same hierarchical level with respect to the parent elements in the higher level of the hierarchy are established. These pairwise comparisons are conducted to transform verbal assessments into numerical values on a scale from 1 to 9, signifying the intensity of the relative importance.

The pairwise comparisons are usually provided by subject matter experts. Unlike statistical samples, there are no strict requirements with respect to the minimum sample size of the experts for the AHP analysis. On the other hand, sometimes smaller expert panel size is even preferred. If an expert evaluating the pairwise dominance is experienced and highly professional in the area, it can be preferred to limit the sample size rather than dilute the individual accuracy with the participation of others having less professional judgment (Sagir Ozdemir & Saaty, 2015).

Once the experts' opinions have been gathered, the mathematical computations are used to arrive at the assessed weights of the factors. By using an example of two factors, F_j and F_k , the expert is asked to express a comparative judgment about the relative importance of F_j and F_k with respect to the goal or contribution towards it. The comparative judgment is captured on a semantic scale indicating the differences in the intensity of the importance from 1 to 9. The intensity is

consequently converted into a numerical integer value a_{jk} . The relative importance of F_k over F_j is reciprocal, meaning $a_{kj}=1/a_{jk}$. A pairwise comparison matrix A is created based on a_{jk} and its reciprocal figures, for all the factors, containing only positive entries and being homogenous.

The method suggests that the weights of factors can be estimated by finding the principal eigenvector w of the matrix A via the equation (5.1.):

$$A \cdot w = \lambda_{\max} \cdot w, \quad (5.1.)$$

where A is the matrix; λ_{\max} the largest or principal eigenvalue of A ; and w the principal eigenvector (vector of priority factors).

The required condition proposed by Saaty (1980) is that the matrix exhibits a minimum level of consistency meaning that a certain level of coherence should exist between judgments. Saaty introduced the following inconsistency index (5.2.):

$$CR = (\lambda_{\max} - n) / (\Lambda - n), \quad (5.2.)$$

where Λ denotes the average of randomly generated pairwise comparison matrices' maximal eigenvalues suggesting a threshold $CR \leq 0.10$ of acceptable inconsistency. CR of 0.10 or less is considered acceptable; otherwise, matrix A is considered to contain a certain degree of randomness.

Practically, there are various approaches to how the calculation process can be ensured – ranging from manual calculations using software such as Microsoft Excel to dedicated online tools, for example, AHP-OS allowing to execute the mathematical computations in an automated way via an online software (Goepel, 2018).

Despite the vast area of application, certain shortcomings are also associated with the AHP. The AHP method is strongly impacted by the biases of human judgment, therefore the output of the technique can be impacted by the choice of the experts in the sample (Sagir Ozdemir & Saaty, 2015). Another area of discussion is the employed judgment scale. While the classical approach uses a scale from 1 to 9 (Saaty, 1980), several derivations of alternative measures have been used in the literature. While such alternatives indeed yield different weighting outcomes, the differences in the judgment scale do not alter the ranking of the criteria (Franek & Kresta, 2014). Another limitation is that the AHP does not account for uncertainty, which can be a significant factor in many decision-making processes.

5.2.3. Sample and data

Figure 5.3. illustrates the hierarchy tree derived based on the previously compiled list of ESG implementation drivers – split into the seven categories of internal and external driving factors and the respective indicators.

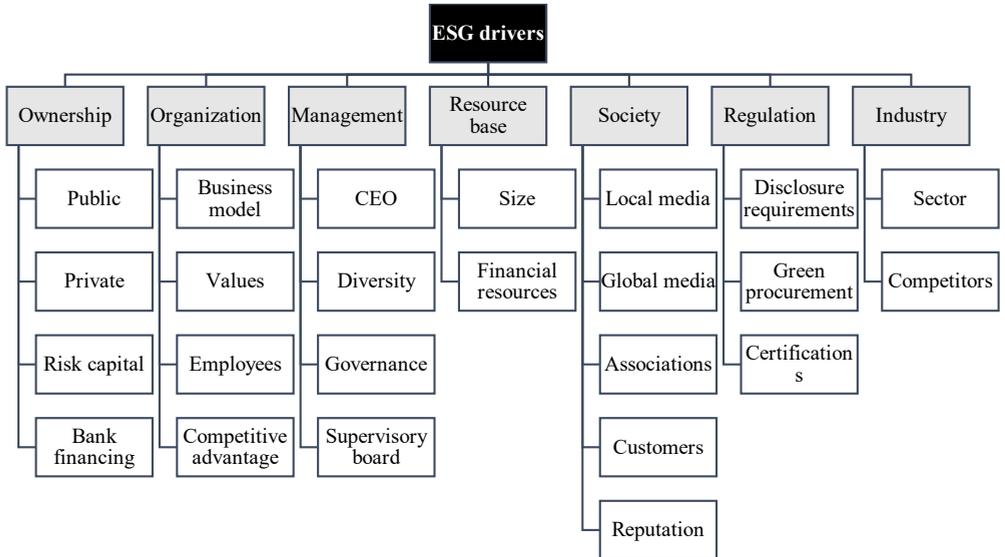


Figure 5.3. AHP hierarchy of the ESG drivers. Created by author.

There are two parts to the AHP questionnaire for the survey of this research. The first part is the AHP questionnaire for prioritizing the seven key factors (ownership, organizational attributes, management, resource base, society, regulation, industry) that summarize the two broader groups of internal and external ESG drivers. The second part is the AHP questionnaire for prioritizing the key indicators within each of the seven key factors. The range of indicators within one factor varies from two to five.

Following pre-discussions with the potential expert panel members, it was decided that a three-stage model (inception, growth, maturity) of the organizational life cycle proposed by Smith, Mitchell, and Summer (1985) will be used for the elaboration of the relevant drivers due to the fact that it might be challenging to recognize and point out companies in the decline stage that can be used as reference examples. By adopting the three-stage model, it allows for a more practical and manageable framework to examine the ESG drivers across different life cycle stages.

Three different expert panels and corresponding questionnaires were, therefore, created matching the three evaluated corporate life cycle stages – inception, growth, and maturity. These panels were comprised of experts in financing and investment, as well as industry associations with considerable exposure and expertise in ESG in the Baltic region. Since venture capital funds often invest in businesses across the three Baltic countries, there was no need for a precise geographical split of the experts.

The expert panel was split in line with the respondent's expertise and professional experience in one of the particular life cycle stages:

- (1) Inception stage experts comprised a sample of venture fund partners, start-up associations, and business angels as well as ESG experts focusing on sustainability consulting for young companies.
- (2) Growth stage experts included experts from the largest and most impactful private equity funds operating in the Baltic region, risk and venture capital association leaders as well as business consulting representatives engaged and working with consulting growth stage companies.
- (3) Maturity stage respondents encompassed highly ranked commercial bank representatives and ESG officers, asset managers, and ESG experts from business consulting companies.

In total, 25 experts completed the pairwise comparison, with 24% representing the affinity to the inception stage companies, 36% to the growth companies, and 40% submitting their answers with respect to the maturity stage companies. The expert sample for the inception stage was the smallest as the ESG relevance for young start-up companies currently in the examined Baltic region is believed to be the lowest. This has also been confirmed by the previous study of regional investors (Zumente & Bistrova, 2021). On the other hand, given the EU-wide regulations as well as requirements by the financiers and pressure from associations, the companies in the maturity stage are certainly faced with the widest exposure to corporate sustainability, thus also the relevant expert circle was the largest. The complete list of the experts who contributed to the questionnaire can be found in Table 5.4.

Table 5.4.

List of experts included in the AHP questionnaire.

No.	Life cycle	Position	Represented institution
	stage		
1	Inception	Founder	Start-up sustainability consulting "Ziemeļmeita"
2	Inception	Head of start-up division	Latvian Investment and Development Agency
3	Inception	Partner	New Nordic Ventures
4	Inception	Investment director	Terra Ventures
5	Inception	Manager in start-up consulting	KPMG
6	Inception	Partner	First Pick venture capital fund
7	Growth	Investment director	ZGI Capital
8	Growth	Investment director	Baltcap
9	Growth	Head of ESG	PwC Baltics
10	Growth	Managing director	Estonian Chamber of Commerce

11	Growth	Executive director	Latvian Venture Capital association
12	Growth	Member of Board	INVEGA Lithuania
13	Growth	Managing director	Estonian Venture Capital association
14	Growth	ESG Officer	ESG Officer at Citadele Bank
15	Growth	Advisor to Management Board	Finance development institution of Latvia, Altum
16	Maturity	Supervisory Board member	Financial Capital Market Commission Latvia
17	Maturity	Head of investments	Luminor bank
18	Maturity	Management board member and ESG expert	Stock-listed company Eesti Energia
19	Maturity	Head of ESG	State-owned company Tet
20	Maturity	Board member advisor	Central Bank of Lithuania
21	Maturity	Board member	Institute of Corporate Sustainability Latvia
22	Maturity	Head of client coverage	SEB Bank
23	Maturity	Head of group ESG target setting	Swedbank Baltics
24	Maturity	Vice President	Baltic Corporate Governance Institute
25	Maturity	ESG and sustainability director	KPMG Baltics

The data collection was done over a period of 3 weeks, ending on 5 December 2022. An online survey was set up for experts to be able to evaluate each pair of factors in a systematic way. The online survey (see Appendix 6) started with a short introduction of the background of the study and the goal of weighing different drivers and factors impacting ESG implementation decisions across Baltic corporations. It also provided an explanation of the respective corporate life cycle stage. The survey required participants to indicate their name, institution, years of experience, and ESG affinity to ensure that the sample of the AHP is clear and corresponds to the previously expected expertise to provide an educated opinion on the subject matter at hand.

To ensure a common understanding of the drivers and factors, a list of definitions (see Table 5.5.) suggested by the author was included before the pairwise comparison, along with two examples of how to use the respective weighting.

The question for every pair of drivers and factors applied was always the same: Which of these drivers is more important for ESG implementation in Baltic [inception (start-up) / growth / maturity stage] companies and by how much? The applied AHP questionnaire used a scale from 1 to 9 ranging from 1 “equal importance”, 3 “moderate importance”, 5 “strong importance”, 7 “very strong importance” to 9 “extreme importance”.

Table 5.5.

List of definitions of the ESG drivers. Created by author.

Driver	Factor	Definition
Ownership	Private	Owner's request to adhere to certain ESG standards for privately-held companies
	Public	Owner's request to adhere to certain ESG standards (i.e., state-owned companies, listed companies, international groups, etc.)
	Bank financing	Pressure from external financing providers (commercial banks) to implement ESG
	Risk capital	Pressure from PE/VC funds as partial shareholders to implement ESG
Organization	Business model	Intrinsic wish to adopt ESG due to the business model's sustainability aspects (i.e., circular, impact, etc.)
	Values	Intrinsic wish to adopt ESG due to the purpose and values of the company
	Employees	Request by employees to engage in ESG activities
	Competitive advantage	Intrinsic wish to adopt ESG to achieve competitive advantage vis-à-vis its competitors
Management	CEO	Strong CEO request to implement ESG
	Diversity	A high degree of diversity among the company's executives as a driving force for sustainable behavior
	Supervisory board	Request from supervisory board to implement ESG
	Governance	Existent corporate governance mechanisms that favor ESG adoption
Resource base	Size	Higher company's visibility in public due to size
	Financial resources	Sufficient financial capabilities to implement ESG-compliant practices
Society	Local media	Pressure from local media
	Global media	Pressure from global media
	Associations	Encouragement from local and international associations
	Customers	Requests from customers to see ESG-compliant behavior / transparency
	Reputation	Company's wish to improve reputation by engaging in ESG activities

Regulation	Certifications	Company's wish to obtain any external certifications that require ESG compliance
	Disclosure requirements	Regulatory pressure for mandatory ESG disclosures (currently applicable only to large companies, from 2026 also to SMEs)
	Green procurement	Pressure from procurement processes that require ESG-related disclosures
Industry	Industry sector	Sector representation that is prone to ESG controversies
	Competitor behavior	Pressure from competitors to match their ESG activities

The responses were gathered in an online survey tool (QuestionPro) and transferred to the AHP software (see Appendix 7 for a screenshot for illustration purposes of the online AHP software). While the majority of the questionnaires were within the ranges of the consistency index to be treated as reliable, in 3 cases the respondents were asked to slightly revise the numerical scaling of the judgment until a value of CR smaller than 0.1 was obtained. One obtained answer was excluded from the final sample due to inconsistencies.

5.2.4. Results

Based on the methodology for the AHP process (Goepel, 2018), the overall consensus level was calculated in each of the sample groups (see Table 5.6.). While the highest level of consensus and homogeneity was reached in the inception stage sample, overall, the level of homogeneity was found to be moderate indicating that the group of experts had a relatively similar opinion on the preferences.

Table 5.6.

AHP results homogeneity and consensus. Created by the author.

	Inception sample	Growth sample	Maturity sample
Average AHP group consensus:	73.1%	60.0%	63.1%
Rel. Homogeneity:	79.3%	70.4%	73.6%

The AHP software produced results for each of the life cycle stage categories. The key drivers and corresponding factors were summarized and compared based on the life cycle stages allowing to compare the impact of certain drivers across different life cycle stages. The following sub-chapters describe in more detail the key findings split into the respective life cycle stages.

5.2.4.1. Inception phase companies

The overall weights of the ESG factors and indicators in the introductory stage are summarized in Table 5.7.

Table 5.7.

AHP weights for the inception stage companies. Created by the author.

Driver	Weight	Factor	Weight	Total weight	Rank
Ownership	0.092	Public	0.129	0.011	22
		Private	0.202	0.018	18
		Bank financing	0.132	0.012	21
		Risk capital	0.537	0.048	6
Organization	0.103	Business model	0.272	0.037	10
		Values	0.253	0.034	12
		Employee demand	0.169	0.023	16
		Competitive advantage	0.307	0.041	9
Management	0.262	CEO	0.628	0.173	1
		Diversity	0.084	0.023	15
		Supervisory board	0.157	0.043	8
		Governance	0.131	0.036	11
Resource base	0.249	Size	0.325	0.075	3
		Financial resources	0.675	0.157	2
Society	0.062	Local media	0.057	0.004	24
		Global media	0.102	0.007	23
		Associations	0.206	0.014	20
		Customers	0.284	0.019	17
		Reputation	0.352	0.024	14
Regulation	0.14	Certifications	0.413	0.047	7
		Green procurements	0.446	0.050	5
		Disclosure requirements	0.141	0.016	19
Industry	0.092	Industry sector	0.277	0.024	13
		Competitor behavior	0.723	0.064	4
Total	1	-	7.00	1.00	-

In the inception stage, the key ESG driving factors as depicted in Figure 5.6. are management (0.262) and resource base (0.249). Primarily, the success of a company in its early stages is heavily dependent on the management team. The management should have a clear vision for the company's development as well as have the ability to execute that vision. The management team should also have a good understanding of the company's resource base and be able to put them to use in the most efficient way – meaning that with the increase in size and visibility of the company (be it by

attracting financing rounds or public exposure via trade fairs or increased revenue) companies are incentivized to think more of the ways how to engage in corporate sustainability activities.

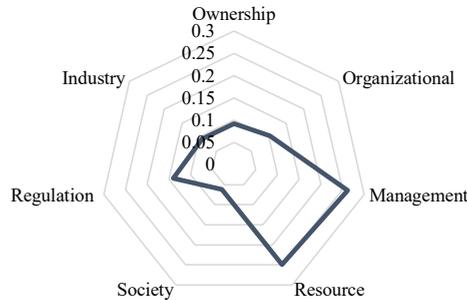


Figure 5.6. Overview of the key drivers at inception stage, created by the author.

When evaluating the respective indicators of each of the factors in Table 5.7., interestingly, the strongest single indicator for driving sustainability in the introductory stage is the CEO (0.173 of the total weight), emphasizing the importance of management at this stage. In the initial phase, the CEO often holds the most crucial role within the company. The task of crafting the company's vision and strategy predominantly falls upon the CEO. Additionally, they are responsible for assembling a competent team, and delivering clear, motivational leadership and direction. Essentially, the CEO's influence and decision-making capabilities are vital in steering the company towards success. The CEO is usually also responsible for attracting capital, managing operations, and transforming the company in a way it can successfully present itself in the market. While usually being the face of the company, the CEO is also responsible for obtaining a favourable reputation. They must be able to inspire and motivate employees and manage resources effectively, thus if the CEO is set on the right sustainability agenda, they will also be the key drivers for ESG practice implementation from the early days. Furthermore, the presence of a supervisory board in early stage of the company is also acknowledged as a relatively strong ESG driving factor (0.043 of the total weight). A supervisory board can be an asset to the company by providing guidance and advice to the founders and management team, helping improve the company's performance, and providing an outside perspective on the company's strategic decisions and business plans. As the board usually also has the authority to impact decisions on key issues, they can form an impactful driving force towards ESG adoption.

Size and financial resources are important ESG drivers (0.075 and 0.157 total weights, respectively) at the introductory stage companies. Especially given the general case of limited resources at the early stages of the company's formation, the companies must prioritize their ESG efforts and focus on those areas where they can have the most impact. Given that companies must have the right resources to implement their strategies and objectives, including sufficient personnel,

the rights technology, and sufficient financial resources, it is likely that CSR priorities will not be the key focus.

Regulatory drivers are less noticeable during the early stage of a company's life cycle compared to other stages, as there are fewer regulatory compliance requirements for smaller companies. However, experts acknowledge that through certifications (0.047 total weight) and green procurement (0.05 total weight) procedures, regulatory pressure can be a significant ESG driver for early-stage companies, even if they are not subject to any disclosure regulations themselves. It means that increasing the relevance of certain industry standards (i.e., Oeko-tex or GOTS certificate for textile producers, BIO or fair-trade certificate for organic food producers, etc.) also can be an important driver for implementing sustainable business practices from early days of corporate activities.

Organizational indicators such as business model, values, and purpose as well as a competitive advantage are essential for a business to succeed. These factors are found to be the most ESG-relevant, particularly in the early stage, and become less relevant in the subsequent stages. The business model is the most influential factor among the organizational drivers (0.037). In the inception stage when the company's business model is established, companies can be seen as having more opportunities to integrate ESG considerations into their business model as they are still in the early stages of development, while a more mature company might find it more difficult to make changes to its established operations, thus internal organizational attributes are more pronounced at earlier corporate development stages.

From the industry metrics perspective, competitor behavior is one of the highest-ranked factors (0.064 total weight). Competitor behavior is relevant for young companies because it can provide valuable insights into the market, reveal facets of customer preferences, and provide an overview of the intensity of the competitive landscape. By understanding the behavior of competitors, introductory stage companies can better position their products and services to gain a competitive advantage.

The ownership factors at this stage play a relatively minor role (0.092 weight for the entire driver). The most important factor is the risk capital partner requirements (0.048), as the relevance of public ownership or bank financing at this stage is quite limited. Furthermore, venture capital and angel investors are increasingly becoming more involved in the early stages of a company's life, thus they can form additional impact on driving enterprise agenda towards sustainability.

Finally, society's pressure on ESG implementation for early-stage companies is relatively low compared to larger, more established companies. This is due to the fact that introductory stage companies often lack the resources and expertise to properly implement ESG initiatives, therefore also the expectations of society fall lower.

5.2.4.2. Growth companies

The overall weights of the ESG factors and indicators in the growth stage are summarized in Table 5.8.

Table 5.8.

AHP weight results for the growth sample, created by author.

Driver	Weight	Factor	Weight	Total weight	Rank
Ownership	0.13	Public	0.211	0.030	14
		Private	0.066	0.009	22
		Bank financing	0.400	0.056	5
		Risk capital	0.324	0.046	9
Organization	0.087	Business model	0.258	0.024	16
		Values	0.211	0.020	17
		Employees	0.141	0.013	19
		Competitive advantage	0.391	0.037	12
Management	0.125	CEO	0.314	0.046	8
		Diversity	0.078	0.012	21
		Supervisory board	0.326	0.048	7
		Governance	0.282	0.042	11
Resource base	0.088	Size	0.394	0.033	13
		Financial resources	0.606	0.051	6
Society	0.072	Local media	0.115	0.009	23
		Global media	0.096	0.007	24
		Associations	0.169	0.013	20
		Customers	0.235	0.017	18
		Reputation	0.385	0.028	15
Regulation	0.373	Certifications	0.272	0.092	3
		Green procurements	0.363	0.122	2
		Disclosure requirements	0.365	0.123	1
Industry	0.126	Industry sector	0.360	0.044	10
		Competitor behavior	0.640	0.079	4
Total	1.001	-	7.00	1.00	-

In the growth stage, the dominant key driving factor is regulation (0.373) as depicted in Figure 5.7. Given that a share of the growth stage companies certainly falls under the EU disclosure regulations, it is assessed as the key driver fostering wider ESG adoption. In its weight the regulatory driver three times exceeds the following most significant driver – management attributes (0.125).

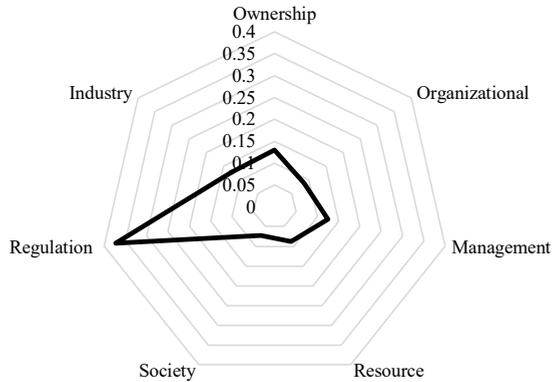


Figure 5.7. Overview of the key drivers at growth stage, created by the author.

The underlying indicators forming the key driving factors are weighed by the experts as follows. The top 3 indicators are regulation-driven (in total forming 0.373 of the total weight). Following the disclosure requirements, interestingly, green procurement is ranked as a close second meaning that supply chain-driven factors and procurement procedures where the ESG components are included in the decision-making process, foster wider ESG adoption among the growth companies. The effect of such sustainability-aware procurements is, therefore, twofold – on one hand ensuring that the supply chain of the procuring companies adheres to ESG standards, and, on the other hand, motivating the potential suppliers to ensure compliance with their operational standards. The lesser role of the regulatory factors plays certifications that were found to be the main regulatory driver for inception stage companies. While still relevant also at the growth stage, the effect is lower (0.092) compared to disclosure requirements and procurements (0.123)

Two other indicators ranked highly by the experts stem from the industry specifics. Competitors' behavior is marked as one of the highest impact factors (0.079) – ranking directly after regulatory components. Growth companies are trying to find the best approach to establish a significant and stable presence in the market, thus they also are heavily influenced by what competitors in the same industry do. Similarly, it impacts the ESG components – if competitors are strongly communicating their sustainability efforts, lagging behind can cause a negative effect on the performance and customer perception, therefore peer pressure serves as a valid ESG driving factor. Differently than in other corporate life cycle stages, also the industry sector plays a relatively meaningful role (0.044) in encouraging companies in the more “sensitive” industries to engage in ESG practices.

From the ownership driver, key indicators relevant at this stage are bank financing (0.056) and risk capital funds (0.046), with bank financing being the more important driver due to its ability to enforce stronger ESG requirements. Additionally, companies are gaining access to growth capital,

which can further support their sustainability efforts by boosting their financial resource availability.

From the management perspective, supervisory board (0.048) and corporate governance practices (0.042) are gaining relevance as ESG drivers. In particular, the board's role in overseeing management and providing strategic guidance is increasingly being recognized as a critical component of ESG performance. Furthermore, the board's ability to set the tone at the top and ensure that ESG considerations are integrated into the company's operations and strategies is also becoming increasingly important. Moreover, the board's oversight of executive compensation and its role in ensuring that executive pay is aligned with ESG performance can be seen as an additional lever by supervisory bodies of corporations to foster ESG adoption.

Finally, from organizational factors - important is competitive advantage vis-à-vis competitors (0.037). The remaining factors show relatively low importance.

5.2.4.3. Maturity stage companies

The overall weights of the ESG factors and indicators in the maturity stage are summarized in Table 5.9.

Table 5.9

AHP weights for maturity stage companies, created by the author.

Driver	Weight	Factor	Weight	Total weight	Rank
Ownership	0.081	Public	0.144	0.012	19
		Private	0.064	0.005	23
		Bank financing	0.442	0.036	10
		Risk capital	0.350	0.028	11
Organization	0.058	Business model	0.195	0.011	20
		Values	0.240	0.014	17
		Employees	0.116	0.007	22
		Competitive advantage	0.449	0.026	12
Management	0.176	CEO	0.221	0.039	8
		Diversity	0.086	0.015	16
		Supervisory board	0.416	0.073	4
		CG	0.287	0.051	7
Resource base	0.08	Size	0.311	0.025	14
		Financial resources	0.689	0.055	6
Society	0.073	Local media	0.105	0.008	21
		Global media	0.047	0.003	24
		Associations	0.168	0.012	18
		Customers	0.339	0.025	15
		Reputation	0.341	0.025	13

Regulation	0.433	Certifications	0.195	0.084	3
		Green procurements	0.199	0.086	2
		Disclosure requirements	0.605	0.262	1
Industry	0.098	Industry sector	0.380	0.037	9
		Competitor behavior	0.620	0.061	5
Total	0.999	-	7.01	1.00	-

In the maturity stage, the key driving factor for the ESG implementation as depicted in Figure 5.8 was determined to be regulation – ranked as meaningfully more important (0.433) than the closest followers – management impact (0.176) and industry characteristics (0.098). The extent of this driver’s dominance is found to be the highest in the maturity phase in line with the prediction.

The weakest effect on the mature companies’ decision to implement ESG practices were found to be associated with society-related factors and media (0.076), resource availability (0.08), and organizational characteristics (0.058).

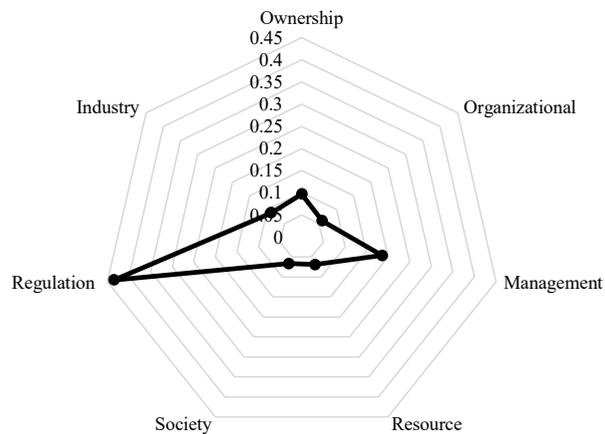


Figure 5.8. Overview of the key drivers at maturity stage, created by author.

In terms of the indicators encompassed in each of the drivers, the largest overall impact on maturity-stage companies is driven by disclosure requirements imposed by the CSRD regulation (0.262). Sustainability disclosure requirements have a high overall dominance among all 24 factors. The effect is undoubtedly the largest of all of the life cycle stages as particularly these companies already now fall under certain thresholds of ESG disclosure and will face even increased scrutiny after the changes in the legislation are made. The regulatory aspects in terms of their driving force are closely followed by green procurement initiatives relevant for companies engaged in B2B business and sustainability-related certifications.

The management driver is the second highest-ranked driver (0.176) after regulation. Particularly the supervisory board’s role (0.073) and established corporate governance practices

(0.051) are ranked high. Remarkably, CEO's power to drive corporate sustainability is ranked relatively lower than in other stages, meaning that particularly the more formal management structures and corporate governance mechanisms are more relevant for established, mature companies. In the maturity stage, also the company's board's diversity is becoming slightly more noted in comparison to other stages where it was found not to be a meaningful ESG driver contrasting the evidence previously described in chapter 4.2.

All the remaining drivers are ranked as having a rather lower level of impact on ESG adoption. From the ownership factors, the most important factors at this stage are bank financing (0.036) and their requirements for ESG compliance, whereas risk capital is ranked slightly below (0.028) bank financing. Nevertheless, the impact of these ownership factors is deemed lower than for growth companies. Society driver factors, organizational attributes as well resource matters are ranked relatively low.

5.3. Model of ESG drivers at different corporate life cycle stages

When comparing the key drivers across all three explored life cycle stages, there are certain differences that can be noted ultimately confirming the hypothesis that there are different sets of drivers that are relevant for ESG adoption motivation by the companies in various stages of their corporate development. There are also several notable differences when assessing the empirical results relative to the conceptual model. Figure 5.9. provides an overview of the key drivers across the three life cycle stages.

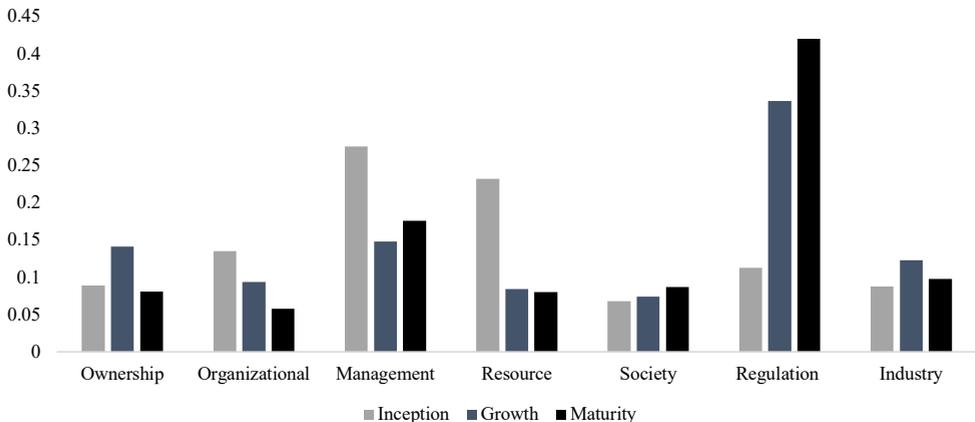


Figure 5.9. Overview of the key ESG drivers at each stage, created by the author.

Figure 5.10. additionally breaks down the single indicators forming the main drivers allowing exploring the relative weight of each of the sub-components on the overall impact level.

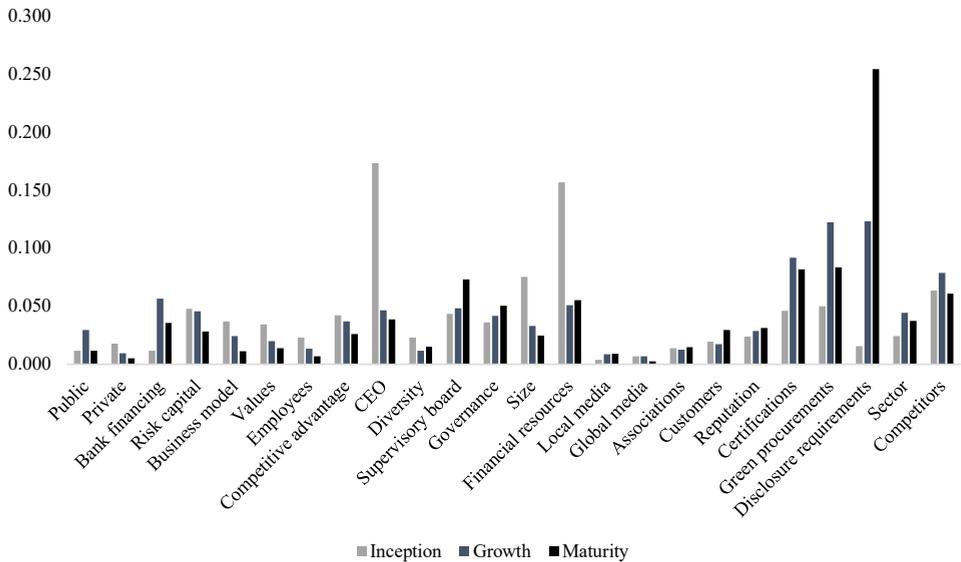


Figure 5.10. Overview of the key ESG driving factors at each stage. Created by the author.

From the internal driving factors, the most relevant one at all the stages is the company's management. The highest impact of the management is observed in the inception stage (0.276), where the CEO plays a crucial role (0.173) in driving the sustainability agenda. In the subsequent stages of development, management remains the most impactful internal driver of ESG implementation exceeding the power of owners or external financiers such as banks and venture capital funds. This result is in line with the conceptual model. The relevance of ownership factors is especially prominent in the growth stage, as this is the typical stage of corporate development where external financing is required to ensure growth. Contrary to the conceptual model, it is found that ownership factors are approximately equally relevant for early and maturity stages, indicating that the estimated impact of the public ownership and institutional investor demands is relatively less significant in the maturity stage. In the maturity stage, also the company's board's diversity is becoming slightly more noted (0.015), albeit still low, in comparison to other stages where it was found not to be a meaningful ESG driver contrasting the evidence in the academic literature (Rao & Tilt, 2016).

Similarly, contrary to the prediction, resource availability is recognized as the second strongest factor driving ESG already in the introductory stage (0.232), however, it gradually loses its relevance in the subsequent stages of corporate development (approx. 0.08) signaling that ESG adoption is expected from more mature corporations despite the extent of resource availability. Thus, as companies mature and have the capacity to invest more in corporate sustainability

activities as also elaborated by the academic literature (Hong et al., 2012) resource availability as a driver of ESG becomes less important.

Likewise, it is the case with organizational attributes. As expected in the conceptual model – while values and business model specifics are seen as one of the strongest drivers in the introductory stage (0.135), they gradually lose the relevance in the growth (0.094) and maturity stage (0.058), where the company's business model is established, and the everyday operational complexity exceeds the internal value relevance. In addition, early stage companies can be seen as having more opportunities to integrate ESG considerations into their business model as it is still in the early stages of development, while a more mature company might find it more difficult to make changes to its established operations. Contrary to the conceptual model, while the wish for competitive advantage remains relevant at all stages, employee demand is not ranked among significant drivers in the maturity stage.

With respect to external drivers, regulatory aspects are extremely relevant in the growth (0.337) and maturity stages (0.433) as companies reach a certain size for which disclosure obligations become mandatory. Its weight, compared to other external drivers, is significantly larger. For the growth companies, a greatly important component is also the pressure exerted by business partners and procurement processes (0.122) that require ESG-related disclosures. Regulatory drivers are less pronounced during the inception stage (0.113) cycle compared to other stages (around 0.4), as there are fewer regulatory compliance requirements for smaller and typically younger companies. On the other hand, experts acknowledge that through certifications and green procurement procedures, regulatory pressure can be a significant ESG driver also for young companies, even if they are not subject to any disclosure regulations themselves. It means that increasing the relevance of certain industry standards (i.e., Oekotex or GOTS certificate for textile producers, BIO, or fair-trade certificate for organic food producers, etc.) also can be an important driver for implementing sustainable business practices from the early days of corporate activities.

With respect to society, expected to be a relevant driver at all stages, as expressed by the experts, it is currently a relatively non-relevant driver for ESG adoption – even though it can be argued that particularly customers and reputational factors might play a role in corporate sustainability tendencies, the experts do not rank it as too powerful.

Finally, industry-related factors are gaining relevance when advancing the stages of the corporate life cycle. Competitors' behavior is marked as one of the highest impact factors – ranking directly after regulatory components for growth companies (0.079) and is important also at the maturity stage (0.061). As growth companies are trying to find the best approach to establish a significant and stable presence in the market, they also are heavily influenced by what competitors in the same industry do. Similarly, it impacts the ESG components – if competitors are strongly communicating their sustainability efforts, lagging behind can cause a negative effect on the performance and customer perception, therefore peer pressure serves as a valid ESG driving factor. As expected by the conceptual model, the impact at all three stages is relatively similar.

Figure 5.11. provides an updated ESG driver model – based on the conceptual model compiled as a result of the review of academic literature and adjusted based on the empirical analysis centering on the specific Baltic market experts. It highlights the three elaborate corporate life cycle stages and the corresponding ESG drivers and indicators deemed to be relevant for companies in the specific stage of development. In order to include only the drivers and indicators that are relevant, the average indicator weight was calculated for each of the life cycle stages and only the indicators scoring above the average were included as relevant.

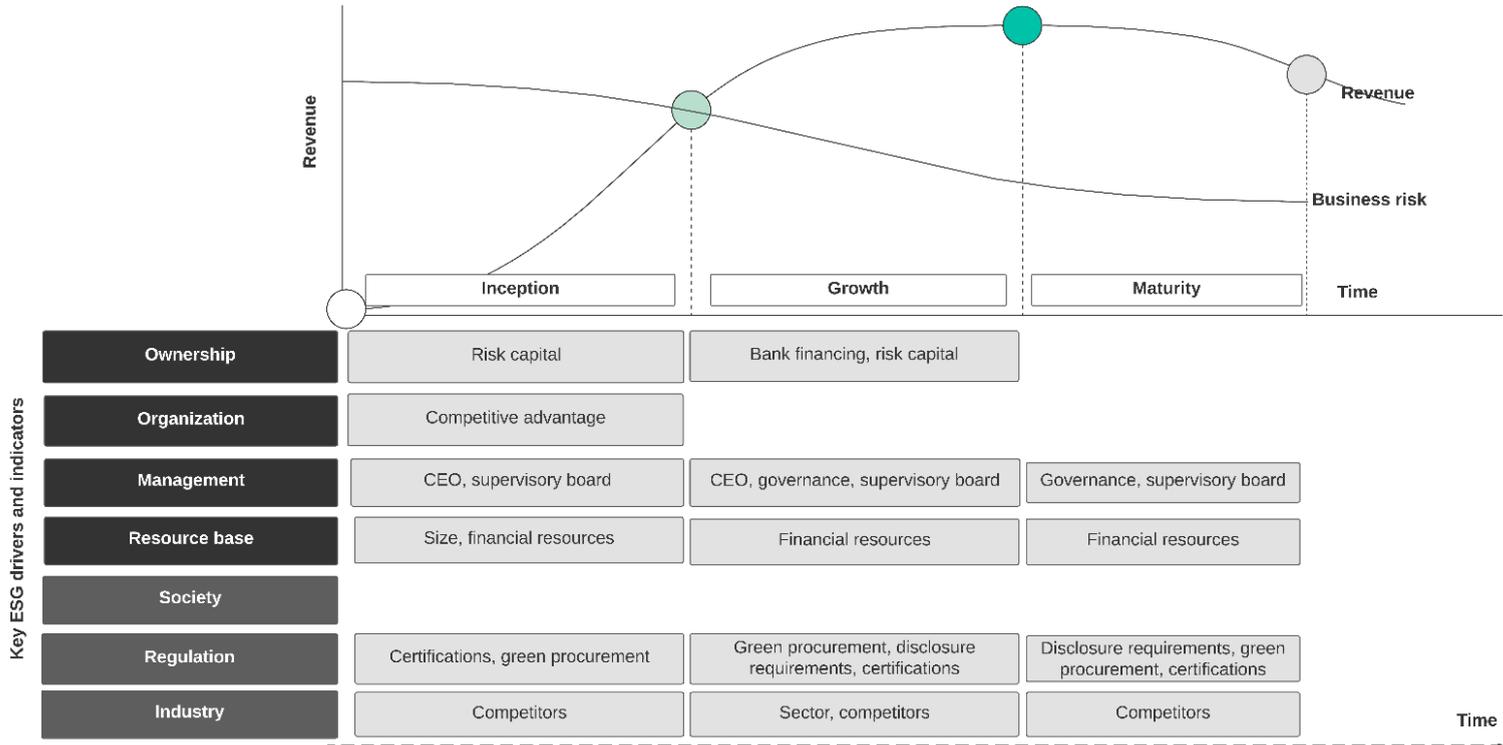


Figure 5.11. Model of ESG drivers at different corporate life cycle stages. Developed by the author.

The key differences between the conceptual model in Figure 5.2. and the updated model based on the AHP process in Figure 5.11. are visibly explained in Appendix 8.

Finally, Figure 5.12. sorts the relevant ESG indicators based on their weights in order to provide a relative grading of the importance of each of the indicators in each of the stages. From the results it becomes visible that in each of the stages there is either one or two indicators that have achieved a significant dominance and impact on the ESG – in inception stage being CEO’s impact and financial resource availability, in growth stage compiling two regulatory aspects of disclosure requirements and green procurement requirements, while for the maturity stage companies significantly relying on the regulatory disclosure requirements. Particularly, the weight comparison of each of the drivers allow for more precise policy recommendations and actions to be derived from the proposed model to achieve a higher ESG adoption.

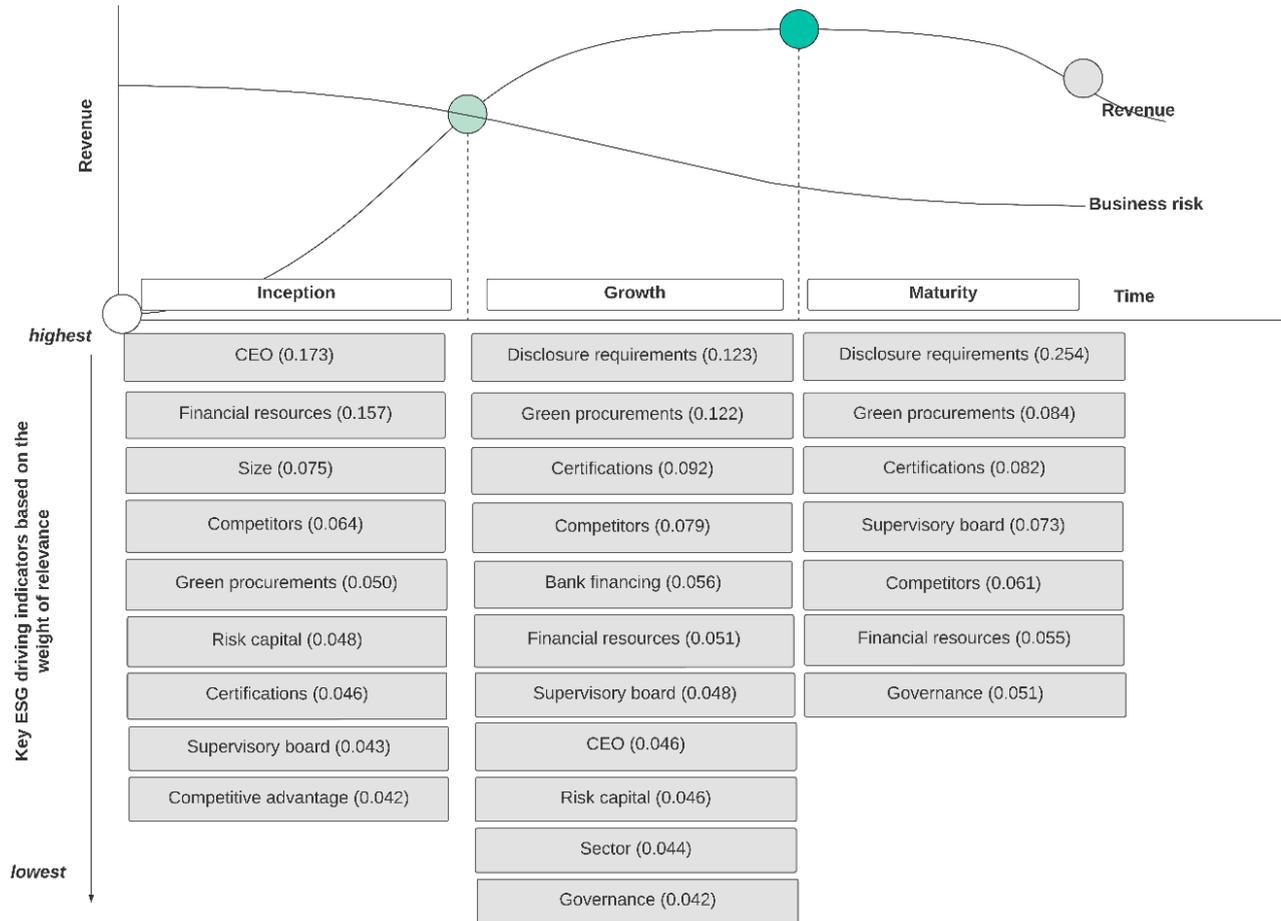


Figure 5.12. Model of weighted ESG drivers¹ at different corporate life cycle stages (measured in weight between 0 and 1).

The model can be used as a basis for understanding the key factors that can aid in implementing ESG practices in corporations based on the specific stages of the corporate life cycle. The study results indicate that factors motivating companies at different stages of the corporate life cycle to implement sustainability measures are not identical.

Within the model, the seven proposed ESG drivers comprising 24 factors are evaluated for their relevance at each of the life cycle stages. In each of the driver groups, there are factors with a stronger impact on ESG adoption. The results confirm that understanding the relevant ESG drivers for each of the life cycle stages can provide more optimal outcomes in terms of higher overall corporate sustainability adoption in the economy. The conceptual model of ESG drivers at different life cycle stages proposed by the author and the factors with substantial impact across each of the stages can be a useful tool for the government representatives and public agencies responsible for outlining ESG policies and regulations, financiers looking to increase the overall ESG level in their portfolio companies as well as corporations seeking to understand the key factors that can aid in implementing ESG practices in the company based on the specific stage of development of the company.

Specifically, inception stage companies may be motivated by their management team, particularly the CEO, and a wider availability of financial resources. In addition, competitors' behavior, procurement-related regulatory requirements, and risk capital as investors at this stage are also found to be important factors for the early enterprise stage. The most important ESG drivers for the growth stage companies are regulatory factors, such as disclosure requirements, a desire to obtain sustainability certifications, and pressure from procurement processes that require ESG disclosures. Additionally, pressure from banks and the behavior of competitors may also serve as significant peer pressure toward ESG adoption at the growth stage. Finally, the key driving factors for the maturity stage companies are disclosure requirements, green procurement processes, and certifications – all corresponding to the regulation. In addition, the supervisory board can have a material impact at this stage supplemented by certain competitive pressure from the industry peers.

These findings largely align with observations from academic literature and build on the existing body of literature by providing a comprehensive view of ESG drivers at differing corporate life cycle stages.

This chapter delivers insights that help address the final research question: "What are the relevant drivers for ESG implementation in companies across different corporate life cycle stages?" The analysis of the seven proposed ESG drivers, encompassing 24 factors, and their relevance at each life cycle stage elucidates the factors that significantly impact ESG adoption. The findings underscore the importance of recognizing the relevant ESG drivers for each life cycle stage, leading to optimized outcomes for overall corporate sustainability adoption within the economy. This comprehensive model, outlining ESG drivers across life cycle stages, serves as a useful tool for stakeholders ranging from government bodies drafting ESG policies and regulations, financiers

striving to enhance ESG levels in their portfolio companies, and corporations looking to understand how to best implement ESG practices based on their specific stage of development. The results and model provided complement existing academic literature and provide novel insights into the topical area of corporate sustainability in the context of the Baltic region.

Conclusions and Recommendations

1. Ethical and climate concerns as well as the evolution of ESG concept, its measurement and related legislation progressively move the goal of corporations from short-term profitability to more long-term value creation as explored in the analysis of the first research question. The importance of ESG considerations is progressively being recognized also by investors, who are increasingly seeking to incorporate ESG factors into their investment analysis and decision-making.
2. Answering the second research question, it has been found that higher corporate sustainability as measured by ESG factors contributes positively towards shareholder value. Qualitative content analysis reveals that improved financial performance is the most decisive single factor linking higher sustainability to higher shareholder value. Other benefits of higher ESG companies, leading to higher long-term shareholder value, include more qualitative and committed management, reduced uncertainty, and risk, as well as improved capital attraction and allocation. Additionally, various nonfinancial intermediary factors such as maintaining a good reputation and nurturing more positive relationships with primary stakeholders such as employees, customers, and communities, increase shareholders' value via developing intangible asset value.
3. Factors linking higher corporate sustainability with higher shareholder value can be divided into direct outcomes (financial performance and risk reduction) that impact the firm's value directly and indirect outcomes (transparency, stakeholder engagement, management, long-term orientation, employees, reputation, capital management, operating capabilities, and customers) that impact the value via the direct outcomes.
4. A wider adoption of ESG-compliant corporate strategies and operations by corporations in the Baltic countries and the overall CEE region is crucially important as ESG can help to improve economic performance by promoting good corporate governance, encouraging sustainable investment, and mitigating environmental and social risks thus advancing the overall development of the economy.
5. The study has made multiple conclusions about the ESG implementation level in the Baltic region:
 - a. Exploration of the average ESG disclosure level across NASDAQ Baltic stock exchange listed companies assessed via qualitative content analysis of the sustainability reports show that the average ESG disclosure score was 47% in 2022 improving by 7 p.p. from 40% in the 2020 sample to sample. The highest transparency level is achieved in the governance pillar (60%), followed by social disclosures at the 48% level and the environmental pillar at 31%.
 - b. Survey data of 74 medium to large enterprises in Latvia indicate an average degree of ESG factor implementation of 5.45 out of 10. Higher scores were documented for stock-listed, foreign corporation-owned, and state-owned companies, as well as

- companies with gender-diverse management boards and supervisory boards in place.
- c. Content analysis performed on a sample of 122 mission statements of companies operating in the CEE region indicates that sustainability and consumer-related keywords dominate companies' agendas. When examining the changes in the mission statements over the last decade, the results reveal a stronger focus on society and sustainable operations, while direct reference to shareholders and profit has experienced the most dramatic decrease.
 - d. Survey analysis of Latvian SOEs shows that the self-assessed degree of sustainability implementation is estimated at 6.1 out of 10. Swift changes in regulation pressure companies to adopt ESG without sufficient understanding and processes in place, as well as lead to missing out on important steps such as stakeholder dialogue and materiality assessment.
 - e. Results of a Baltic-wide financier's survey show that 81% of the respondents already perform ESG evaluation to at least a limited extent before investing in or lending to the companies. In addition, 73% of the surveyed companies believed that ESG can be a value driver for their investments. The average weight of the sustainability factor impact on the overall investing decision is found to be 0.39 being somewhat higher for banks (0.46) and asset management companies (0.41).
6. There are a number of obstacles to ESG implementation including a lack of standardization in how ESG data is collected and reported, lack of awareness and understanding of the concept among senior management and employees, and therefore also lack of commitment towards sustainability implementation and resistance to change. An additional obstacle negatively impacting ESG adoption is the lack of resources, including financial, human, and technical resources leading also to slow adoption of sustainability disclosures by the companies and investors.
 7. An additional challenge highlighted by the performed study shows that CEE region companies have extremely low external ESG rating coverage – companies of the 11 CEE countries contributed to a total of only 4% of the total score count of the European sample. The inclusion of Baltic corporations is insignificant. The lack of ESG rating availability is an important obstacle that indicates a rather strong disadvantage to the sustainable investments that could be flowing into these geographies. Independent t-test analysis between the sample of companies having the ranking and a sample of unranked companies was performed and confirmed that even when removing the potential market capitalization effect, the unranked companies had lower trading volume than their ESG-ranked peers highlighting significant liquidity risks.
 8. The analysis of the academic literature as well as studies performed within the thesis suggests as an answer to the third research question that the level of ESG implementation is determined by the interaction between internal and external factors and that there are

potential changes over time as companies progress through their life cycle. Overall, seven drivers (ownership, organizational, resource, management, society, regulation, and industry) consisting of 24 factors influence the development of ESG adoption. It is hypothesized that different drivers are the most impactful ones in different stages of the corporate life cycle.

9. The analytical hierarchy process was used to prioritize and rank ESG drivers by the experts representing the largest Baltic banks, risk capital funds, associations, consultants, and corporate sustainability subject matter experts.
10. The results of the AHP, explored within the review of the fourth research question, confirm observations from the academic literature and the hypothesis that there are different ESG drivers that motivate companies to implement corporate sustainability measures at various corporate life cycle stages:
 - a. Inception stage companies can be highly motivated by their management team, especially their CEO. An important pre-requisite is having sufficient financial resources to adopt ESG-related activities.
 - b. Growth stage companies are driven by regulatory aspects – disclosure requirements, wish for obtaining sustainability-related certifications, and pressure from procurement processes that require ESG-related disclosures. The strongest ownership-related indicator is pressure from banks, while competitor’s behavior can also act as significant peer pressure towards ESG adoption.
 - c. The key drivers for the maturity stage similarly are regulatory driven – largely dominated by the disclosure requirement. An important sustainability driver for mature companies can also be their supervisory boards.

Taking into account the results of the multiple parts of the research, the author suggests the following recommendations.

For the government representatives and public agencies responsible for outlining ESG policies and regulations:

1. Use the model of the ESG drivers across the corporate life cycle as a guideline for ESG promotion initiatives to find the relevant motivators and aspects addressing companies in various development stages.
2. Consider the identified obstacles and barriers to ESG adoption when crafting policies and regulations to support companies in overcoming these challenges.
3. Increase public awareness of the importance of ESG adoption through education and outreach efforts aimed at companies and market participants.

For financiers (investors, banks, and asset managers active in the Baltic region):

1. Utilize the findings of this study to gain a better comprehension of the current position of ESG integration within Baltic businesses.
2. Consider incorporating the findings of this study into your investment strategies and decision-making processes to better align your investments with ESG principles and achieve better financial outcomes.
3. Apply the ESG drivers model across the corporate life cycle to identify the most appropriate motivators and aspects that will resonate with businesses at different stages of development, when promoting ESG initiatives.
4. Utilize the significant impact of the relevant players (i.e., risk capital funds in the early start-up stage and banks in the growth stage) to foster ESG adoption in the portfolio companies. Engage in constructive dialogue with Baltic businesses to provide guidance and support on ESG integration and to encourage ESG-focused initiatives.

For corporations:

1. Conduct a thorough review of the study results to gain a comprehensive understanding of the financial benefits of ESG adoption, including improved financial performance, risk management, and enhanced reputation.
2. Recognize the importance of ESG disclosure and the potential consequences of limited disclosure, such as lower ESG ratings, increased investor scrutiny, and difficulty in attracting capital.
3. Implement the model of ESG drivers to develop a tailored ESG strategy that considers the specific motivators and aspects that are most relevant to the company's current stage of development.
4. Enhance ESG disclosure and transparency by reporting on ESG performance and initiatives in a consistent and reliable manner, to increase stakeholder confidence and attract investment.
5. Engage in ongoing communication with stakeholders, including investors, customers, and employees, to keep them informed of ESG progress and initiatives, and to seek feedback on ESG practices.

Bibliography

1. Abnett, K. (2022, February 3). Explainer: What is the EU's sustainable finance taxonomy? *Reuters*. <https://www.reuters.com/business/sustainable-business/what-is-eus-sustainable-finance-taxonomy-2022-02-03/>
2. Adelino, M., Ma, S., & Robinson, D. T. (2014). Firm Age, Investment Opportunities, and Job Creation. *NBER Working Paper #19845*, 50.
3. Adizes, I. (1979). Organizational passages—Diagnosing and treating lifecycle problems of organizations. *Organizational Dynamics*, 8(1), 3–25. [https://doi.org/10.1016/0090-2616\(79\)90001-9](https://doi.org/10.1016/0090-2616(79)90001-9)
4. Adizes, I. (2004). *Managing Corporate Lifecycles*. Adizes Institute Publication.
5. Adizes, I. (n.d.). *Adizes Institute Worldwide*. <https://www.adizes.com/>
6. Advisory Board for Corporate Governance. (2020). *Corporate Governance Code*. <https://www.tm.gov.lv/en/media/7428/download>
7. Aguilera, R. V., Rupp, D. E., Williams, C. A., & Ganapathi, J. (2007). Putting the S Back in Corporate Social Responsibility: A Multilevel Theory of Social Change in Organizations. *The Academy of Management Review*, 32(3), 836–863. <http://www.jstor.org/stable/20159338>
8. Aguinis, H., & Glavas, A. (2012). What We Know and Don't Know About Corporate Social Responsibility. *Journal of Management*. <https://doi.org/10.1177/0149206311436079>
9. Aharony, J., Falk, H., & Yehuda, N. (2006). *Corporate Life Cycle and the Relative Value—Relevance of Cash Flow versus Accrual Financial Information*. 34.
10. Amel-Zadeh, A., & Serafeim, G. (2017). Why and How Investors Use ESG Information: Evidence from a Global Survey. *Harvard Business School Working Paper*. <https://ssrn.com/abstract=2925310> Electronic copy available at: <https://ssrn.com/abstract=2925310>
11. Analoui, F., & Karami, A. (2002). CEOs and development of the meaningful mission statement. *Corporate Governance*, 2, 13–20. <https://doi.org/10.1108/14720700210440044>
12. Anthony, J. H., & Ramesh, K. (1992). Association between accounting performance measures and stock prices: A test of the life cycle hypothesis. *Journal of Accounting and Economics*, 15(2–3), 203–227.
13. Antikainen, M., & Valkokari, K. (2016). A Framework for Sustainable Circular Business Model Innovation. *Technology Innovation Management Review*, 6(7), 8.
14. Aragón-Correa, J. A., Marcus, A., & Hurtado-Torres, N. (2016). The Natural Environmental Strategies of International Firms: Old Controversies and New Evidence on Performance and Disclosure. *Academy of Management Perspectives*, 30(1), 24–39. <https://doi.org/10.5465/amp.2014.0043>
15. Argento, D., Grossi, G., Persson, K., & Vingren, T. (2019). Sustainability disclosures of hybrid organizations: Swedish state-owned enterprises. *Meditari Accountancy Research*, 27(4), 505–533. <https://doi.org/10.1108/MEDAR-07-2018-0362>

16. Artiach, T., Lee, D., Nelson, D., & Walker, J. (2010). The determinants of corporate sustainability performance. *Accounting & Finance*, 50(1), 31–51. <https://doi.org/10.1111/j.1467-629X.2009.00315.x>
17. Atif, M., Liu, B., & Nadarajah, S. (2022). The effect of corporate environmental, social and governance disclosure on cash holdings: Life-cycle perspective. *Business Strategy and the Environment*, 31(5), 2193–2212. <https://doi.org/10.1002/bse.3016>
18. Avetisyan, E., & Hockerts, K. (2017). The Consolidation of the ESG Rating Industry as an Enactment of Institutional Retrogression: Consolidation of the ESG Rating Industry. *Business Strategy and the Environment*, 26(3), 316–330. <https://doi.org/10.1002/bse.1919>
19. Bakar, A. B. S. A., Ghazali, N. A. B. Mohd., & Ahmad, M. B. (2019). Sustainability Reporting and Board Diversity in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 9(2), Pages 1044-1067. <https://doi.org/10.6007/IJARBS/v9-i2/5663>
20. Baldini, M., Maso, L. D., Liberatore, G., Mazzi, F., & Terzani, S. (2018). Role of Country- and Firm-Level Determinants in Environmental, Social, and Governance Disclosure. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-016-3139-1>
21. Barnea, A., & Rubin, A. (2010). Corporate Social Responsibility as a Conflict Between Shareholders. *Journal of Business Ethics*, 97, 71–86. <https://doi.org/10.1007/s10551-010-0496-z>
22. Barnett Waddingham. (2022). *Sustainable Investor Insight Survey*. <https://view.barnett-waddingham.co.uk/sustainable-investor/p/1>
23. Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1). <https://doi.org/10.1177/014920639101700108>
24. Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, 31(1–3), 77–104.
25. Bartkus, B., Glassman, M., & McAfee, B. (2006). Mission Statement Quality and Financial Performance. *European Management Journal*, 24(1), 86–94. <https://doi.org/10.1016/j.emj.2005.12.010>
26. Baumüller, J., & Sopp, K. (2022). Double materiality and the shift from non-financial to European sustainability reporting: Review, outlook and implications. *Journal of Applied Accounting Research*, 23(1), 8–28. <https://doi.org/10.1108/JAAR-04-2021-0114>
27. Benbasat, I., Dexter, A. S., & Mantha, R. W. (1980). Impact of Organizational Maturity on Information System Skill Needs. *MIS Quarterly*, 4(1), 21–34. JSTOR. <https://doi.org/10.2307/248865>
28. Bentley, K., Omer, T., & Sharp, N. (2013). Does Business Strategy Impact a Firms Information Environment.pdf. *Contemporary Accounting Research*, 30(2), 780–817.
29. Berg, F., Koelbel, J. F., & Rigobon, R. (2019). Aggregate Confusion: The Divergence of ESG Ratings. *MIT Sloan Research Paper*, 5822(19), 1–43. <http://dx.doi.org/10.2139/ssrn.3438533>

30. Berger, A., & Udell, G. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6), 613–673. [https://doi.org/10.1016/S0378-4266\(98\)00038-7](https://doi.org/10.1016/S0378-4266(98)00038-7)
31. Besser, T., & Miller, N. (2011). The Company They Keep: How Formal Associations Impact Business Social Performance. *Business Ethics Quarterly*, 21(3), 503–525.
32. Bistрова, J., & Lace, N. (2010). Ownership Structure in CEE Companies and its Influence on Stock Performance. *Economics and Management*, 15, 880–885.
33. Bistрова, J., & Lace, N. (2012). Quality of Corporate Governance System and Quality of Reported Earnings: Evidence From Cee Companies. *Economics and Management*, 17(1), 55–61. <https://doi.org/10.5755/j01.em.17.1.2251>
34. Bistрова, J., & Lace, N. (2016). CSR Initiatives Introduction Status in Central and Eastern Europe and Their Importance for the Equity Investor. *Key Initiatives in Corporate Social Responsibility*, 43–69. https://doi.org/10.1007/978-3-319-21641-6_3
35. Bizoumi, T., Lazaridis, S., & Stamou, N. (2019). Innovation in stock exchanges: Driving ESG disclosure and performance. *Applied Corporate Finance*, 31(2), 72–79. <https://doi.org/10.1111/jacf.12348>
36. Black, E. L. (1998). Which is More Value-Relevant: Earnings or Cash Flows? <https://ssrn.com/abstract=118089>
37. Bloomberg Law. (2021, November 8). *Corporate Reputation Is What Drives ESG Disclosures*. <https://news.bloomberglaw.com/bloomberg-law-analysis/analysis-corporate-reputation-is-what-drives-esg-disclosures>
38. Boffo, R., & Patalano, R. (2020). *ESG Investing: Practices, Progress and Challenges*. OECD. <https://www.oecd.org/finance/ESG-Investing-Practices-Progress-and-Challenges.pdf>
39. Bravo, F., & Reguera-Alvarado, N. (2019). Sustainable development disclosure: Environmental, social, and governance reporting and gender diversity in the audit committee. *Business Strategy and the Environment*, 28(2), 418–429. <https://doi.org/10.1002/bse.2258>
40. Brooks, C., & Oikonomou, I. (2018). The Effects of Environmental, Social and Governance Disclosures and Performance on Firm Value: A Review of the Literature in Accounting and Finance. *The British Accounting Review*, 50, 1–15. <https://doi.org/10.1016/j.bar.2017.11.005>
41. Burke, J. J. (2022). Do Boards Take Environmental, Social, and Governance Issues Seriously? Evidence from Media Coverage and CEO Dismissals. *Journal of Business Ethics*, 176(4), 647–671. <https://doi.org/10.1007/s10551-020-04715-x>
42. Campbell, L. (2007). Why Would Corporations Behave in Socially Responsible Ways? An Institutional Theory of Corporate Social Responsibility. *The Academy of Management Review*, 32(3), 946–967. <https://doi.org/10.5465/amr.2007.25275684>
43. Carroll, A. B. (1979). A Three-Dimensional Conceptual Model of Corporate Performance. *Academy of Management Review*, 4(4), 497–505. <https://doi.org/10.5465/amr.1979.4498296>

44. Carroll, A.B. and Shabana, K.M. (2010), The Business Case for Corporate Social Responsibility: A Review of Concepts, Research and Practice. *International Journal of Management Reviews*, 12: 85-105. <https://doi.org/10.1111/j.1468-2370.2009.00275.x>
45. Central Statistics Bureau. (2021). *Statistics on Company Revenue*. <https://www.lursoft.lv/lursoft-statistika/Uznemumu-pelna-pa-gadiem&id=1>
46. Chan, P., & Lee, M.-H. (2019). Prioritizing Sustainable City Indicators for Cambodia. *Urban Science*, 3(4), 104. <https://doi.org/10.3390/urbansci3040104>
47. Chang, R.-D., Zuo, J., Zhao, Z.-Y., Zillante, G., Gan, X.-L., & Soebarto, V. (2017). Evolving theories of sustainability and firms: History, future directions and implications for renewable energy research. *Renewable and Sustainable Energy Reviews*, 72, 48–56. <https://doi.org/10.1016/j.rser.2017.01.029>
48. Chatterji, A. K., Durand, R., Levine, D. I., & Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors and strategy researchers: Do Ratings of Firms Converge? *Strategic Management Journal*, 37(8), 1597–1614. <https://doi.org/10.1002/smj.2407>
49. Cheng, C. S. A., Collins, D., & Huang, H. H. (2006). Shareholder rights, financial disclosure and the cost of equity capital. *Review of Quantitative Finance and Accounting*, 27(2), 175–204. <https://doi.org/10.1007/s11156-006-8795-2>
50. Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, 40, 78–94. <https://doi.org/10.1016/j.aos.2014.12.003>
51. Clark, G., Feiner, A., & Viehs, M. (2015). *From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2508281
52. Clark, G. L., & Viehs, M. (2014). The Implications of Corporate Social Responsibility for Investors: An Overview and Evaluation of the Existing CSR Literature. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2481877>
53. Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4–5), 303–327. <https://doi.org/10.1016/j.aos.2007.05.003>
54. Cormier, D., & Gordon, I. M. (2001). An examination of social and environmental reporting strategies. *Accounting, Auditing & Accountability Journal*, 14(5), 587–617. <https://doi.org/10.1108/EUM0000000006264>
55. Crifo, P., Escrig-Olmedo, E., & Mottis, N. (2019). Corporate Governance as a Key Driver of Corporate Sustainability in France: The Role of Board Members and Investor Relations. *Journal of Business Ethics*, 159(4), 1127–1146. <https://doi.org/10.1007/s10551-018-3866-6>
56. Cross-Sectoral Coordination Centre. (n.d.). *State-owned enterprise governance*. <https://doi.org/10.3390/su131810223>

57. Cucari, N., Falco, S. E. D., & Orlando, B. (2018). Diversity of Board of Directors and Environmental Social Governance: Evidence from Italian Listed Companies. *Corporate Social Responsibility and Environmental Management*, 25(3), 250–266. <https://doi.org/10.1002/csr.1452>
58. Czerwińska, T., & Kaźmierkiewicz, P. (2015). ESG Rating in Investment Risk Analysis of Companies Listed on the Public Market in Poland. *Economic Notes*, 44(2), 211–248. <https://doi.org/10.1111/ecno.12031>
59. Darko, A., Chan, A. P. C., Ameyaw, E. E., Owusu, E. K., Pärn, E., & Edwards, D. J. (2019). Review of application of analytic hierarchy process (AHP) in construction. *International Journal of Construction Management*, 19(5), 436–452. <https://doi.org/10.1080/15623599.2018.1452098>
60. Daugaard, D., & Ding, A. (2022). Global Drivers for ESG Performance: The Body of Knowledge. *Sustainability*, 14(4), 2322. <https://doi.org/10.3390/su14042322>
61. Davis, G., & Stout, S. (1992). Organization Theory and the Market for Corporate Control: A Dynamic Analysis of the Characteristics of Large Takeover Targets, 1980-1990. *Administrative Science Quarterly*, 37(4), 605–633. <https://doi.org/10.2307/2393474>
62. DeAngelo, H., DeAngelo, J., & Stulz, R. (2006). Dividend Policy and the Earned/Contributed Capital Mix: A Test of the Life-Cycle Theory. *Journal of Financial Economics*, 2, 227–254. <http://dx.doi.org/10.1016/j.jfineco.2005.07.005>
63. Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15(3), 282–311. <https://doi.org/10.1108/09513570210435852>
64. Delmas, M. A., & Burbano, V. C. (2011). The Drivers of Greenwashing. *California Management Review*, 54(1), 64–87. <https://doi.org/10.1525/cmr.2011.54.1.64>
65. Deloitte. (2020). *Private Equity Confidence Survey Central Europe, Summer 2020*. 35.
66. Deloitte. (2021). *Purpose-driven ESG in the consumer industry: Sustainability as a value-creator*. <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/risk/us-risk-purpose-driven-esg-in-the-consumer-industry-infographic.pdf>
67. Deutsche Bank. (2021). *ESG Survey – What corporates and investors think*. [dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000520951/ESG_Survey_-_What_corporates_and_investors_think.PDF?undefined&reload=oDOcowsiknHVgS~S3tFHQ1GT7JkM~2KKIEyCUSi8vqnJ1fVWYkvO4CaFzaSCzvr1](https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000520951/ESG_Survey_-_What_corporates_and_investors_think.PDF?undefined&reload=oDOcowsiknHVgS~S3tFHQ1GT7JkM~2KKIEyCUSi8vqnJ1fVWYkvO4CaFzaSCzvr1)
68. Deutsche Bank. (2022). *Eight ESG Trends to watch*. <https://flow.db.com/more/esg/eight-esg-trends-to-watch-in-2022>
69. Dhaliwal, D., Li, O. Z., Tsang, A., & Yang, Y. G. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. *Journal of Accounting and Public Policy*, 33(4), 328–355. <https://doi.org/10.1016/j.jaccpubpol.2014.04.006>

70. Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Accounting Review*, *86*(1), 59–100. <https://doi.org/10.2308/accr.00000005>
71. Dickinson, V. (2011). Cash Flow Patterns as a Proxy for Firm Life Cycle. *The Accounting Review*, *86*(6), 1969–1994.
72. Diebecker, J., Rose, C., & Sommer, F. (2017). Corporate Sustainability Performance Over the Firm Life Cycle: Levels, Determinants, and the Impact on Accounting Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3084601>
73. Dienes, D., & Velte, P. (2016). The Impact of Supervisory Board Composition on CSR Reporting. Evidence from the German Two-Tier System. *Sustainability*, *8*(1), 63. <https://doi.org/10.3390/su8010063>
74. DiMaggio, P., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*, 147–160. <https://doi.org/10.2307/2095101>
75. Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *The Academy of Management Review*, *20*(1), 65. <https://doi.org/10.2307/258887>
76. Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review*, *18*(1), 122–136. JSTOR. <https://doi.org/10.2307/1388226>
77. Drepetic, S., Klein, C., & Zwergel, B. (2020). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, *167*(2), 333–360. <https://doi.org/10.1007/s10551-019-04164-1>
78. Du, S., Lindgreen, V., & Sen, S. (2013). The roles of leadership styles in corporate social responsibility. *Journal of Business Ethics*, *114*(1), 155–169.
79. Duygulu, E., Ozeren, E., Işildar, P., & Appolloni, A. (2016). The Sustainable Strategy for Small and Medium Sized Enterprises: The Relationship between Mission Statements and Performance. *Sustainability*, *8*, 16. <https://doi.org/10.3390/su8070698>
80. Dye, R. (1985). Disclosure of Nonproprietary Information. *Journal of Accounting Research*, *23*(1), 123–145. <https://doi.org/10.2307/2490910>
81. Dyer, R. F., & Forman, E. H. (1992). Group decision support with the Analytic Hierarchy Process. *Decision Support Systems*, *8*(2), 99–124. [https://doi.org/10.1016/0167-9236\(92\)90003-8](https://doi.org/10.1016/0167-9236(92)90003-8)
82. Easley, D., & O'hara, M. (2004). Information and the Cost of Capital. *The Journal of Finance*, *59*(4), 1553–1583. <https://doi.org/10.1111/j.1540-6261.2004.00672.x>
83. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, *60*(11), 2381–2617. <https://doi.org/10.1287/mnsc.2014.1984>

84. Eccles, R. G., & Serafeim, G. (2013, May 1). The Performance Frontier: Innovating for a Sustainable Strategy. *Harvard Business Review*, May 2013. <https://hbr.org/2013/05/the-performance-frontier-innovating-for-a-sustainable-strategy>
85. Eccles, R. G., Strohle, J., & Lee, L.-E. (2019). The Social Origins of ESG? An Analysis of Innovest and KLD. *ORGANIZATION & ENVIRONMENT*, 1–36.
86. Ehsan, Zaem-Al, Defining a Startup - A Critical Analysis (April 9, 2021). Available at SSRN: <https://ssrn.com/abstract=3823361> or <http://dx.doi.org/10.2139/ssrn.3823361>
87. Elkington, J. (1998), "Accounting for the Tripple Bottom Line", *Measuring Business Excellence*, Vol. 2 No. 3, pp. 18-22. <https://doi.org/10.1108/eb025539>
88. Escrig-Olmedo, E., Fernández-Izquierdo, M., Ferrero-Ferrero, I., Rivera-Lirio, J., & Muñoz-Torres, M. (2019). Rating the Raters: Evaluating how ESG Rating Agencies Integrate Sustainability Principles. *Sustainability*, 11(3), 915. <https://doi.org/10.3390/su11030915>
89. European Commission. (n.d.-a). *Non-financial reporting | European Commission*. Retrieved November 29, 2019, from https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en
90. European Commission. (2011). *Corporate social responsibility & Responsible business conduct*. https://ec.europa.eu/growth/industry/sustainability/corporate-social-responsibility-responsible-business-conduct_en
91. European Commission. (n.d.b). *A European Green Deal*. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
92. European Commission. (n.d.c). *Overview of sustainable finance*. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance_en
93. European Parliament. (2022). *Women on boards: Deal to boost gender balance in companies*. <https://www.europarl.europa.eu/news/en/press-room/20220603IPR32195/women-on-boards-deal-to-boost-gender-balance-in-companies>
94. Eurosif. (2016). *European SRI Study*. <http://www.eurosif.org/wp-content/uploads/2016/11/SRI-study-2016-HR.pdf#page=52>
95. EY. (2020). *How will ESG performance shape your future?* https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/assurance/assurance-pdfs/ey-global-institutional-investor-survey-2020.pdf
96. Faff, R., Kwok, W. C., Podolski, E. J., & Wong, G. (2016). Do corporate policies follow a life-cycle? *Journal of Banking & Finance*, 69, 95–107. <https://doi.org/10.1016/j.jbankfin.2016.04.009>
97. Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing "rm characteristics or lower propensity to pay?&. *Journal of Financial Economics*, 41.
98. Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>

99. Fernandez-Feijoo, B., Romero, S., & Ruiz, S. (2012). *Does Board Gender Composition affect Corporate Social Responsibility Reporting?* 3(1), 8.
100. Fernández-Kranz, D., & Santalo, J. (2010). When Necessity Becomes a Virtue: The Effect of Product Market Competition on Corporate Social Responsibility. *Journal of Economics & Management Strategy*, 19(2), 453–487.
101. First Insight. (2020). *Gen Z Shoppers Demand Sustainable Retail*. <https://www.firstinsight.com/press-releases/first-insight-finds-expectations-for-sustainable-retail-practices-growing-with-the-rise-of-gen-z-shoppers>
102. Flammer, C. (2015a). Does Corporate Social Responsibility Lead to Superior Financial Performance? A Regression Discontinuity Approach. *Management Science*, 61(11). <https://doi.org/10.1287/mnsc.2014.2038>
103. Flammer, C. (2015b). Does product market competition foster corporate social responsibility? Evidence from trade liberalization. *Strategic Management Journal*, 36(10), 1469–1485. <https://doi.org/10.1002/smj.2307>
104. Fombrun, C., & Shanley, M. (1990). What's in a Name? Reputation Building and Corporate Strategy. *Academy of Management Journal*, 33(2), 233–258. <https://doi.org/10.5465/256324>
105. Franek, J., & Kresta, A. (2014). Judgment Scales and Consistency Measure in AHP. *17th International Conference Enterprise and Competitive Environment 2014*, 12, 164–173. [https://doi.org/10.1016/S2212-5671\(14\)00332-3](https://doi.org/10.1016/S2212-5671(14)00332-3)
106. Fraser Institute. (2019). *Economic Freedom*. <https://www.fraserinstitute.org/studies/economic-freedom>
107. Freeman, R. E. (1984). *Strategic Management: A Stakeholder Perspective*. Prentice-Hall.
108. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
109. Friedman, F. (1970, September 13). *A Friednzan doctrine*. New York Times Magazine. <https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html>
110. Fulton, M., Kahn, B. M., & Sharples, C. (2013). Sustainable Investing: Establishing Long-Term Value and Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2222740>
111. Gamal, L., Wahba, H., & Correia, M. D. R. (2022). Corporate sustainability performance throughout the firm life cycle: Case of Egypt. *Corporate Governance and Organizational Behavior Review*, 6, 79–97. <https://doi.org/10.22495/cgobrv6i1p6>
112. Garcia, A. S., Mendes-Da-Silva, W., & Orsato, R. J. (2017). Sensitive industries produce better ESG performance: Evidence from emerging markets. *Journal of Cleaner Production*, 150, 135–147. <https://doi.org/10.1016/j.jclepro.2017.02.180>
113. Gartenberg, C. M., Prat, A., & Serafeim, G. (2016). Corporate Purpose and Financial Performance. *Columbia Business School Research Paper*, 16(69).

114. Ghoul, S. E., Guedhami, O., & Kim, Y. (2017). Country-level institutions, firm value, and the role of corporate social responsibility initiatives. *Journal of International Business Studies*, 48(3), 360–385. <https://doi.org/10.1057/jjibs.2016.4>
115. Gibson, R., Krueger, P., & Schmidt, P. S. (2019). ESG Rating Disagreement and Stock Returns. *Swiss Finance Institute Research Paper No. 19-67*. <http://dx.doi.org/10.2139/ssrn.3433728>
116. Gidron, B., Israel-Cohen, Y., Bar, K., Silberstein, D., Lustig, M., & Kandel, D. (2021). Impact Tech Startups: A Conceptual Framework, Machine-Learning-Based Methodology and Future Research Directions. *Sustainability*, 13(18), 10048. <https://doi.org/10.3390/su131810048>
117. Giese, G., Lee, L.-E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG Investing: How ESG Affects Equity Valuation, Risk, and Performance? *The Journal of Portfolio Management*, 45(5), 1–15. <https://doi.org/10.3905/jpm.2019.45.5.069>
118. Global Reporting Initiative. (2022). *Our Mission and History*. <https://www.globalreporting.org/about-gri/mission-history/>
119. Goepel, K. D. (2018). Implementation of an Online Software Tool for the Analytic Hierarchy Process (AHP-OS). *International Journal of the Analytic Hierarchy Process*, 10(3), 469–487. <https://doi.org/10.13033/ijahp.v10i3.590> Introduction
120. Grabowski, H. G., & Mueller, D. C. (1975). Life-Cycle Effects on Corporate Returns on Retentions. *The Review of Economics and Statistics*, 57(4), 400–409. JSTOR. <https://doi.org/10.2307/1935899>
121. Grace, L., & Gehman, J. (2022). What Really Explains ESG Performance? Disentangling the Asymmetrical Drivers of the Triple Bottom Line. *Organization & Environment*, forthcoming. <https://doi.org/10.1177/10860266221079408>
122. Griffin, J. J., & Mahon, J. F. (1997). The Corporate Social Performance and Corporate Financial Performance Debate: Twenty-Five Years of Incomparable Research. *Business & Society*, 36(1), 5–31. <https://doi.org/10.1177/000765039703600102>
123. Gulec, O. F., & Karacaer, S. (2017). Corporate Life Cycle Methods in Emerging Markets: Evidence from Turkey. *Journal of Economics*, 13.
124. Habib, A., & Hasan, M. M. (2019). Corporate life cycle research in accounting, finance and corporate governance: A survey, and directions for future research. *International Review of Financial Analysis*, 61, 188–201. <https://doi.org/10.1016/j.irfa.2018.12.004>
125. Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. *The Academy of Management Review*, 9(2), 193–206. JSTOR. <https://doi.org/10.2307/258434>
126. Hanks, S. H. (1990). The Organization Life Cycle: Integrating Content and Process. *Journal of Small Business Strategy (Archive Only)*, 1, 1–12.

127. Harjoto, M. A., Laksmana, I., & Yang, Y.-W. (2018). Board Nationality Diversity and Corporate Social Responsibility. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3252114>
128. Harjoto, M., Laksmana, I., & Lee, R. (2015). Board Diversity and Corporate Social Responsibility. *Journal of Business Ethics*, 132(4), 641–660. <https://doi.org/10.1007/s10551-014-2343-0>
129. Hart, S. L. (1995). A Natural-Resource-Based View of the Firm. *The Academy of Management Review*, 20(4), 986–1014. <https://doi.org/10.2307/258963>
130. Hasan, I., Kobeissi, N., Liu, L., & Wang, H. (2018). Corporate Social Responsibility and Firm Financial Performance: The Mediating Role of Productivity. *Journal of Business Ethics*, 149(3), 671–688. <https://doi.org/10.1007/s10551-016-3066-1>
131. Hawn, O., & Kang, H. G. (2013). The Market for Corporate Social Responsibility (CSR): How Industry Structure Determines CSR. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2380641>
132. Hay, R., & Ginter, P. (1979). *Strategies for maintaining a share of the market*. Annual meeting of the Southern Academy of Management in Atlanta.
133. Helfat, C., & Peteraf, M. (2003). The Dynamic Resource-Based View: Capability Lifecycles. *Strategic Management Journal*, 24, 997–1010. <https://doi.org/10.1002/smj.332>
134. Hellmann, T., & Puri, M. (2002). Venture Capital and the Professionalization of Start-Up Firms: Empirical Evidence. *The Journal of Finance*, 57(1), 169–197. <https://doi.org/10.1111/1540-6261.00419>
135. Helwege, J., & Liang, N. (1996). Is there a pecking order? Evidence from a panel of IPO firms. *Journal of Financial Economics*, 40(3), 429–458. [https://doi.org/10.1016/0304-405X\(95\)00851-5](https://doi.org/10.1016/0304-405X(95)00851-5)
136. Henisz, W., Koller, T., & Nuttall, R. (2019). *Five ways that ESG creates value*. McKinsey Quarterly. <https://www.mckinsey.com/~media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx>
137. Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000). The Resource Dependence Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. *Journal of Management Studies*, 37(2), 235–256. <https://doi.org/10.1111/1467-6486.00179>
138. Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal*, 22(2), 125–139. [https://doi.org/10.1002/1097-0266\(200101\)22:2<125::AID-SMJ150>3.0.CO;2-H](https://doi.org/10.1002/1097-0266(200101)22:2<125::AID-SMJ150>3.0.CO;2-H)
139. Hillman, A. J., Shropshire, C., & Cannella, A. A. (2007). *Organizational Predictors of Women on Corporate Boards*. <https://doi.org/10.5465/amj.2007.26279222>

140. Hong, H., Kubik, J. D., & Scheinkman, J. A. (2012). Financial Constraints on Corporate Goodness. *National Bureau of Economic Research, NBER Working Paper 18476*, 48.
141. Honjo, Y. (2021). Public or perish? From founding to initial public offering. *Review of Managerial Science*, 15(6), 1573–1610. <https://doi.org/10.1007/s11846-020-00390-4>
142. Horváth, P., Pütter, J. M., Dagilienė, L., Dimante, D., Haldma, T., Kochalski, C., Král, B., Labaš, D., Lääts, K., Bedenik, N. O., Pakšiová, R., Petera, P., Ratajczak, P., Buhovac, A. R., Sava, A., Sucală, V. I., Tirnitz, T. J., & Wagner, J. (2017). Status quo and future development of sustainability reporting in central and eastern Europe. *Journal of East European Management Studies*, 22(2), 221–243. <https://doi.org/10.5771/0949-6181-2017-2-221>
143. Hsu, P.-H., Liang, H., & Matos, P. (2021). Leviathan Inc. And Corporate Environmental Engagement. *Darden Business School Working Paper*, 84. <http://dx.doi.org/10.2139/ssrn.2960832>
144. Huber, B. M., & Comstock, M. (2017). *ESG Reports and Ratings: What They Are, Why They Matter*. <https://corpgov.law.harvard.edu/2017/07/27/esg-reports-and-ratings-what-they-are-why-they-matter/>
145. Iamandi, I.-E., Constantin, L.-G., Munteanu, S. M., & Cernat-Gruici, B. (2019). Mapping the ESG Behavior of European Companies. A Holistic Kohonen Approach. *Sustainability*, 11(12), 3276. <https://doi.org/10.3390/su11123276>
146. In, S. Y., Rook, D., & Monk, A. (2019). Integrating Alternative Data (Also Known as ESG Data) in Investment Decision Making. *Global Economic Review*, 48(3), 237–260. <https://doi.org/10.1080/1226508X.2019.1643059>
147. Invest Europe. (2021a). *Private Equity in CEE: Creating Value and Continued Growth*. <https://www.investeurope.eu/about-private-equity/private-equity-impact/private-equity-in-cee/>
148. Invest Europe. (2021b). *Sustainable finance*. <https://www.investeurope.eu/policy/key-policy-areas/sustainable-finance/>
149. Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, 43(9), 834–864. <https://doi.org/10.1057/jibs.2012.26>
150. Ioannou, I., & Serafeim, G. (2019). Corporate Sustainability: A Strategy? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3312191>
151. ISS ESG. (2021). *Governance Quality Score*. <https://www.issgovernance.com/esg/ratings/governance-qualityscore/>
152. Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, 76(2), 323–329. <http://www.jstor.org/stable/1818789>
153. Jensen, M. (2002). Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics*, 12, 235–256.
154. Jirásek, M., & Bílek, J. (2018). The Organizational Life Cycle: Review and Future Agenda. *Quality Innovation Prosperity*, 22(3), 01. <https://doi.org/10.12776/qip.v22i3.1177>

155. Jones, T. M. (1995). Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics. *The Academy of Management Review*, 20(2), 404. <https://doi.org/10.2307/258852>
156. Jovanovic, B. (1982). Selection and the Evolution of Industry. *Econometrica*, 50(3), 649–670. JSTOR. <https://doi.org/10.2307/1912606>
157. Kamarudin, K., Ariff, A., & Ismail, W. A. (2021). Product market competition, board gender diversity and corporate sustainability performance: International evidence. *Journal of Financial Reporting and Accounting, ahead-of-print*. <https://doi.org/10.1108/JFRA-01-2021-0020>
158. Kang, H., Cheng, M., & Gray, S. (2007). Corporate Governance and Board Composition: Diversity and Independence of Australian Boards. *Corporate Governance An International Review*, 15(2), 194–207.
159. Kariv, D. (2013). Start-Up and Small Business Life. In: Carayannis, E.G. (eds) Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship. Springer, New York, NY. https://doi.org/10.1007/978-1-4614-3858-8_466
160. Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate Sustainability: First Evidence on Materiality. *The Accounting Review*, 91(6), 1697–1724.
161. Knippenberg, D. van, Dreu, C. K. W. D., & Homan, A. C. (2004). Work group diversity and group performance: An integrative model and research agenda. *The Journal of Applied Psychology*, 89(6), 1008–1022. <https://doi.org/10.1037/0021-9010.89.6.1008>
162. Kocmanova, A., Pavlakova Docekalova, M., & Nemecek, P. (2015). Utilization of multidimensional methods for corporate sustainability. *WMSCI 2015 - 19th World Multi-Conference on Systemics, Cybernetics and Informatics, Proceedings, 1*, 69–75.
163. Kotsantonis, S., & Serafeim, G. (2019). Four Things No One Will Tell You About ESG Data. *Journal of Applied Corporate Finance*, 31(2), 50–58. <https://doi.org/10.1111/jacf.12346>
164. Kotter, J. P. (1995) Leading Change: Why Transformation Efforts Fail. *Harvard Business Review*, 73, 59-67.
165. KPMG. (2020). *The KPMG Survey of Sustainability Reporting 2020*. <https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf>
166. KPMG International. (2022). *Survey of Sustainability Reporting 2022* (p. 12). <https://assets.kpmg/content/dam/kpmg/xx/pdf/2022/10/ssr-executive-summary-small-steps-big-shifts.pdf>
167. La Rocca, M., La Rocca, T., & Cariola, A. (2011). Capital Structure Decisions During a Firm's Life Cycle. *Small Business Economics*, 37(1), 107–130. <https://doi.org/10.1007/s11187-009-9229-z>
168. Latvian Parliament. (2022). *Publiskas personas kapitāla daļu un kapitālsabiedrību pārvaldības likums*. <https://m.likumi.lv/ta/id/269907-publiskas-personas-kapitala-dalu-un-kapitalsabiedribu-parvaldibas-likums>

169. Lăzăroiu, G., Ionescu, L., Uță, C., Hurloiu, I., Andronie, M., & Dijmărescu, I. (2020). Environmentally Responsible Behavior and Sustainability Policy Adoption in Green Public Procurement. *Sustainability*, *12*(5), 2110. <https://doi.org/10.3390/su12052110>
170. Lazonick, W., & O'Sullivan, M. (2000). Maximizing shareholder value: A new ideology for corporate governance. *Economy and Society*, *29*(1), 13–35. <https://doi.org/10.1080/030851400360541>
171. Lee, L.-E., & Moscardi, M. (2019). 2019 ESG trends to watch. *MSCI ESG Research LLC*, 32.
172. Lester, D. L., Parnell, J. A., & Carraher, S. (2003). ORGANIZATIONAL LIFE CYCLE: A FIVE-STAGE EMPIRICAL SCALE. *The International Journal of Organizational Analysis*, *11*(4), 339–354. <https://doi.org/10.1108/eb028979>
173. Li, F., & Polychronopoulos, A. (2020). *What a Difference an ESG Ratings Provider Makes!* <https://www.researchaffiliates.com/documents/770-what-a-difference-an-esg-ratings-provider-makes.pdf>
174. Li, J., & Wu, D. (2018). Do Corporate Social Responsibility Engagements Lead to Real Environmental, Social and Governance Impact? *Ross School of Business Paper No. 1335*. <https://dx.doi.org/10.2139/ssrn.2853877>
175. Li, Y., Gong, M., Zhang, X. Y., & Koh, L. (2018). The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *British Accounting Review*. <https://doi.org/10.1016/j.bar.2017.09.007>
176. Loderer, C., Stulz, R., & Waelchli, U. (2017). Firm Rigidities and the Decline in Growth Opportunities. *Management Science*, *63*(9), 3000–3020. <https://doi.org/10.1287/mnsc.2016.2478>
177. Lopez, C., Contreras, O., & Bendix, J. (2020). ESG Ratings: The Road Ahead. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3706440>
178. López-Duarte, C., Vidal-Suárez, M. M., & González-Díaz, B. (2016). International Business and National Culture: A Literature Review and Research Agenda. *International Journal of Management Reviews*, *18*(4), 397–416. <https://doi.org/10.1111/ijmr.12070>
179. Lozano, R. (2015). A Holistic Perspective on Corporate Sustainability Drivers: A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*, *22*(1), 32–44. <https://doi.org/10.1002/csr.1325>
180. Malik, M. (2015). Value-Enhancing Capabilities of CSR: A Brief Review of Contemporary Literature. *Journal of Business Ethics*, *127*(2), 419–438. <https://doi.org/10.1007/s10551-014-2051-9>
181. Marquis, C., Toffel, M. W., & Zhou, Y. (2016). Scrutiny, Norms, and Selective Disclosure: A Global Study of Greenwashing. *Organization Science*, *27*(2), 483–504. <https://doi.org/10.1287/orsc.2015.1039>
182. Matisone, A., & Lāce, N. (2017). *Venture Capital in Latvia*. https://www.researchgate.net/profile/Valdis_Avotins/publication/320842368_The_analysis_o

- f_business_start-up_factors/links/59fd8118458515d07068b10d/The-analysis-of-business-start-up-factors.pdf#page=101.
183. McColgan, P. (2001). *Agency theory and corporate governance: A review of the literature from a UK perspective*. 78.
 184. McWilliams, A., Van Fleet, D. D., & Cory, K. D. (2002). Raising Rivals' Costs Through Political Strategy: An Extension of Resource-based Theory. *Journal of Management Studies*, 39(5), 707–724. <https://doi.org/10.1111/1467-6486.00308>
 185. Mervelskemper, L., & Streit, D. (2017). Enhancing Market Valuation of ESG Performance: Is Integrated Reporting Keeping its Promise? *Business Strategy and the Environment*, 26(4), 536–549. <https://doi.org/10.1002/bse.1935>
 186. Miller, D., & Friesen, P. (1984). A Longitudinal Study of the Corporate Life Cycle. *Management Science*, 30(10), 1161–1183. <https://doi.org/10.1287/mnsc.30.10.1161>
 187. Milliken, F. J., & Martins, L. L. (1996). Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups. *The Academy of Management Review*, 21(2), 402. <https://doi.org/10.2307/258667>
 188. Moir, L., Kennerley, M., & Ferguson, D. (2007). Measuring the Business Case: Linking Stakeholder and Shareholder value. *Corporate Governance*, 7(4), 388–400.
 189. Moore, G. (2001). Corporate Social and Financial Performance: An Investigation in the U.K. Supermarket Industry. *Journal of Business Ethics*, 34, 299–315.
 190. Morningstar Inc. (2016). *European Companies Lead the Way in ESG*. <https://expertinvestoreurope.com/european-companies-lead-esg/>
 191. Morningstar Inc. (2020). *Morningstar, Inc. Completes Acquisition of Sustainalytics*. <https://newsroom.morningstar.com/newsroom/news-archive/press-release-details/2020/Morningstar-Inc-Completes-Acquisition-of-Sustainalytics/default.aspx>
 192. Morrison & Foerster LLP. (2020). *Sustainable Finance Disclosure Regulation (SFDR): What to Expect?* <https://www.lexology.com/library/detail.aspx?g=56ca382e-e1a4-4090-9c19-a5bdba7dfd6b>
 193. MSCI. (2021). *ESG Ratings*. <https://www.msci.com/our-solutions/esg-investing/esg-ratings>
 194. MSCI ESG Research. (2020). *MSCI ESG Ratings Methodology*. <https://www.msci.com/documents/1296102/21901542/MSCI+ESG+Ratings+Methodology+-+Exec+Summary+Nov+2020.pdf>
 195. Mueller, D. (1972). A Life Cycle Theory of the Firm. *The Journal of Industrial Economics*, 20(3), 199–219. <https://doi.org/10.2307/2098055>
 196. Myers, S., & Majluf, N. (1984). Corporate Financing and Investment Decisions when Firms have Information the Investors do not have. *NBER Working Paper #1396*, 61.
 197. Ocean Tomo. (2021). *Intangible Asset Market Value Study*. <https://www.oceantomo.com/intangible-asset-market-value-study/>

198. OECD. (2020a). Implementing the OECD Guidelines on Corporate Governance of State-Owned Enterprises: Review of Recent Developments. *OECD Publishing Paris*. <https://doi.org/10.1787/4caa0c3b-en>.
199. OECD (Ed.). (2020b). *Sustainable and resilient finance*. OECD. <https://doi.org/10.1787/eb61fd29-en>
200. Official Journal of the European Union. (2019). *Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R2088>
201. Opimas Market Research. (2020). *ESG Data Market: No Stopping Its Rise Now*. opimas.com/research/547/detail/
202. Owen, S., & Yawson, A. (2010). Corporate life cycle and M&A activity. *Journal of Banking & Finance*, 34(2), 427–440.
203. Pagano, M., Panetta, F., & Zingales, L. (1998). Why Do Companies Go Public? An Empirical Analysis. *The Journal of Finance*, 53(1), 27–64. <https://doi.org/10.1111/0022-1082.25448>
204. Pfeffer, J., & Salancik, G. (1978). The External Control of Organizations: A Resource Dependence Perspective. *Administrative Science Quarterly*, 23(2), 358–361. <https://doi.org/10.2307/2392573>
205. Philippe, D., & Durand, R. (2011). The impact of norm-conforming behaviors on firm reputation. *Strategic Management Journal*. <https://doi.org/10.1002/smj.919>
206. Porter, M. (2004). *Competitive Advantage: Creating and Sustaining Superior Performance*.
207. Porter, M. E., & Linde, C. van der. (1995). Toward a New Conception of the Environment-Competitiveness Relationship. *Journal of Economic Perspectives*, 9(4), 97–118. <https://doi.org/10.1257/jep.9.4.97>
208. Porter, M., & Kramer, M. (2011). *Creating Shared Value*. Harvard Business Review. <http://www.relativimpact.com/downloads/HBR-Shared-value.pdf>
209. Powell, W. W., & Bromley, P. (2015). New Institutionalism in the Analysis of Complex Organizations. In *International Encyclopedia of the Social & Behavioral Sciences* (pp. 764–769). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.32181-X>
210. Principles for Responsible Investment. (2022). *Signatory directory*. <https://www.unpri.org/signatories/signatory-resources/signatory-directory>
211. PwC. (2015). *State-owned enterprises—Catalysts for public value creation?* <https://www.pwc.com/gx/en/psrc/publications/assets/pwc-state-owned-enterprise-psrc.pdf>.
212. PwC. (2021). *PwC's 2021 Annual Corporate Directors Survey*. <https://www.pwc.com/us/en/about-us/newsroom/press-releases/pwc-launches-acds-2021.html>
213. Quigley, T. J., & Hambrick, D. C. (2015). Has the “CEO effect” increased in recent decades? A new explanation for the great rise in America’s attention to corporate leaders. *Strategic Management Journal*, 36(6), 821–830. <https://doi.org/10.1002/smj.2258>

214. Rajan, R. (1992). Insiders and Outsiders: The Choice between Informed and Arm's-Length Debt. *The Journal of Finance*, 47(4), 1367–1400. <https://doi.org/10.1111/j.1540-6261.1992.tb04662.x>
215. Rao, K., & Tilt, C. (2016). Board Composition and Corporate Social Responsibility: The Role of Diversity, Gender, Strategy and Decision Making. *Journal of Business Ethics*, 138(2), 327–347. <https://doi.org/10.1007/s10551-015-2613-5>
216. Rappaport, A. (1986). *Creating Shareholder Value: The New Standard for Business Performance*. Simer and Schuster Publishing Group.
217. Rees, W., & Rodionova, T. (2015). The influence of family ownership on corporate social responsibility: An international analysis of publicly listed companies. *Corporate Governance: An International Review*. <https://doi.org/10.1111/corg.12086>
218. Reguera-Alvarado, N., de Fuentes, P., & Laffarga, J. (2017). Does Board Gender Diversity Influence Financial Performance? Evidence from Spain. *Journal of Business Ethics*, 141(2), 337–350. <https://doi.org/10.1007/s10551-015-2735-9>
219. RepRisk. (2021). *Approach to ESG Scoring*. <https://www.reprisk.com/approach>
220. Reuters. (2021, July 27). *Global sustainable fund assets hit record \$2.3 tln in Q2, says Morningstar*. <https://www.reuters.com/business/sustainable-business/global-sustainable-fund-assets-hit-record-23-tln-q2-says-morningstar-2021-07-27/>
221. Reverte, C. (2009). Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms. *Journal of Business Ethics*, 88(2), 351–366. <https://doi.org/10.1007/s10551-008-9968-9>
222. Richardson, S. (2006). Over-investment of free cash flow. *Review of Accounting Studies*, 11(2–3), 159–189. <https://doi.org/10.1007/s11142-006-9012-1>
223. RobecoSAM. (2021). *Smart ESG Score*. <https://www.robeco.com/en/key-strengths/sustainable-investing/glossary/smart-esg-score.html>
224. Roca, L. C., & Searcy, C. (2012). An analysis of indicators disclosed in corporate sustainability reports. *Journal of Cleaner Production*, 20(1), 103–118. <https://doi.org/10.1016/j.jclepro.2011.08.002>
225. Roca, L., & Searcy, C. (2012). An analysis of indicators disclosed in corporate sustainability reports. *Journal of Cleaner Production*, 20(1), 103–118. <https://doi.org/10.1016/j.jclepro.2011.08.002>
226. Rodrigues, M., & Mendes, L. (2018). Mapping of the literature on social responsibility in the mining industry: A systematic literature review. *Journal of Cleaner Production*, 181, 88–101. <https://doi.org/10.1016/j.jclepro.2018.01.163>
227. Rogers, J., & Serafeim, G. (2019). Pathways to Materiality: How Sustainability Issues Become Financially Material to Corporations and Their Investors. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3482546>

228. Russo, A., & Perrini, F. (2010). Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. *Journal of Business Ethics*, 91, 207–221. <https://doi.org/10.1007/s10551-009-0079-z>
229. Saaty, T. L. (1980). *The Analytic Hierarchy Process*. McGraw-Hill.
230. Saaty, T. L. (2008). Decision making with the analytic hierarchy process. *International Journal of Services Sciences*, 1(1), 83. <https://doi.org/10.1504/IJSSCI.2008.017590>
231. Sagir Ozdemir, M., & Saaty, T. (2015). How Many Judges Should There Be in a Group? *Annals of Data Science*, 1. <https://doi.org/10.1007/s40745-014-0026-4>
232. SASB. (2021). *SASB Materiality Map*. <https://www.sasb.org/standards/materiality-map/>
233. Sassen, R., Hinze, A.-K., & Hardeck, I. (2016). Impact of ESG factors on firm risk in Europe. *Journal of Business Economics*, 86(8), 867–904. <https://doi.org/10.1007/s11573-016-0819-3>
234. Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business Cases for Sustainability: A Stakeholder Theory Perspective. *Organization & Environment*, 32(3), 191–212. <https://doi.org/10.1177/1086026617722882>
235. Schnabel, I. (2020). *Never Waste a Crisis: COVID-19, Climate Change and Monetary Policy*. Sustainable Crisis Responses in Europe, Frankfurt. 17 May 2021. <https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200717~1556b0f988.en.html>
236. Schramade, W. (2016). Integrating ESG into valuation models and investment decisions: The value-driver adjustment approach. *Journal of Sustainable Finance & Investment*, 6(2), 95–111.
237. Shimizu, K., & Hitt, M. A. (2005). What Constrains or Facilitates Divestitures of Formerly Acquired Firms? The Effects of Organizational Inertia. *Journal of Management*, 31(1), 50–72. <https://doi.org/10.1177/0149206304271381>
238. Siew, R., & Balatbat, M. (2016). The impact of ESG disclosures and institutional ownership on market information asymmetry. *Asia-Pacific Journal of Accounting & Economics*, 23, 432–448. <https://doi.org/10.1080/16081625.2016.1170100>
239. Sikora, A. (2021). European Green Deal – legal and financial challenges of the climate change. *ERA Forum*, 21(4), 681–697. <https://doi.org/10.1007/s12027-020-00637-3>
240. Soliman, M., El Din, M. B., & Sakr, A. (2013). Ownership Structure and Corporate Social Responsibility (CSR): An Empirical Study of the Listed Companies in Egypt. *SSRN Electronic Journal*, 5(1). <https://doi.org/10.2139/ssrn.2257816>
241. Sood, K., Pathak, P., Jain, J., & Gupta, S. (2022). How does an investor prioritize ESG factors in India? An assessment based on fuzzy AHP. *Managerial Finance*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/MF-04-2022-0162>
242. S&P Global. (2021). *Corporate Sustainability Assessment (CSA) 2021*. <https://www.spglobal.com/esg/csa/csa-2021>
243. S&P Global Market Intelligence. (2020). *2019 ESG Survey*. <https://pages.marketintelligence.spglobal.com/ESG-Survey.html>

244. S&P Global Market Intelligence. (2019). *S&P Global to Acquire the ESG Ratings Business from RobecoSAM*. <https://www.spglobal.com/en/research-insights/articles/sp-global-to-acquire-the-esg-ratings-business-from-robecosam-shell>
245. Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review*, 20(3), 571. <https://doi.org/10.2307/258788>
246. Sustainalytics. (2020). *ESG Risk Rating—Methodology Abstract Version 2.1*. https://connect.sustainalytics.com/hubfs/INV/Methodology/Sustainalytics_ESG%20Ratings_Methodology%20Abstract.pdf
247. Szabo, Z. K., Szádóczi, Z., Bozóki, S., Stănculescu, G. C., & Szabo, D. (2021). An Analytic Hierarchy Process Approach for Prioritisation of Strategic Objectives of Sustainable Development. *Sustainability*, 13(4), 2254. <https://doi.org/10.3390/su13042254>
248. Tamimi, N., & Sebastianelli, R. (2017). Transparency among S & P 500 companies: An analysis of ESG disclosure scores. *Management Decision*, 55(3). <https://doi.org/10.1108/MD-01-2017-0018>
249. The Conference Board. (2022). *Five Reasons Private Companies Care About ESG*. <https://www.conference-board.org/topics/sustainable-business-integration/5-reasons-private-companies-care-about-ESG>
250. The Economist. (2021). *An Eco Awakening*. https://impact.economist.com/perspectives/sites/default/files/an_ecowakening_measuring_awareness_engagement_and_action_for_nature_final_may_18_2021.pdf
251. The World Bank. (2021a). *Manufacturing value added (current USD)*. <https://data.worldbank.org/indicator/NV.IND.MANF.CD>
252. The World Bank. (2021b). *Urban population (% of total population)*. <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>
253. Turban, D. B., & Greening, D. W. (1997). Corporate Social Performance And Organizational Attractiveness To Prospective Employees. *Academy of Management Journal*, 40(3), 658–672. <https://doi.org/10.5465/257057>
254. Tushman, M., & O'Reilly, C. (1996). Organizations. *California management review*, 38(4), 8-30.
255. Udayasankar, K. (2008). Corporate Social Responsibility and Firm Size. *Journal of Business Ethics*, 83(2), 167–175. <https://doi.org/10.1007/s10551-007-9609-8>
256. UN Global Compact. (2005). *Who Cares Wins*. unepfi.org/fileadmin/events/2004/stocks/who_cares_wins_global_compact_2004.pdf
257. UN Global Compact. (2020). *Communicate the Value of Sustainability to Investors*. <https://www.unglobalcompact.org/take-action/action/value-driver-model>
258. UN PRI. (2022). *Regulation database*. <https://www.unpri.org/policy/regulation-database>
259. UNEP & WBCSD. (2010). Translating ESG into sustainable business value. *Report from an International Workshop Series*.

260. Vaidya, O. S., & Kumar, S. (2006). Analytic hierarchy process: An overview of applications. *European Journal of Operational Research*, 169(1), 1–29. <https://doi.org/10.1016/j.ejor.2004.04.028>
261. van Duuren, E., Plantinga, A., & Scholtens, B. (2016). ESG Integration and the Investment Management Process: Fundamental Investing Reinvented. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-015-2610-8>
262. Velte, P. (2016). Women on management board and ESG performance. *Journal of Global Responsibility*. <https://doi.org/10.1108/jgr-01-2016-0001>
263. Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169–178. <https://doi.org/10.1108/JGR-11-2016-0029>
264. Velte, P. (2020). Does CEO power moderate the link between ESG performance and financial performance? A focus on the German two-tier system. *Management Research Review*, 43(5), 497–520. <https://doi.org/10.1108/MRR-04-2019-0182>
265. Verrecchia, R. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, 5, 179–194. [https://doi.org/10.1016/0165-4101\(83\)90011-3](https://doi.org/10.1016/0165-4101(83)90011-3)
266. Villalba-Ríos, P., Barroso-Castro, C., & Vecino-Gravel, J. D. (2022). The influence of CEO profile on corporate social responsibility companies. A qualitative comparative analysis. *Corporate Social Responsibility and Environmental Management*, 29(2), 356–366. <https://doi.org/10.1002/csr.2205>
267. Vourvachis, P., & Woodward, T. (2015). Content analysis in social and environmental reporting research: Trends and challenges. *Journal of Applied Accounting Research*, 16(2), 166–195. <https://doi.org/10.1108/JAAR-04-2013-0027>
268. Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance—Financial Performance Link. *Strategic Management Journal*, 18(4), 303–319. [https://doi.org/10.1002/\(SICI\)1097-0266\(199704\)18:4<303::AID-SMJ869>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-0266(199704)18:4<303::AID-SMJ869>3.0.CO;2-G)
269. Walter, I. (1996). Universal Banking: A Shareholder Value Perspective. *New York University Stern School of Business Finance Department, Working Paper Series*. <https://archive.nyu.edu/bitstream/2451/27098/2/wpa96040.pdf>
270. Wernerfelt, B. (1985). The Dynamics of Prices and Market Shares Over the Product Life Cycle. *Management Science*, 31(8), 928–939.
271. Whelan, T., Atz, U., Holt, T. V., & Clark, C. (2021). ESG AND FINANCIAL PERFORMANCE: *NYU Stern Center for Sustainable Business*, 19.
272. Whitaker, R. (2007). Validation examples of the Analytic Hierarchy Process and Analytic Network Process. *Decision Making with the Analytic Hierarchy Process and the Analytic Network Process*, 46(7), 840–859. <https://doi.org/10.1016/j.mcm.2007.03.018>
273. Williams, K., & O'Reilly, C. (1998). Demography and Diversity in Organizations: A Review of 40 Years of Research. *Research in Organizational Behavior*, 20, 77–140.

274. Willis Tower Watson. (2020). *2020 ESG survey of board members and senior executives*. <https://www.willistowerswatson.com/en-VN/Insights/2020/12/2020-esg-survey-of-board-members-and-senior-executives>
275. World Economic Forum. (2022). *What start-ups think about ESG and why it matters*. <https://www.weforum.org/agenda/2022/09/what-start-ups-think-about-esg-and-why-it-matters/>
276. Yang, Z., Nguyen, T. T. H., Nguyen, H. N., Nguyen, T. T. N., & Cao, T. T. (2020). Greenwashing behaviors: Causes, Taxonomy and Consequences based on a Systematic Literature Review. *Journal of Business Economics and Management*, 21(5), 1486–1507. <https://doi.org/10.3846/jbem.2020.13225>
277. Yaseen, H., Isk, M., rani, Ajina, A., & Hamad, A. (2019). Investigating the Relationship between Board Diversity & Corporate Social Responsibility (CSR) Performance: Evidence from France. *Academy of Accounting and Financial Studies Journal*. <https://www.abacademies.org/abstract/investigating-the-relationship-between-board-diversity--corporate-social-responsibility-csr-performance-evidence-from-fr-8504.html>
278. Yu, E. P., & Luu, B. V. (2021). International variations in ESG disclosure – Do cross-listed companies care more? *International Review of Financial Analysis*, 75, 101731. <https://doi.org/10.1016/j.irfa.2021.101731>
279. Zhao, T., & Xiao, X. (2019). The impact of corporate social responsibility on financial constraints: Does the life cycle stage of a firm matter? *International Review of Economics & Finance*, 63, 76–93. <https://doi.org/10.1016/j.iref.2018.08.010>
280. Zumente, I., & Bistrova, J. (2021). Do Baltic investors care about environmental, social and governance (ESG)? *Entrepreneurship and Sustainability Issues*, 8(4), 349–362. [https://doi.org/10.9770/jesi.2021.8.4\(20\)](https://doi.org/10.9770/jesi.2021.8.4(20))
281. Zumente, I., & Lāce, N. (2020). Does Diversity Drive Non-financial Reporting in the Baltic countries. *Intellectual Economics*, 14(2), 50–66. <https://doi.org/10.13165/IE-20-14-2-04>
282. Zumente, I., Lāce, N., & Bistrova, J. (2020, June 9). *ESG disclosure patterns in the Baltics*. 11th International Scientific Conference „Business and Management 2020“, Vilnius Gediminas Technical University, Lithuania. <https://doi.org/10.3846/bm.2020.484>

Appendices

Appendix 1 The sources used for bibliography analysis

1. Aguinis, H., & Glavas, A. (2012). What We Know and Don't Know About Corporate Social Responsibility: A Review and Research Agenda. *Journal of Management*, 38(4), 932–968. <https://doi.org/10.1177/0149206311436079>
2. Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate Economic, Environmental, and Social Sustainability Performance Transformation through ESG Disclosure. *Sustainability*, 12(9), 3910. <https://doi.org/10.3390/su12093910>
3. Aouadi, A., & Marsat, S. (2018). Do ESG Controversies Matter for Firm Value? Evidence from International Data. *Journal of Business Ethics*, 151(4), 1027–1047. <https://doi.org/10.1007/s10551-016-3213-8>
4. Ashwin Kumar, N. C., Smith, C., Badis, L., Wang, N., Ambrosy, P., & Tavares, R. (2016). ESG factors and risk-adjusted performance: A new quantitative model. *Journal of Sustainable Finance & Investment*, 6(4), 292–300. <https://doi.org/10.1080/20430795.2016.1234909>
5. Atan, R., Razali, F. A., Said, J., & Zainun, S. (2016). Environmental, Social and Governance (ESG) Disclosure and Its Effect on Firm's Performance: A Comparative Study. *International Journal of Economics and Management*, 10(2), 355–375.
6. Bassen, A., & Kovács, A. M. (2008). Environmental, Social and Governance Key Performance Indicators from a Capital Market Perspective. *Zeitschrift Für Wirtschafts-Und Unternehmensethik*, 9(2), 182–192. <https://doi.org/10.5771/1439-880X-2008-2-182>
7. Brooks, C., & Oikonomou, I. (2018). The Effects of Environmental, Social and Governance Disclosures and Performance on Firm Value: A Review of the Literature in Accounting and Finance. *The British Accounting Review*, 50, 1–15. <https://doi.org/10.1016/j.bar.2017.11.005>
8. Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/MEQ-12-2017-0149>
9. Burke, J. J. (2022). Do Boards Take Environmental, Social, and Governance Issues Seriously? Evidence from Media Coverage and CEO Dismissals. *Journal of Business Ethics*, 176(4), 647–671. <https://doi.org/10.1007/s10551-020-04715-x>
10. Camilleri, M. A. (2015). Environmental, social and governance disclosures in Europe. *Sustainability Accounting, Management and Policy Journal*. <https://doi.org/10.1108/SAMPJ-10-2014-0065>
11. Campbell, L. (2007). Why Would Corporations Behave in Socially Responsible Ways? An Institutional Theory of Corporate Social Responsibility. *The Academy of Management Review*, 32(3), 946–967. <https://doi.org/10.5465/amr.2007.25275684>

12. Capelle-Blancard, G., & Monjon, S. (2012). Trends in the literature on socially responsible investment: Looking for the keys under the lamppost. *Business Ethics: A European Review*, 21(3), 239–250. <https://doi.org/10.1111/j.1467-8608.2012.01658.x>
13. Capelle-Blancard, G., & Petit, A. (2019). Every Little Helps? ESG News and Stock Market Reaction. *Journal of Business Ethics*, 157(2), 543–565. <https://doi.org/10.1007/s10551-017-3667-3>
14. Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35(1), 1–23. <https://doi.org/10.1002/smj.2131>
15. Cheng, C. S. A., Collins, D., & Huang, H. H. (2006). Shareholder rights, financial disclosure and the cost of equity capital. *Review of Quantitative Finance and Accounting*, 27(2), 175–204. <https://doi.org/10.1007/s11156-006-8795-2>
16. Clark, G., Feiner, A., & Viehs, M. (2015). From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2508281
17. Clark, G. L., & Viehs, M. (2014). The Implications of Corporate Social Responsibility for Investors: An Overview and Evaluation of the Existing CSR Literature. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2481877>
18. Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4–5), 303–327. <https://doi.org/10.1016/j.aos.2007.05.003>
19. Crifo, P., Escrig-Olmedo, E., & Mottis, N. (2019). Corporate Governance as a Key Driver of Corporate Sustainability in France: The Role of Board Members and Investor Relations. *Journal of Business Ethics*, 159(4), 1127–1146. <https://doi.org/10.1007/s10551-018-3866-6>
20. Cuadrado-Ballesteros, B., & Rodríguez-Ariza, L. (2015). The role of independent directors at family firms in relation to corporate social responsibility disclosures. *International Business Review*, 24(5), 890–901. <https://doi.org/10.1016/j.ibusrev.2015.04.002>
21. Czerwińska, T., & Kaźmierkiewicz, P. (2015). ESG Rating in Investment Risk Analysis of Companies Listed on the Public Market in Poland. *Economic Notes*, 44(2), 211–248. <https://doi.org/10.1111/ecno.12031>
22. Dagilienė, L. (2013). The Influence of Corporate Social Reporting to Company's Value in a Developing Economy. *Procedia Economics and Finance*, 5, 212–221. [https://doi.org/10.1016/s2212-5671\(13\)00027-0](https://doi.org/10.1016/s2212-5671(13)00027-0)
23. De Lucia, C., Pazienza, P., & Bartlett, M. (2020). Does Good ESG Lead to Better Financial Performances by Firms? Machine Learning and Logistic Regression Models of Public Enterprises in Europe. *Sustainability*, 12(13), 5317. <https://doi.org/10.3390/su12135317>
24. Dell'Atti, S., Trotta, A., Iannuzzi, A. P., & Demaria, F. (2017). Corporate Social Responsibility Engagement as a Determinant of Bank Reputation: An Empirical Analysis.

- Corporate Social Responsibility and Environmental Management, 24(6), 589–605. <https://doi.org/10.1002/csr.1430>
25. Devalle, A., Fiandrino, S., & Cantino, V. (2017). The Linkage between ESG Performance and Credit Ratings: A Firm-Level Perspective Analysis. *International Journal of Business and Management*, 12(9), 53. <https://doi.org/10.5539/ijbm.v12n9p53>
 26. Dhaliwal, D., Li, O. Z., Tsang, A., & Yang, Y. G. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. *Journal of Accounting and Public Policy*, 33(4), 328–355. <https://doi.org/10.1016/j.jaccpubpol.2014.04.006>
 27. Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Accounting Review*, 86(1), 59–100. <https://doi.org/10.2308/accr.00000005>
 28. Drempetic, S., Klein, C., & Zwergel, B. (2020). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, 167(2), 333–360. <https://doi.org/10.1007/s10551-019-04164-1>
 29. Easley, D., & O'hara, M. (2004). Information and the Cost of Capital. *The Journal of Finance*, 59(4), 1553–1583. <https://doi.org/10.1111/j.1540-6261.2004.00672.x>
 30. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, 60(11), 2381–2617. <https://doi.org/10.1287/mnsc.2014.1984>
 31. Eliwa, Y., Aboud, A., & Saleh, A. (2021). ESG practices and the cost of debt: Evidence from EU countries. *Critical Perspectives on Accounting*, 79, 102097. <https://doi.org/10.1016/j.cpa.2019.102097>
 32. Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>
 33. Flammer, C. (2012). Does Corporate Social Responsibility Lead to Superior Financial Performance? A Regression Discontinuity Approach. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2146282>
 34. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
 35. Fulton, M., Kahn, B. M., & Sharples, C. (2013). Sustainable Investing: Establishing Long-Term Value and Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2222740>
 36. Gartenberg, C. M., Prat, A., & Serafeim, G. (2016). Corporate Purpose and Financial Performance. *Columbia Business School Research Paper*, 16(69).

37. Giese, G., Lee, L.-E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG Investing: How ESG Affects Equity Valuation, Risk, and Performance? *The Journal of Portfolio Management*, 45(5), 1–15. <https://doi.org/10.3905/jpm.2019.45.5.069>
38. Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, 101889. <https://doi.org/10.1016/j.jcorpfin.2021.101889>
39. Glossner, S. (2021). The Price of Ignoring ESG Risks. Social Science Research Network.
40. Gómez-Bezares, F., Przychodzen, W., & Przychodzen, J. (2016). Corporate Sustainability and Shareholder Wealth—Evidence from British Companies and Lessons from the Crisis. *Sustainability*, 8(3), 276. <https://doi.org/10.3390/su8030276>
41. Gregory, A., Tharyan, R., & Whittaker, J. (2014). Corporate Social Responsibility and Firm Value: Disaggregating the Effects on Cash Flow, Risk and Growth. *Journal of Business Ethics*, 124(4), 633–657. <https://doi.org/10.1007/s10551-013-1898-5>
42. Griffin, J. J., & Mahon, J. F. (1997). The Corporate Social Performance and Corporate Financial Performance Debate: Twenty-Five Years of Incomparable Research. *Business & Society*, 36(1), 5–31. <https://doi.org/10.1177/000765039703600102>
43. Hasan, I., Kobeissi, N., Liu, L., & Wang, H. (2018). Corporate Social Responsibility and Firm Financial Performance: The Mediating Role of Productivity. *Journal of Business Ethics*, 149(3), 671–688. <https://doi.org/10.1007/s10551-016-3066-1>
44. Henisz, W. J., & McGlinch, J. (2019). ESG, Material Credit Events, and Credit Risk. *Journal of Applied Corporate Finance*, 31(2), 105–117. <https://doi.org/10.1111/jacf.12352>
45. Henisz, W., Koller, T., & Nuttall, R. (2019). Five ways that ESG creates value. *McKinsey Quarterly*.
<https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx>
46. Hoang, T. (2018). The Role of the Integrated Reporting in Raising Awareness of Environmental, Social and Corporate Governance (ESG) Performance. In *Stakeholders, Governance and Responsibility* (Vol. 14, pp. 47–69). Emerald Publishing Limited. <https://doi.org/10.1108/S2043-052320180000014003>
47. Hong, H., Kubik, J. D., & Scheinkman, J. A. (2012). Financial Constraints on Corporate Goodness. National Bureau of Economic Research, NBER Working Paper 18476, 48.
48. Hong, Y., & Andersen, M. (2011). The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study. *Journal of Business Ethics*, 104(4), 461–471.
49. Huang, D. Z. X. (2021). Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting & Finance*, 61(1), 335–360. <https://doi.org/10.1111/acfi.12569>

50. Hübel, B., & Scholz, H. (2020). Integrating sustainability risks in asset management: The role of ESG exposures and ESG ratings. *Journal of Asset Management*, 21(1), 52–69. <https://doi.org/10.1057/s41260-019-00139-z>
51. Ioannou, I., & Serafeim, G. (2019). Corporate Sustainability: A Strategy? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3312191>
52. Ionescu, G. H., Firoiu, D., Pirvu, R., & Vilag, R. D. (2019). THE IMPACT OF ESG FACTORS ON MARKET VALUE OF COMPANIES FROM TRAVEL AND TOURISM INDUSTRY. *Technological and Economic Development of Economy*, 25(5), 820–849. <https://doi.org/10.3846/tede.2019.10294>
53. Ismai, N., Isa, M. A., Rahman, N. H. A., & Mazlan, N. F. (n.d.). SUSTAINABILITY PERFORMANCE USING ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) SCORES: EVIDENCE FROM PUBLIC LISTED COMPANIES (PLCS) IN MALAYSIA. 5.
54. Jeffrey, S., Rosenberg, S., & McCabe, B. (2019). Corporate social responsibility behaviors and corporate reputation. *Social Responsibility Journal*, 15(3), 395–408. <https://doi.org/10.1108/SRJ-11-2017-0255>
55. Jensen, M. (2002). Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics*, 12, 235–256.
56. Kang, M., Viswanathan, K. G., White, N. A., & Zychowicz, E. J. (2021). Sustainability efforts, index recognition, and stock performance. *Journal of Asset Management*, 22(2), 120–132. <https://doi.org/10.1057/s41260-020-00202-0>
57. Khan, M. (2019). Corporate Governance, ESG, and Stock Returns around the World. *Financial Analysts Journal*, 75(4), 103–123. <https://doi.org/10.1080/0015198X.2019.1654299>
58. Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate Sustainability: First Evidence on Materiality. *The Accounting Review*, 91(6), 1697–1724.
59. Kim, Y., Park, M. S., & Wier, B. (2012). Is Earnings Quality Associated with Corporate Social Responsibility? *The Accounting Review*, 87(3), 761–796. <https://doi.org/10.2308/accr-10209>
60. Li, Y., Gong, M., Zhang, X. Y., & Koh, L. (2018). The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *British Accounting Review*. <https://doi.org/10.1016/j.bar.2017.09.007>
61. Maiti, M. (2021). Is ESG the succeeding risk factor? *Journal of Sustainable Finance & Investment*, 11(3), 199–213. <https://doi.org/10.1080/20430795.2020.1723380>
62. Malik, M. (2015). Value-Enhancing Capabilities of CSR: A Brief Review of Contemporary Literature. *Journal of Business Ethics*, 127(2), 419–438. <https://doi.org/10.1007/s10551-014-2051-9>

63. Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (2009). Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1866371>
64. McBrayer, G. A. (2018). Does persistence explain ESG disclosure decisions? *Corporate Social Responsibility and Environmental Management*, 25(6), 1074–1086. <https://doi.org/10.1002/csr.1521>
65. Mervelskemper, L., & Streit, D. (2017). Enhancing Market Valuation of ESG Performance: Is Integrated Reporting Keeping its Promise? *Business Strategy and the Environment*, 26(4), 536–549. <https://doi.org/10.1002/bse.1935>
66. Miller, S. R., Eden, L., & Li, D. (2018). CSR Reputation and Firm Performance: A Dynamic Approach. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-018-4057-1>
67. Nekhili, M., Boukadhaha, A., Nagati, H., & Chtioui, T. (2021). ESG performance and market value: The moderating role of employee board representation. *The International Journal of Human Resource Management*, 32(14), 3061–3087. <https://doi.org/10.1080/09585192.2019.1629989>
68. Ng, A. C., & Rezaee, Z. (2015). Business sustainability performance and cost of equity capital. *Journal of Corporate Finance*. <https://doi.org/10.1016/j.jcorpfin.2015.08.003>
69. Nirino, N., Santoro, G., Miglietta, N., & Quaglia, R. (2021). Corporate controversies and company's financial performance: Exploring the moderating role of ESG practices. *Technological Forecasting and Social Change*, 162, 120341. <https://doi.org/10.1016/j.techfore.2020.120341>
70. Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate Social and Financial Performance: A Meta-Analysis. *Organization Studies*, 24(3), 403–441. <https://doi.org/10.1177/0170840603024003910>
71. Poole, V., & Sullivan, K. (2021). Tectonic shifts: How ESG is changing business, moving markets, and driving regulation. *Deloitte Insights*, 28.
72. Porter, M. (2004). *Competitive Advantage: Creating and Sustaining Superior Performance*.
73. Porter, M., & Kramer, M. (2011). *Creating Shared Value*. *Harvard Business Review*. <http://www.relativimpact.com/downloads/HBR-Shared-value.pdf>
74. Russo, A., & Perrini, F. (2010). Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. *Journal of Business Ethics*, 91, 207–221. <https://doi.org/10.1007/s10551-009-0079-z>
75. Sabbaghi, O. (2022). The impact of news on the volatility of ESG firms. *Global Finance Journal*, 51, 100570. <https://doi.org/10.1016/j.gfj.2020.100570>
76. Sahut, J.-M., & Pasquini-Descomps, H. (2015). ESG Impact on Market Performance of Firms: International Evidence. *Management International*, 19(2), 40–63. <https://doi.org/10.7202/1030386ar>

77. Santamaria, R., Paolone, F., Cucari, N., & Dezi, L. (2021). Non-financial strategy disclosure and environmental, social and governance score: Insight from a configurational approach. *Business Strategy and the Environment*, 30(4), 1993–2007. <https://doi.org/10.1002/bse.2728>
78. Sassen, R., Hinze, A.-K., & Hardeck, I. (2016). Impact of ESG factors on firm risk in Europe. *Journal of Business Economics*, 86(8), 867–904. <https://doi.org/10.1007/s11573-016-0819-3>
79. Schramade, W. (2016a). Integrating ESG into valuation models and investment decisions: The value-driver adjustment approach. *Journal of Sustainable Finance & Investment*, 6(2), 95–111.
80. Schramade, W. (2016b). Bridging Sustainability and Finance: The Value Driver Adjustment Approach. *Journal of Applied Corporate Finance*, 28(2), 17–28. <https://doi.org/10.1111/jacf.12170>
81. Starks, L. T., Venkat, P., & Zhu, Q. (2017). Corporate ESG Profiles and Investor Horizons. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3049943>
82. Syed, A. M. (2017). Environment, social, and governance (ESG) criteria and preference of managers. *Cogent Business & Management*, 4(1), 1340820. <https://doi.org/10.1080/23311975.2017.1340820>
83. Taliento, M., Favino, C., & Netti, A. (2019). Impact of Environmental, Social, and Governance Information on Economic Performance: Evidence of a Corporate ‘Sustainability Advantage’ from Europe. *Sustainability*, 11(6), 1738. <https://doi.org/10.3390/su11061738>
84. Tamimi, N., & Sebastianelli, R. (2017). Transparency among S & P 500 companies: An analysis of ESG disclosure scores. *Management Decision*, 55(3). <https://doi.org/10.1108/MD-01-2017-0018>
85. the Faculty of Accountancy, Universiti Teknologi MARA, Tarmuji, I., Maelah, R., the Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Tarmuji, N. H., & the Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA. (2016). The Impact of Environmental, Social and Governance Practices (ESG) on Economic Performance: Evidence from ESG Score. *International Journal of Trade, Economics and Finance*, 7(3), 67–74. <https://doi.org/10.18178/ijtef.2016.7.3.501>
86. Ting, I. W. K., Azizan, N. A., Bhaskaran, R. K., & Sukumaran, S. K. (2019). Corporate Social Performance and Firm Performance: Comparative Study among Developed and Emerging Market Firms. *Sustainability*, 12(1), 26. <https://doi.org/10.3390/su12010026>
87. Turban, D. B., & Greening, D. W. (1997). Corporate Social Performance And Organizational Attractiveness To Prospective Employees. *Academy of Management Journal*, 40(3), 658–672. <https://doi.org/10.5465/257057>

88. van Duuren, E., Plantinga, A., & Scholtens, B. (2016). ESG Integration and the Investment Management Process: Fundamental Investing Reinvented. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-015-2610-8>
89. Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169–178. <https://doi.org/10.1108/JGR-11-2016-0029>
90. Velte, P. (2019). The bidirectional relationship between ESG performance and earnings management – empirical evidence from Germany. *Journal of Global Responsibility*, 10(4), 322–338. <https://doi.org/10.1108/JGR-01-2019-0001>
91. Velte, P. (2020). Does CEO power moderate the link between ESG performance and financial performance? A focus on the German two-tier system. *Management Research Review*, 43(5), 497–520. <https://doi.org/10.1108/MRR-04-2019-0182>
92. Vilanova, M., Lozano, J. M., & Arenas, D. (2009). Exploring the Nature of the Relationship Between CSR and Competitiveness. *Journal of Business Ethics*, 87(S1), 57–69. <https://doi.org/10.1007/s10551-008-9812-2>
93. Waddock, S. A., & Graves, S. B. (1997). The Corporate Social Performance—Financial Performance Link. *Strategic Management Journal*, 18(4), 303–319. [https://doi.org/10.1002/\(SICI\)1097-0266\(199704\)18:4<303:AID-SMJ869>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1097-0266(199704)18:4<303:AID-SMJ869>3.0.CO;2-G)
94. Whelan, T., Atz, U., Holt, T. V., & Clark, C. (2021). ESG AND FINANCIAL PERFORMANCE: NYU Stern Center for Sustainable Business, 19.

Appendix 2 The sources used for qualitative content analysis on the ESG and SHV relationship

1. Aguinis, H., & Glavas, A. (2012). What We Know and Don't Know About Corporate Social Responsibility: A Review and Research Agenda. *Journal of Management*, 38(4), 932–968. <https://doi.org/10.1177/0149206311436079>
2. Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate Economic, Environmental, and Social Sustainability Performance Transformation through ESG Disclosure. *Sustainability*, 12(9), 3910. <https://doi.org/10.3390/su12093910>
3. Aouadi, A., & Marsat, S. (2018). Do ESG Controversies Matter for Firm Value? Evidence from International Data. *Journal of Business Ethics*, 151(4), 1027–1047. <https://doi.org/10.1007/s10551-016-3213-8>
4. Ashwin Kumar, N. C., Smith, C., Badis, L., Wang, N., Ambrosy, P., & Tavares, R. (2016). ESG factors and risk-adjusted performance: A new quantitative model. *Journal of Sustainable Finance & Investment*, 6(4), 292–300. <https://doi.org/10.1080/20430795.2016.1234909>
5. Brooks, C., & Oikonomou, I. (2018). The Effects of Environmental, Social and Governance Disclosures and Performance on Firm Value: A Review of the Literature in Accounting and Finance. *The British Accounting Review*, 50, 1–15. <https://doi.org/10.1016/j.bar.2017.11.005>
6. Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, 30(1), 98–115. <https://doi.org/10.1108/MEQ-12-2017-0149>
7. Burke, J. J. (2022). Do Boards Take Environmental, Social, and Governance Issues Seriously? Evidence from Media Coverage and CEO Dismissals. *Journal of Business Ethics*, 176(4), 647–671. <https://doi.org/10.1007/s10551-020-04715-x>
8. Capelle-Blancard, G., & Petit, A. (2019). Every Little Helps? ESG News and Stock Market Reaction. *Journal of Business Ethics*, 157(2), 543–565. <https://doi.org/10.1007/s10551-017-3667-3>
9. Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35(1), 1–23. <https://doi.org/10.1002/smj.2131>
10. De Lucia, C., Paziienza, P., & Bartlett, M. (2020). Does Good ESG Lead to Better Financial Performances by Firms? Machine Learning and Logistic Regression Models of Public Enterprises in Europe. *Sustainability*, 12(13), 5317. <https://doi.org/10.3390/su12135317>
11. Dell'Atti, S., Trotta, A., Iannuzzi, A. P., & Demaria, F. (2017). Corporate Social Responsibility Engagement as a Determinant of Bank Reputation: An Empirical Analysis. *Corporate Social Responsibility and Environmental Management*, 24(6), 589–605. <https://doi.org/10.1002/csr.1430>

12. Devalle, A., Fiandrino, S., & Cantino, V. (2017). The Linkage between ESG Performance and Credit Ratings: A Firm-Level Perspective Analysis. *International Journal of Business and Management*, 12(9), 53. <https://doi.org/10.5539/ijbm.v12n9p53>
13. Dhaliwal, D., Li, O. Z., Tsang, A., & Yang, Y. G. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. *Journal of Accounting and Public Policy*, 33(4), 328–355. <https://doi.org/10.1016/j.jaccpubpol.2014.04.006>
14. Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Accounting Review*, 86(1), 59–100. <https://doi.org/10.2308/accr.00000005>
15. Dremptic, S., Klein, C., & Zwergel, B. (2020). The Influence of Firm Size on the ESG Score: Corporate Sustainability Ratings Under Review. *Journal of Business Ethics*, 167(2), 333–360. <https://doi.org/10.1007/s10551-019-04164-1>
16. Easley, D., & O'hara, M. (2004). Information and the Cost of Capital. *The Journal of Finance*, 59(4), 1553–1583. <https://doi.org/10.1111/j.1540-6261.2004.00672.x>
17. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, 60(11), 2381–2617. <https://doi.org/10.1287/mnsc.2014.1984>
18. Eliwa, Y., Aboud, A., & Saleh, A. (2021). ESG practices and the cost of debt: Evidence from EU countries. *Critical Perspectives on Accounting*, 79, 102097. <https://doi.org/10.1016/j.cpa.2019.102097>
19. Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45–64. <https://doi.org/10.1016/j.gfj.2017.03.001>
20. Flammer, C. (2012). Does Corporate Social Responsibility Lead to Superior Financial Performance? A Regression Discontinuity Approach. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2146282>
21. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance and Investment*, 5(4), 210–233. <https://doi.org/10.1080/20430795.2015.1118917>
22. Gartenberg, C. M., Prat, A., & Serafeim, G. (2016). Corporate Purpose and Financial Performance. *Columbia Business School Research Paper*, 16(69).
23. Giese, G., Lee, L.-E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG Investing: How ESG Affects Equity Valuation, Risk, and Performance? *The Journal of Portfolio Management*, 45(5), 1–15. <https://doi.org/10.3905/jpm.2019.45.5.069>
24. Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*, 66, 101889. <https://doi.org/10.1016/j.jcorpfin.2021.101889>

25. Gregory, A., Tharyan, R., & Whittaker, J. (2014). Corporate Social Responsibility and Firm Value: Disaggregating the Effects on Cash Flow, Risk and Growth. *Journal of Business Ethics*, 124(4), 633–657. <https://doi.org/10.1007/s10551-013-1898-5>
26. Hennisz, W. J., & McGlinch, J. (2019). ESG, Material Credit Events, and Credit Risk. *Journal of Applied Corporate Finance*, 31(2), 105–117. <https://doi.org/10.1111/jacf.12352>
27. Hennisz, W., Koller, T., & Nuttall, R. (2019). Five ways that ESG creates value. *McKinsey Quarterly*.
<https://www.mckinsey.com/~media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx>
28. Hoang, T. (2018). The Role of the Integrated Reporting in Raising Awareness of Environmental, Social and Corporate Governance (ESG) Performance. In *Stakeholders, Governance and Responsibility* (Vol. 14, pp. 47–69). Emerald Publishing Limited. <https://doi.org/10.1108/S2043-052320180000014003>
29. Hong, Y., & Andersen, M. (2011). The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study. *Journal of Business Ethics*, 104(4), 461–471.
30. Huang, D. Z. X. (2021). Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting & Finance*, 61(1), 335–360. <https://doi.org/10.1111/acfi.12569>
31. Hübel, B., & Scholz, H. (2020). Integrating sustainability risks in asset management: The role of ESG exposures and ESG ratings. *Journal of Asset Management*, 21(1), 52–69. <https://doi.org/10.1057/s41260-019-00139-z>
32. Ioannou, I., & Serafeim, G. (2019). Corporate Sustainability: A Strategy? SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3312191>
33. Jeffrey, S., Rosenberg, S., & McCabe, B. (2019). Corporate social responsibility behaviors and corporate reputation. *Social Responsibility Journal*, 15(3), 395–408. <https://doi.org/10.1108/SRJ-11-2017-0255>
34. Jensen, M. (2002). Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics*, 12, 235–256.
35. Kang, M., Viswanathan, K. G., White, N. A., & Zychowicz, E. J. (2021). Sustainability efforts, index recognition, and stock performance. *Journal of Asset Management*, 22(2), 120–132. <https://doi.org/10.1057/s41260-020-00202-0>
36. Khan, M. (2019). Corporate Governance, ESG, and Stock Returns around the World. *Financial Analysts Journal*, 75(4), 103–123. <https://doi.org/10.1080/0015198X.2019.1654299>
37. Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate Sustainability: First Evidence on Materiality. *The Accounting Review*, 91(6), 1697–1724.

38. Kim, Y., Park, M. S., & Wier, B. (2012). Is Earnings Quality Associated with Corporate Social Responsibility? *The Accounting Review*, 87(3), 761–796. <https://doi.org/10.2308/accr-10209>
39. Li, Y., Gong, M., Zhang, X. Y., & Koh, L. (2018). The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *British Accounting Review*. <https://doi.org/10.1016/j.bar.2017.09.007>
40. Malik, M. (2015). Value-Enhancing Capabilities of CSR: A Brief Review of Contemporary Literature. *Journal of Business Ethics*, 127(2), 419–438. <https://doi.org/10.1007/s10551-014-2051-9>
41. Margolis, J. D., Elfenbein, H. A., & Walsh, J. P. (2009). Does it Pay to Be Good...And Does it Matter? A Meta-Analysis of the Relationship between Corporate Social and Financial Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1866371>
42. McBrayer, G. A. (2018). Does persistence explain ESG disclosure decisions? *Corporate Social Responsibility and Environmental Management*, 25(6), 1074–1086. <https://doi.org/10.1002/csr.1521>
43. Mervelskemper, L., & Streit, D. (2017). Enhancing Market Valuation of ESG Performance: Is Integrated Reporting Keeping its Promise? *Business Strategy and the Environment*, 26(4), 536–549. <https://doi.org/10.1002/bse.1935>
44. Miller, S. R., Eden, L., & Li, D. (2018). CSR Reputation and Firm Performance: A Dynamic Approach. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-018-4057-1>
45. Nekhili, M., Boukadhaba, A., Nagati, H., & Chtioui, T. (2021). ESG performance and market value: The moderating role of employee board representation. *The International Journal of Human Resource Management*, 32(14), 3061–3087. <https://doi.org/10.1080/09585192.2019.1629989>
46. Nirino, N., Santoro, G., Miglietta, N., & Quaglia, R. (2021). Corporate controversies and company's financial performance: Exploring the moderating role of ESG practices. *Technological Forecasting and Social Change*, 162, 120341. <https://doi.org/10.1016/j.techfore.2020.120341>
47. Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate Social and Financial Performance: A Meta-Analysis. *Organization Studies*, 24(3), 403–441. <https://doi.org/10.1177/0170840603024003910>
48. Poole, V., & Sullivan, K. (2021). Tectonic shifts: How ESG is changing business, moving markets, and driving regulation. *Deloitte Insights*, 28.
49. Porter, M. (2004). *Competitive Advantage: Creating and Sustaining Superior Performance*.
50. Porter, M., & Kramer, M. (2011). *Creating Shared Value*. *Harvard Business Review*. <http://www.relativimpact.com/downloads/HBR-Shared-value.pdf>

51. Russo, A., & Perrini, F. (2010). Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. *Journal of Business Ethics*, 91, 207–221. <https://doi.org/10.1007/s10551-009-0079-z>
52. Sabbaghi, O. (2022). The impact of news on the volatility of ESG firms. *Global Finance Journal*, 51, 100570. <https://doi.org/10.1016/j.gfj.2020.100570>
53. Sahut, J.-M., & Pasquini-Descomps, H. (2015). ESG Impact on Market Performance of Firms: International Evidence. *Management International*, 19(2), 40–63. <https://doi.org/10.7202/1030386ar>
54. Santamaria, R., Paolone, F., Cucari, N., & Dezi, L. (2021). Non-financial strategy disclosure and environmental, social and governance score: Insight from a configurational approach. *Business Strategy and the Environment*, 30(4), 1993–2007. <https://doi.org/10.1002/bse.2728>
55. Sassen, R., Hinze, A.-K., & Hardeck, I. (2016). Impact of ESG factors on firm risk in Europe. *Journal of Business Economics*, 86(8), 867–904. <https://doi.org/10.1007/s11573-016-0819-3>
56. Schramade, W. (2016). Integrating ESG into valuation models and investment decisions: The value-driver adjustment approach. *Journal of Sustainable Finance & Investment*, 6(2), 95–111.
57. Starks, L. T., Venkat, P., & Zhu, Q. (2017). Corporate ESG Profiles and Investor Horizons. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3049943>
58. Syed, A. M. (2017). Environment, social, and governance (ESG) criteria and preference of managers. *Cogent Business & Management*, 4(1), 1340820. <https://doi.org/10.1080/23311975.2017.1340820>
59. Taliento, M., Favino, C., & Netti, A. (2019). Impact of Environmental, Social, and Governance Information on Economic Performance: Evidence of a Corporate ‘Sustainability Advantage’ from Europe. *Sustainability*, 11(6), 1738. <https://doi.org/10.3390/su11061738>
60. Ting, I. W. K., Azizan, N. A., Bhaskaran, R. K., & Sukumaran, S. K. (2019). Corporate Social Performance and Firm Performance: Comparative Study among Developed and Emerging Market Firms. *Sustainability*, 12(1), 26. <https://doi.org/10.3390/su12010026>
61. Turban, D. B., & Greening, D. W. (1997). Corporate Social Performance And Organizational Attractiveness To Prospective Employees. *Academy of Management Journal*, 40(3), 658–672. <https://doi.org/10.5465/257057>
62. van Duuren, E., Plantinga, A., & Scholtens, B. (2016). ESG Integration and the Investment Management Process: Fundamental Investing Reinvented. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-015-2610-8>
63. Velte, P. (2017). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility*, 8(2), 169–178. <https://doi.org/10.1108/JGR-11-2016-0029>

64. Velte, P. (2020). Does CEO power moderate the link between ESG performance and financial performance? A focus on the German two-tier system. *Management Research Review*, 43(5), 497–520. <https://doi.org/10.1108/MRR-04-2019-0182>
65. Vilanova, M., Lozano, J. M., & Arenas, D. (2009). Exploring the Nature of the Relationship Between CSR and Competitiveness. *Journal of Business Ethics*, 87(S1), 57–69. <https://doi.org/10.1007/s10551-008-9812-2>

Appendix 3 Investor survey - ESG in the Baltics

ESG stands for Environmental, Social, and Governance. Globally, investors are increasingly applying these non-financial factors as part of their analysis process to better identify risks and growth potentials.

This study aims to analyze ESG preferences and requirements of the financial investors and banks operating in Lithuania, Latvia and Estonia. The survey is conducted within the frame of an academic research, performed by PhD student Ilze Zumente and Dr. Jūlija Bistrova from Riga Technical university.

The results will only be analyzed on an aggregated and no-name basis.

1. Country of HQ:
 - Estonia
 - Latvia
 - Lithuania
 - Other:
2. Operation type:
 - Bank
 - Private equity fund
 - Venture capital fund
 - Early stage / seed fund/ accelerator
 - Asset management company
 - Other:
3. How many employees does your organization have?
4. Average investment ticket (mEUR):
5. Count of companies currently in the portfolio (or invested):
 - Below 5
 - 6 to 15
 - 16 to 24
 - 25 to 40
 - Over 40
6. Which financial investors / lenders in your opinion should consider ESG (E-environmental, S-social, G-governance) factors before investing (may select more than one):
 - Banks
 - Private equity funds
 - Venture capital funds
 - Early stage funds / accelerators

- Mezzanine lenders
 - Asset managers
 - Other:
7. Do you perform ESG evaluation within the due diligence / company assessment process prior to executing an investment?
 - Yes, for all investments
 - Yes, but in a limited scope and mostly for the companies or industries especially at risk
 - Not yet, but plan to do so in the future
 - No, do not see any value
 - No, do not have means / opportunities to do so
 8. Do you see that high ESG performance can be a value driver for your investments?
 - Yes, higher ESG performance can increase the value
 - No, there is no significant difference
 - No, higher sustainability means more costs and therefore decreased financial value
 9. Which ESG factor is the most important for your portfolio companies?
 - All equally important
 - Environmental
 - Social
 - Governance
 10. Do the companies usually have sufficient ESG data to provide in case required?
 - Yes
 - No, mostly E data missing
 - No, mostly S data missing
 - Other:
 11. Do you foresee differing ESG approach for different types of your investment (e.g. loan vs equity or short-term / long-term loan):
 - Yes
 - No
 12. The Financial Accounting Standards Board defines materiality as: “information which would be considered decision- relevant to an investor”. Have you discussed the materiality domains of the ESG factors with your portfolio companies?
 - Yes
 - No
 - Yes, partly (with some companies)
 13. Does your institution publish a dedicated sustainability / ESG report?
 - Yes
 - No

- No dedicated report, but publish information on web-page or other means
14. Do you see value added in portfolio companies publishing dedicated non-financial reports / disclosing information on the web?
- Yes
 - No
 - It depends on the industry
 - Other:
15. Do you see any obstacles in applying ESG data in your investment and management decisions:
- Yes, not sufficient knowledge for us about the topic
 - Yes, the majority of the companies we invest in are not aware of the importance of non-financial aspects
 - Yes, the data quality / sufficiency is lacking
 - Yes, there is lack of focus on the material issues that really matter
 - No, there are no obstacles
 - Other:
16. Has the Covid-19 pandemic somehow changed your perception of the ESG importance:
- Yes, ESG factors and risks now seem more important
 - Yes, ESG factors and risks seem less important as there are more crucial aspects to concentrate on now
 - Partially – more focus on S factor
 - No, no changes
17. In case you perform ESG evaluation, what was the main driver and motivation of this choice?
- Client's requirement
 - Attempt to lower the risk
 - Higher expected returns
 - Regulatory requirements
 - Global tendencies
 - Other:
18. Approximately, what weight does the ESG factors carry in the overall evaluation assessment process?
19. Do you foresee varying ESG approaches to companies from different industries?
20. What kind of ESG data have you used for your analysis?
- In-house research
 - Bloomberg
 - RepRisk
 - Refinitiv

- Sustainalytics
- Other:

21. Do you have any remarks / comments to add?

Appendix 4 SOE survey – Non-financial Reporting

2021. gada 8. decembrī stājās spēkā grozījumi Publiskas personas kapitāla daļu un kapitālsabiedrību pārvaldības likumā, kas noteica, ka lielām valsts kapitālsabiedrībām jāgatavo Nefinanšu paziņojums. Nefinanšu paziņojums jeb ilgtspējas pārskats ietver informāciju par kapitālsabiedrības attīstību un darbības rezultātiem, kā arī par tās komercdarbības ietekmi uz vidi, sociālajiem un ar darbiniekiem saistītajiem aspektiem, cilvēktiesību ievērošanu un pretkorupcijas un kukuļošanas novēršanas pasākumiem.

Starptautiskos avotos šīs jomas kopā atzīmē kā Environmental, Social, and Governance (ESG) jeb vide, sociāli aspekti un korporatīvā pārvaldība.

Šī aptauja tiek veikta akadēmiska pētījuma ietvaros. To veic PhD studente Ilze Zumente un Dr. Jūlija Bistrova no Rīgas Tehniskās universitātes.

Rezultāti tiks apkopoti un analizēti anonimizēti.

Liels paldies jau iepriekš!

1. Apgrozījums (pēdējā finanšu gadā):
2. Industrijā, kurā uzņēmums strādā:
3. Darbinieku skaits:
4. Vai Jūsu uzņēmums ir sagatavojis un publicējis Nefinanšu paziņojumu?
 - Jā
 - Nē
 - Ir sagatavots, bet nav publiski pieejams
 - Cits:
5. Kas ir bijis galvenais motivators Nefinanšu (ilgtspējas) ziņojuma ieviešanai?
 - Likuma prasības
 - Globālās tendences
 - Valdes iniciatīva
 - Klientu prasības
 - Other:
6. Kurā gadā uzņēmums pirmo reizi publicējis / publicēs Nefinanšu paziņojumu?
7. Vai uzņēmums ir veicis Būtisko ilgtspējas jomu novērtējumu (Materiality assessment)?
8. Vai uzņēmums ir veicis Iesaistīto pušu dialogu, lai noteiktu kuras ilgtspējas jomas būtu būtiskas Jūsu iesaistītajām pusēm (Stakeholder dialogue)?
9. Vai uzņēmumā ir noteikta atbildība par ilgtspējas jautājumiem (piem. konkrētiem darbiniekiem vai valdes locekļiem)?
10. Vai uzņēmuma valde aktīvi iesaistās ilgtspējas aspektu vadībā?
11. Ar kādiem izaicinājumiem Jūsu uzņēmums ir saskāries, gatavojot Ilgtspējas / Nefinanšu paziņojumu?
 - Neskaidrība par paziņojuma jēga

- Grūtības ar datu iegūšanu / mērījumu
 - Nepietiekams uzņēmuma vadības fokuss
 - Nesistemātiska pieeja
 - Other:
12. Lūdzu īsi aprakstiet 2021.gada Nefinanšu paziņojuma sagatavošanas pieeju - cik strukturēta tā bijusi, kas uzņēmies tā gatavošanu, kādi izaicinājumi bijuši, kādas mācības gūtas, mērķi izvirzīti?
 13. Kā Jūs vērtēto uzņēmuma vidējo sapratni un zināšanas par ilgtspējas (ESG) jautājumiem?
 14. Vai uzņēmums ir izvirzījis konkrētus ilgtspējas (ESG) mērķus 2022.gadam?
 15. Vai Jums ir vēl kāds komentārs, ko būtu vēlams ņemt vērā pētījumā?

Appendix 5 Questionnaire of Latvian Corporations

Ilgtspēja (ESG) Latvijas uzņēmumos

ESG (apzīmējot vides, sociālos un ar korporatīvo pārvaldību saistītos faktorus) ir viena no šī brīža tendencēm uzņēmumu darbībā. Visā pasaulē uzņēmumi mēdz ņemt vērā šos nefinanšu faktorus, lai tiektos uzņēmuma darbību virzīt ilgtspējas virzienā.

Šī pētījuma mērķis ir novērtēt ESG faktoru ieviešanas pakāpi un ar to saistītos izaicinājumus uzņēmumiem, kas darbojas Latvijā. Aptauja tiek veikta akadēmiskā pētījuma ietvaros, ko veic doktorante Ilze Zumente un doktore Jūlija Bistrova no Rīgas Tehniskās universitātes. Rezultāti tiks analizēti tikai apkopotā un anonimizētā formā.

Gadījumā, ja vēlaties saņemt pētījuma rezultātus, lūgums atstāt e-pasta adresi pie pēdējā jautājuma.

Paldies par atsaucību!

1. Uzņēmuma dibināšanas gads:
2. Industrija, kurā uzņēmums darbojas:
3. Darbinieku skaits:
4. Uzņēmuma apgrozījums (mEUR) pēdējā finanšu gadā:
5. Kāda ir uzņēmuma īpašnieku struktūra?
 - Vietējās privātpersonas
 - Ārzemju privātpersonas
 - Ģimenes uzņēmums
 - Starptautiska uzņēmuma atzars / filiāle Latvijā
 - Biržā kotēts uzņēmums
 - Valsts kapitālsabiedrība
 - Uzņēmums ar riska kapitāla fonda ieguldījumu
 - Other:
6. Sieviešu proporcija uzņēmuma valdē (%)
7. Sieviešu proporcija uzņēmuma padomē (%)
8. Ja uzņēmumam ir padome, vai tā ir neatkarīga (% no padomes locekļiem, kam nepieder uzņēmuma kapitāldaļas)?
 - 0%
 - 1 - 25%
 - 26% - 50%
 - >50%
 - Nav padomes
9. Vai uzņēmuma vadība ir lietas kursā par ESG konceptu kā tādu?
 - Jā
 - Nē
 - Neesmu drošs/-a
10. Cik labi ieviesti ESG faktori ir uzņēmuma darbībā? (1 – 10)

11. Kurus no šiem ESG faktoriem Jūsu uzņēmums mēra, tiem seko un/vai atklāj par tiem informāciju? (Ir ieviesta formāla politika / Sekojam šim faktoram (to mēram) /Atklājam informāciju par šo faktoru):
- CO2 emisijas
 - Ūdens un energoresursu patēriņš
 - Iepakojums un izejmateriāli
 - Piegādes ķēdes ietekme uz vidi
 - Darbinieku dažādība
 - Samaksas vienlīdzība abiem dzimumiem
 - Atkritumu pārstrāde
 - Darbinieku veselība un drošība
 - Darbinieku apmierinātība
 - Ziedojumi
 - Datu drošība
 - Vadības atalgojuma atklāšana
 - Korporatīvās pārvaldības principi
12. Vai uzņēmums ir veicis ESG faktoru materialitātes / ietekmes izvērtējumu, lai noteiktu uz kuriem ESG faktoriem koncentrēties?
13. Vai uzņēmums ir veicis iesaistīto pušu (stakeholders) dialogu, lai saprastu, kuri no ESG faktoriem ir svarīgi iesaistītajām pusēm (īpašniekiem, darbiniekiem, finansētājiem, vietējām kopienām)?
14. Kāda ir bijusi galvenā motivācija ESG ieviešanai uzņēmumā?
- Īpašnieku prasība
 - Valdes iniciatīva
 - Globālās tendences
 - Risku mazināšana un pārvaldība
 - Klientu prasības
 - Augstāka kapitāla atdeve ilgtermiņā
 - Regulatoru prasība
 - Finansētāju prasība
15. Vai ESG tēma ir uzņēmuma vadības tiešā pārraudzībā?
16. Vai Jūsu uzņēmums atklāj ne-finanšu (ESG) informāciju?
- Jā, tiek sagatavots pārskats pēc starptautiskiem standartiem (GRI, SDG, u.tml dz.)
 - Jā, informācija tiek atklāti neformāli (mājas lapa, sadaļa gada pārskatā, u.tml dz.)
 - Nē
17. Kādēļ Jūsu uzņēmums veic ESG informācijas atklāšanu?
- Īpašnieki to pieprasa

- Globālās tendences (citi uzņēmumi to dara)
 - Uzņēmuma klienti to pieprasa
 - Finansētāji (bankas, investori) to pieprasa
 - Uzņēmuma vadība tā vēlas
 - Mēs neziņojam par saviem ESG rezultātiem
 - Cits
18. Vai Jūsu uzņēmums ir saskāries ar kādām grūtībām ESG principu ieviešanai?
- Nepietiekamas zināšanas / izpratne
 - Grūtības aplēst / mērīt rādītājus (piem. CO2 emisijas)
 - ESG faktoru ieviešana prasa ievērojamus finanšu resursus
 - Nav pietiekamas vēlmes / motivācijas sekot ESG principiem
 - Grūtības ar informācijas atklāšanu
 - Cits
19. Kādas ir aptuvenās investīcijas (% no apgrozījuma), ko Jūsu uzņēmums pagājušā finanšu gadā ieguldījis ilgtspējas uzlabošanā?
20. Cik nozīmīgu lomu ilgtspēja (ESG) ieņem Jūsu uzņēmuma dienas kārtībā pašlaik? (1-10)

Appendix 6 AHP survey

ESG drivers in Baltic early-stage companies [separate surveys were created for experts of all three different life cycle stages].

Dear participant,

Corporate sustainability as measured via ESG (Environmental, Social, and Governance) is gaining increased relevance across corporations globally, and also in the Baltic states. Therefore, the author of this study is conducting research of experts to understand the key drivers behind ESG implementation across field experts.

Purpose: This study, performed within the scope of PhD thesis of Ilze Zumente (PhD candidate at Riga Technical university) is aimed at evaluating and weighting different ESG drivers across specific company life cycle stage. The purpose of this study is to evaluate the impact of different drivers fostering wider ESG adoption across start-up companies in the Baltic region.

Use of Information: The information and findings obtained will be used for completing the requirements for the degree of PhD thesis. In addition, they may be used in seminars, conference presentations and research publications.

Confidentiality: The data will be only used on an aggregated basis, nevertheless, it is kindly asked to identify the name and represented institution, to ensure that the results are obtained from subject matter relevant experts. It will take approximately 10 minutes to complete the questionnaire.

Definitions: start-up / inception life cycle stage for corporations is defined to occur shortly after their inception, having primitive internal organization structures and limited length of experience in the market.

Thank you very much for your time and support. Please start with the survey now by clicking on the Continue button below.

1. Full name
2. Represented institution
3. Years of professional experience
4. Years of experience with corporate sustainability (ESG) topics.

Based on research, academic literature and business studies I have compiled a list of key drivers and influencing factors likely to positively impact ESG adoption, implementation and disclosure among corporations. The key drivers and factors are summarized in this table.

What drives ESG implementation in the Baltic companies?

Driver	Factor	Definition
Ownership type	Private owners	Owner's request to adhere to certain ESG standards for privately-held companies
	Public owners	Owner's request to adhere to certain ESG standards (i.e. state-owned companies, listed companies, international groups etc.)
	Bank financing	Pressure from external financing providers (commercial banks) to implement ESG
Organizational factors	Risk capital	Pressure from PE/VC funds as partial shareholders to implement ESG
	Business model	Intrinsic wish to adopt ESG due to business model's sustainability aspects (i.e. circular, impact, etc.)
	Values and purpose	Intrinsic wish to adopt ESG due to purpose and values of the company
	Employee demand	Request by employees to engage in ESG activities
Management	Competitive advantage	Intrinsic wish to adopt ESG to achieve competitive advantage vis-à-vis its competitors
	CEO	Strong CEO request to implement ESG
	Diversity	A high degree of diversity across company's executives as a driving force for sustainability behavior
Resource base	Supervisory board	Request from supervisory board to implement ESG
	CG	Existant corporate governance mechanisms that favour ESG adoption
	Size	Higher company's visibility in public due to size
Society	Financial resources	Sufficient financial capabilities to implement ESG compliant practices
	Local media	Pressure from local media
	Global media	Pressure from global media
	Associations	Encouragement from local and international associations
	Customers	Requests from customers to see ESG compliant behavior / transparency
Regulation	Reputation	Company's wish to improve reputation by engaging in ESG activities
	Certifications	Company's wish to obtain any external certifications that require ESG compliance
	Disclosure requirements	Regulatory pressure for mandatory ESG disclosures (currently applicable only to large companies, from 2026 also to SMEs)
Industry	Green procurement	Pressure from procurement processes that require ESG related disclosures
	Industry sector	Sector representation that is prone to ESG contraversies
	Competitor behavior	Pressure from competitors to match their ESG activities

I would now kindly ask you to exercise your professional judgement and expertise by comparing the factors in pairs and estimating their relative importance for ESG implementation across companies in the start-up phase of life-cycle.

Example:

Given Options A & B, you can judge their relative importance as shown below example: if you think the driver 'Ownership type' in column A is moderately more important than the driver 'Organizational factors' in column B, then you slide the lever to 5 on the left-hand side.



If you believe that the driver 'Ownership type' in column A is equally important as the driver 'Organizational factors' in column B, then you slide the lever to 1 in the middle.



★ General drivers:

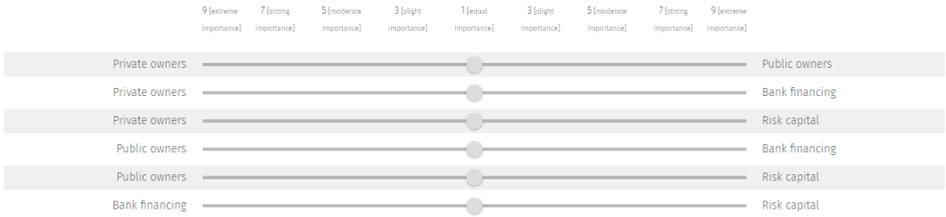
Which of these drivers is more important for ESG implementation in Baltic start-up companies and by how much? 



★ Organizational factors: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Ownership factors: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Management factors: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Society: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Regulation: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Resource base: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



• Industry: Which of these factors is more important for ESG implementation in Baltic start-up companies and by how much?



Do you think that any drivers or factors were not represented in the overview above?



No, seemed like all were in



Something was missing

Appendix 7 AHP Project structure

Project Structure

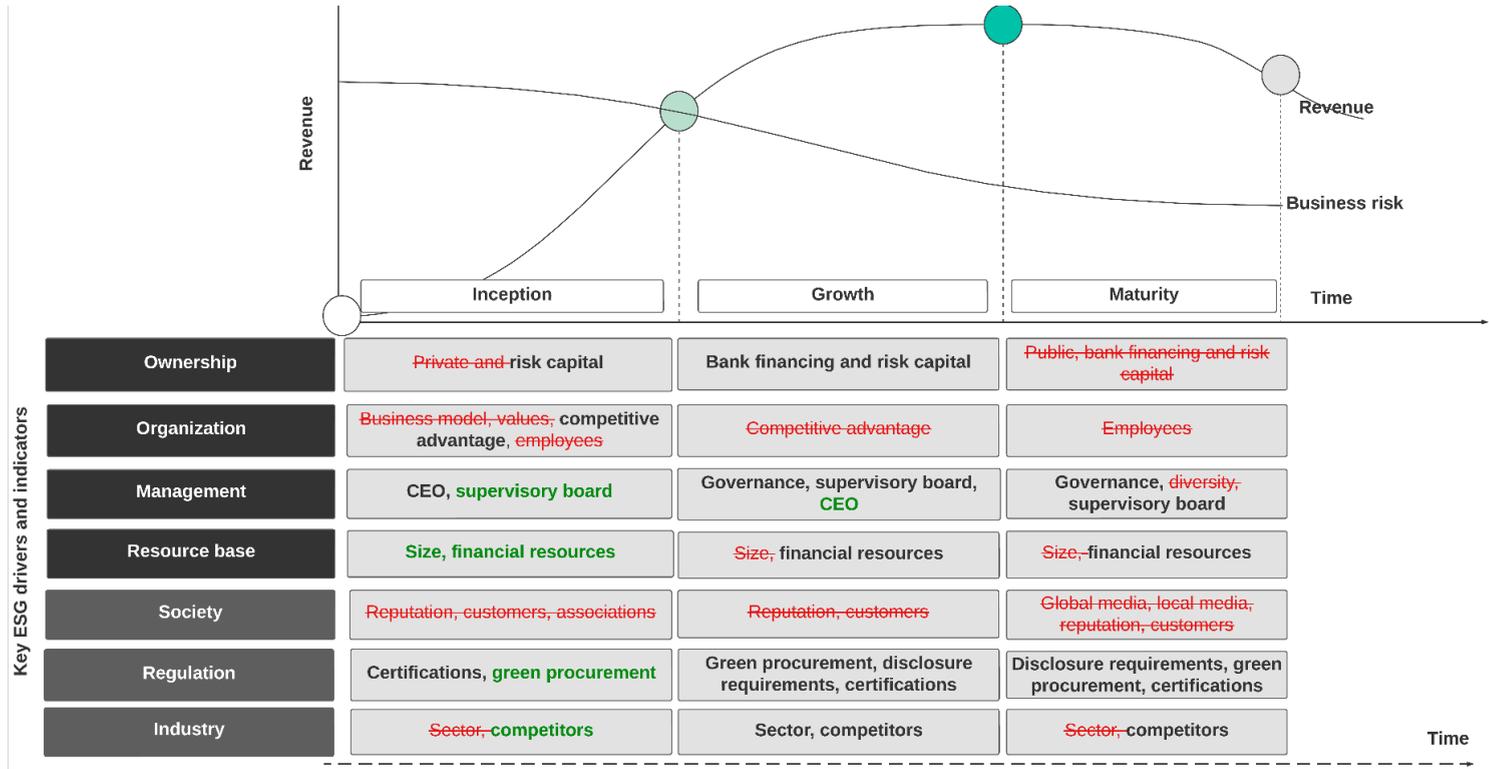
Show project structure

2 (6) hierarchy level(s), 24 (100) hierarchy leafs, 8 (50) hierarchy node(s), 391 (6000) hierarchy characters.

Decision Hierarchy		
Level 0	Level 1	Level 2
ESG drivers	Ownership	Public
		Private
		Bank
		VC
	Organizational	BM
		Values
		Employees
		CompAdv
	Management	CEO
		diversity
		SupBoard
		CG
	Resource	Size
		financials
	Society	local
		global
		associations
		customers
		reputation
	Regulation	certification
		procurement
		reporting
	Industry	Sector
		competitors

Appendix 8 ESG driver life cycle model – conceptual versus tested

Note: Green color and bold – additions to the conceptual model. Red and strikethrough – exclusions from the conceptual model. Black – confirmed drivers in the conceptual model.





Ilze Zumente was born in Riga, Latvia. She obtained a Bachelor's degree from the Stockholm School of Economics in Riga and a Master's degree in Business Administration from the University of Cologne, Germany. She has worked as a financial analyst in the M&A department of Erste Group (Austria), in the private equity fund LR Capital, as well as in the Advisory Department of KPMG Baltics. Since 2021, she has been the Chief of Staff at The Customization Group, a German e-commerce company. Ilze also teaches finance at Riga Technical University. Her scientific interests are related to topics of corporate sustainability and diversity, as well as their impact on company financial results.