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A thematic analysis of the perception of sustainability in the commercial property insurance industry on the basis of selected companies operating in Germany

Sustainability is a key topic defining key challenges in this century. Individual contribution and common understanding are essential as trends start to redefine sustainable behaviour and establishing new goals. This is especially true in the commercial and industrial context, including commercial property insurance. This industry forms the basis, stabilizes the economy and secures industrial development. Industry peers, clients, and the supply chain start emphasizing the role of sustainability and build pressure on the commercial property insurance industry. Yet, ambiguity starts with the definition and common understanding of the used terms.

This paper investigates and evaluates how commercial property insurance companies relate to sustainability. For this purpose, a thematic analysis of 19 German and international property insurance companies operating in Germany was performed. This analysis seeks to identify and evaluate common themes in the industry. In total, nine themes could be identified.

The presented results offer some first insight and support on common patterns between sustainability and commercial property insurance.

Keywords: Thematic analysis; Sustainability; Ecological economics; Property Insurance

Introduction

Commercial property insurance is adapting and transforming towards sustainability, while feeling pressure from industry peers, clients and public. Bilateral stress on present business models is applied by the increasing financial losses related to climate change and political actions leading to stricter regulations and lawmaking. Sustainability of business is being questioned and needs to be rethought. Within this context, sustainability applies to multiple levels. Primarily, sustainability and sustainable performance can be measured as part of financial success. Yet, a more integrated approach, expanding sustainability to the operations not directly related to financial performance is now established, especially within the commercial property insurance community.

Following this transition, this paper aims to close the research gap establishing a common ground on how sustainability is defined for this specific industry and providing context on how commercial property insurance companies relate to and evaluate their own sustainability based on a thematic analysis. Its result is especially useful for research to achieve a clearer picture on the industry's motivational structure allowing them to a) target and position their future research according to the themes identified herewith and b) set the first milestone for future research of an enhanced analysis introducing new dimensions such as the time parameter for identifying trends establishing a basis for comparison.

The first sections of this paper (Section 1–4) describe sustainability and how it is used in this paper relating it to commercial property insurance while highlighting its importance. Present methods of sustainability evaluations are discussed in Section 5, while the remaining part of the paper provides the methodology (Section 6) and results (Section 7), including the thematic map and the nine identified themes. Finally, Section 8 concludes the paper.

Definition of sustainability

At this point we want to clarify what we mean by the term “sustainability” as it embodies a multitude of concepts. Dictionaries define sustainability as “the ability to continue (activities) for a long time”¹. It is especially used in the context of the environment, highlighting “the use of natural products and energy in a way that does not harm the environment”². These dictionary-level definitions can serve as a starting base, however, lack a practical level, as being generic.

As an example, the vague definition of “long time” presented in the first definition can be criticised. This description of time periods potentially leads to misunderstandings depending on what timeframe is applied. Such timeframes could vary between a human lifespan of 80 years and up to several billion years on a planetary level, significantly altering the effects of harming the environment.

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1. „sustainability noun – Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner’s Dictionary at OxfordLearnersDictionaries.com“, zugegriffen 13. März 2022, <https://www.oxfordlearnersdictionaries.com/definition/english/sustainability>.
 2. „sustainability noun – Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner’s Dictionary at OxfordLearnersDictionaries.com“.

On the other hand, the “harm to the environment” can be complex to be measured and quantified, as the environment is subject to constant changes and adapts itself influencing several parameters including those harming it.

Besides the environmental aspects, sustainability is present within the financial system. Companies are individual contributors interacting with each other with the goal of establishing a sustainable business, meaning being profitable by means of creating value³. For a long time, the sustainability in a business context was only measured by the business’s monetary performance and its ability to maintain the business operations.

The current definition of sustainability requires a broader scope not being limited to the environment or economics only. This is important due to the fact that the areas interact with each other on multiple levels. Currently, a company’s performance is measured by its ability to maintain its business operations with respect to its financial performance, alone, however, the importance of sustainability in terms of the ecosystem is growing continuously and is driven by the company’s stakeholders.

In 1987, the Brundtland Commission Report defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”, thus including a time component⁴.

Likewise, in this paper, sustainability will include both aspects of environment and economic impact of individual companies. Sustainable development will incorporate a time aspect and be used to define the pathway of reaching sustainability.

Importance of sustainability for commercial property insurance

Commercial property insurance companies provide risk coverage by means of insurance policies for business and other organizations against damage or loss to their building, contents, stock and supplies and business interruption due to an insured event.

Typically, perils such as but not limited to fire and explosions are covered, as well as natural catastrophes such as flooding, earthquake or wind and hail. Terms and conditions including loss limits, deductibles, and annual premiums are agreed between the insured and the insurer.

Commercial property insurance companies are classic representatives of financial services, originally relying on their monetary performance, only. The traditional business model of the insurance industry is to pay for insured losses according to the agreed policy. Value for the insurance company is created by incoming premiums supposedly outweighing paid losses. The implicit risk of this business model is the reversed outcome in the case that paid losses outweigh incoming premiums. Thus, risk management stands at the centre of every insurance company. The correlating management process starts with the identification and quantification of a risk followed by the development of loss prevention measures and finalized by underwriting in the case of a relevant

3. Walter Grosse, *Allgemeine Versicherungslehre*, 4. Aufl. (Aachen/ München: Springer Fachmedien Wiesbaden, 1991).

4. Gro Harlem Brundtland, „Report of the World Commission on Environment and Development: Our Common Future“ (Oslo: United Nations, 20. März 1987).

event. Insurance companies thus contribute to the long-term functionality of their insured customers and their long-term survival⁵.

For the last decades risk management has become increasingly challenging for the insurance industry due to an increase of unprecedented environmental catastrophes regarding quantity and quality, respectively. Climate change induced environmental catastrophes like the flooding in Pakistan, among other things, trigger huge loss payments outweighing the incoming premiums by far with an increasing frequency.

One reason of the increasing early-stage risks is a lack of sustainability management within the industry's customers. However, the widespread practice to base the risk assessment on historical data is disrupted and continuously challenged by environmental changes, making deductions thereof increasingly impede.

In 2013, Shea et al. analysed the insurance perspective on the importance of sustainability in the three dimensions: Environmental, Social and Governmental (ESG). A semantic network analysis of some 156 insurance representatives confirmed (i) the impact of ESG factors on insureds and insurers, (ii) identified the ripe potential of ESG factors and (iii) suggested the implementation of integrating ESG factors into underwriting⁶.

This trend matured over the years, ascribing key responsibility of sustainability to insurance companies highlighted by a market research in 2021 by Brocke⁷. The latest studies support the development of preliminary business models that take sustainability into account as a future metric. This is believed to have an impact on underwriting capacities and policy terms and conditions.

How to measure sustainability?

Today, over 500 different indicators are trying to account the sustainable development on various levels, increasing the complexity of sustainable measurement while diminishing the meaningfulness and comparability among individual methods. Common ground of the developed indicators

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5. Marco Arena, „Does Insurance Market Activity Promote Economic Growth? A Cross-Country Study for Industrialized and Developing Countries“, *The Journal of Risk and Insurance* 75, Nr. 4 (2008): 921–46; Tsangyao Chang, Chien-Chiang Lee, and Chi-Hung Chang, „Does Insurance Activity Promote Economic Growth? Further Evidence Based on Bootstrap Panel Granger Causality Test“, *The European Journal of Finance* 20, Nr. 12 (2. Dezember 2014): 1187–1210, <https://doi.org/10.1080/1351847X.2012.757555>; Xing Rong, Tingting Zhang, and Kai Liu, „The Impact of Insurance Institutional Investors on Corporate Value from Selection and Creation Perspective“, *PLOS ONE* 17, Nr. 7 (1. Juli 2022): e0269520, <https://doi.org/10.1371/journal.pone.0269520>; Sandra Batten, Rhiannon Sowerbutts, and Misa Tanaka, „Let's Talk About the Weather: The Impact of Climate Change on Central Banks“, *SSRN Electronic Journal*, 2016, <https://doi.org/10.2139/ssrn.2783753>.
 6. Matthew Shea and James Hutchin, „The Insurance Industry Must Champion Sustainability“, *Thunderbird International Business Review* Vol. 55, Nr. No. 6 (Dezember 2013): 659–72, <https://doi.org/10.1002/tie.21582>.
 7. Michaela Brocke, „Welche Versicherungen am besten zu Nachhaltigkeit passen – and welche Abschlussprofile nachhaltige Versicherungsprodukte haben“, *Heute und Morgen*, 10. Juni 2021.

is their use for decision making on policy level, environmental management, and research⁸. However, they are often criticized for their lack of consistency and methodological flaws⁹.

Most of the established indicators are based on a set of single ones or a composition of sub-indicators. Examples of single indicators are tons of CO₂ or energy consumption MWh, whereas composite indices, such as GHG emissions or ecological footprint, reflect more than one indicator. Different areas not limited to the environment are considered during the development and absolute measurement of such. Socio-economic and political dimensions are taken into consideration to achieve a more comprehensive picture of sustainability¹⁰.

In many cases single indicators are used by empirical studies with the goal to show a relationship between cause and effect. Welsch, for example, identified in 2007 that the pollutant nitrogen dioxide plays an important role in the subjective well-being¹¹. Given its nature, a single indicator reflecting only one specific characteristic of the system is not suitable to describe multiple system dimensions¹².

According to Mayer, composite indicators offer a simplified, coherent multidimensional view of a system¹³. A variety of single indicators are aggregated into an index showing a more balanced perspective of the multiple dimensions of a system (e.g., environmental, socio-economic, political), often supporting the recognition of patterns as they are more robust against interdependencies. The Environmental Sustainability Index (ESI) is an example of a composite index. Weakness of these indicators often relate to methodological issues considering aggregation and normalization of data. As an example the ESI applies equal weights within the variables, missing sensible interpretations and contradicting to the Principal Components Analysis¹⁴.

The majority of the developed indicators have the goal to measure and compare the sustainability performance or the development of ecological systems of countries. The intrinsic nature

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8. Thomas M. Parris and Robert W. Kates, „Characterising and Measuring Sustainable Development“, *Annual Review of Environment and Resources* 28, Nr. 1 (November 2003): 559–86, <https://doi.org/10.1146/annurev.energy.28.050302.105551>.
 9. J. Ram Pillarisetti and Jeroen C. J. M. van den Bergh, „Sustainable Nations: What Do Aggregate Indexes Tell Us?“, *Environment, Development and Sustainability* 12, Nr. 1 (Februar 2010): 49–62, <https://doi.org/10.1007/s10668-008-9179-7>; J.R. Siche u. a., „Sustainability of Nations by Indices: Comparative Study between Environmental Sustainability Index, Ecological Footprint and the Emergy Performance Indices“, *Ecological Economics* 66, Nr. 4 (Juli 2008): 628–37, <https://doi.org/10.1016/j.ecolecon.2007.10.023>; David Niemeijer and Rudolf S. de Groot, „Framing Environmental Indicators: Moving from Causal Chains to Causal Networks“, *Environment, Development and Sustainability* 10, Nr. 1 (Februar 2008): 89–106, <https://doi.org/10.1007/s10668-006-9040-9>; Christoph Böhringer and Patrick E.P. Jochem, „Measuring the Immeasurable — A Survey of Sustainability Indices“, *Ecological Economics* 63, Nr. 1 (Juni 2007): 1–8, <https://doi.org/10.1016/j.ecolecon.2007.03.008>.
 10. Parris and Kates.
 11. Heinz Welsch, „Environmental Welfare Analysis: A Life Satisfaction Approach“, *Ecological Economics* 62, Nr. 3–4 (Mai 2007): 544–51, <https://doi.org/10.1016/j.ecolecon.2006.07.017>.
 12. Audrey L. Mayer, „Strengths and Weaknesses of Common Sustainability Indices for Multidimensional Systems“, *Environment International* 34, Nr. 2 (Februar 2008): 277–91, <https://doi.org/10.1016/j.envint.2007.09.004>.
 13. Mayer.
 14. Ian Jolliffe, *Principal Component Analysis*, 2nd Aufl. (New York: Springer New York, 2002), [http://cda.psych.uiuc.edu/statistical_learning_course/Jolliffe%20Principal%20Component%20Analysis%20\[2ed.,%20Springer,%202002\]\[518s\]_MVsa_.pdf](http://cda.psych.uiuc.edu/statistical_learning_course/Jolliffe%20Principal%20Component%20Analysis%20[2ed.,%20Springer,%202002][518s]_MVsa_.pdf).

of sustainability in all of its dimensions is a challenge for the measurement of individual systems like companies. The variety of companies, their processes and manufacturing depth hinders the comparability thereof.

Additionally, limited guidance is present from national or international regulations. As a result, companies have started introducing their own set of sustainability indicators favouring their business goals. Based on the susceptibility of property insurance, a mutual understanding of sustainability and best practices are crucial.

This paper answers the questions of (i) how property insurance companies can measure sustainability and (ii) what sustainability dimensions need to be covered by insureds and paves the way for the future development of a suitable sustainability index.

Methodology

For the purpose of identifying patterns in the commercial property insurance industry and responding to the question of how property insurance companies relate to sustainability a thematic analysis was conducted. An inductive reflexive approach was followed to minimize primary researchers' bias following Braun and Clarke's approach during the thematic analysis¹⁵. Therefore, the analysis consisted of the following six steps:

1. **Familiarize oneself with the data** – read through the reports and websites to get a general idea of what it is about. Re-read the reports and websites, then note down any initial impressions you have of central or recurring topics.
2. **Generate initial codes** – carefully go through data, and break down the patterns. For any piece of potentially interesting information, create a 'code' or small description of what it tells you in just a few words. This is done the easiest using Microsoft Excel to highlight small portions of the text, such as part of a sentence, and adding a comment containing the code to it. Please pay careful and equal attention to all parts of the text and apply this coding process to a high level of detail. You do not need to code anything the interviewer is saying.
3. **Search for themes** – now create a list of all the codes you have created. Use this list to collate the codes into groups that could potentially become your themes. An easy way of doing this is to write each code onto a post-it flag or piece of paper, then rearrange these into groups on a wall or desk.
4. **Review themes** – check that the themes that you have created work with the codes and the portions of the text that those codes were created from. Re-read the interview to check that your themes make sense overall. This can help to clarify whether you should add a subgroup or discard small miscellaneous groups that do not form a significant or coherent theme.
5. **Define and name themes** – create a clear thematic statement in for each of the themes you extract. It is important that themes do not just repeat the data or extracts of the reports and

15. Virginia Braun and Victoria Clarke, „Using Thematic Analysis in Psychology“, *Qualitative Research in Psychology* 3, Nr. 2 (Januar 2006): 77–101, <https://doi.org/10.1191/1478088706qp0630a>; Virginia Braun and Victoria Clarke, „Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning“, *The Psychologist* 26, Nr. 2 (Februar 2013): 120–23.

websites, but describe what is interesting about the idea and why. Remember that later these themes could be expanded on and discussed in detail.

6. Produce the report

In the first step the research data was researched and reviewed. The study gathered pertinent data from multiple sources, namely Corporate Social Responsibility (CSR) reports, Environmental Social Governmental (ESG) reports, Sustainability reports, and Annual reports of commercial property insurance companies, to facilitate the research process.

The following steps 2, 3 and 4 were performed iteratively across codes, themes, and data reduction, delivering a concise number of themes. Steps 5 and 6 are included in the following sections of the paper.

All steps were documented by a reflexivity journal, helping to increase the reliability of the analysis and improving a systematic and consistent approach. Resulting themes were tested against Owen's criteria for recurrence, repetition and forcefulness¹⁶.

Results

The performed analysis compared 19 largest property insurance companies in Germany. In total over 2,800 pages of reports were analysed by the author team during the period from May 1st, 2022, and August 7th, 2022.

The majority of analysed companies (eleven) have their headquarters in Germany. The second most predominant group are American companies, operating subsidiaries in Germany and contributing to more than 20% of the group. Other analysed companies are based in Switzerland (two), Italy (one) and Japan (one). All companies operate on a worldwide basis and generate an average revenue of approximately EUR 68 billion.

There is evidence that the company's revenue and cultural background impact its positioning on sustainability. Especially companies with their headquarters in Germany show that with increasing revenue their level of sustainable communication in relation to intensity and depth also increases. Yet, this was not found within the analysed American, Swiss, Italian, or Japanese companies.

The results of the thematic analysis are set out in Table 1. A total of nine high-level themes have been identified as a result of this study. The majority of companies show a similar interest towards sustainability. Interestingly, different perspectives on sustainability are considered but not limited to an internal focus, but stressing their potential impact of the company on the environment. Additionally, the results reveal that the cultural background and stakeholders have a strong impact on the company's strategy. In the next section, we will present the principal findings providing the results and background information of the current investigation.

16. William Foster Owen, „Interpretive Themes in Relational Communication“, *Quarterly Journal of Speech* 70, Nr. 3 (August 1984): 274–87, <https://doi.org/10.1080/00335638409383697>; Lynne M. Webb, „Online Research Methods, Qualitative“, in *The International Encyclopedia of Communication Research Methods*, hg. von Jörg Matthes, Christine S. Davis, and Robert F. Potter, 1. Aufl. (Wiley, 2017), 1–9, <https://doi.org/10.1002/9781118901731.iecrm0173>.

Table 1: Thematic Map

High-Level Themes	Codes
Mantra	Vision, What the company believes in, Principle, Message to Stakeholders
Certifications	PSI; ISO/ DIN
Net Zero	Net Zero, ESG Task force, Green Technologies, Green Initiatives
Sustainable insurance products	Green Insurance Products, Restricted Underwriting (specific occupancies/ CO2 intense business), Green Coverage, Climate Risks, Risk Transfer for emerging Risks/ green Technologies
Sustainable investments	Sustainable investing, Green investment products, Financial Resilience
Self-analysis	Footprint analysis (CO2, Fuels, Energy, Employee contribution), GHG Scope 1–3, c-Level Statement, Stakeholder-driven data, Sustainable sourcing incl. supply chain
Defining Mega Trends	Exposure Trend Analysis/ Matrix, Fact-Based approach, Circular economy, Inclusion and Diversity
Sustainable development	Climate Change, SDGs, Regional focus, protecting the planet
Greenprint	ESG Strategy, Sustainability Strategy, Emerging Risks, Corporate Citizenship, c-Level Commitment, Greenprint, Alliances

Theme 1: Mantra

According to Kantabutra et al. or Chun and Davies the theme “Mantra” describes what a company believes in and thus providing the basis for a concise message to the stakeholders¹⁷. Thirteen out of 19 companies hold a Mantra resonating with sustainability and their sustainable development.

Almost two-thirds of the statements (62%) included a combination of sustainability followed by reference to a future state as in “*Sustainability secures our future*”. Interestingly, exclusive combinations were present among the tested group, such as sustainability and impact. Another recurring pattern was observed in relation to a sense of community and responsibility, as shows in “*To insure what matters to you, we protect what matters to the planet*”.

The analysis demonstrated that in the majority of cases the Mantra consists of few words, highlighting the organizations’ impact on the future while stimulating a sense of community including its stakeholders as evident in “*Inspiring action together*” or “*Transforming-Tomorrow-Together*”. These statements resonate with current common beliefs, while promoting the company’s goals. The corporate strategy aligns with their value statement and works towards fulfilling its promise in a long-term perspective. The alignment and prosperity of corporations are fundamental to their stakeholders.

Theme 2: Certifications

Certifications are a strategic signal supporting the reputation and increasing trust levels from partners and consumers. The importance of official certifications in globalized companies was

17. Sooksan Kantabutra and Gayle C. Avery, „The Power of Vision: Statements That Resonate“, *Journal of Business Strategy* 31, Nr. 1 (5. Januar 2010): 37–45, <https://doi.org/10.1108/02756661011012769>; R. Chun and G. Davies, „E-Reputation: The Role of Mission and Vision Statements in Positioning Strategy“, *Journal of Brand Management* 8, Nr. 4 (Mai 2001): 315–33, <https://doi.org/10.1057/palgrave.bm.2540031>.

discussed and confirmed by much research over the past years¹⁸. Standards and principles include Environmental Management (ISO 14001), Corporate Social Responsibility (ISO 26000), Quality Management (ISO 9001), or Principles for Sustainable Insurance (PSI). In 2019 Martinez et al., as well as Prell et al. in 2020, found that sustainability certifications positively correlate with an increased product preference¹⁹. Official independent certifications increase overall trust levels and allow unbiased comparison.

The researched companies actively promote their certifications and environmental efforts with all companies showing some certifications. The predominant certification was ISO 14001 with over 70%. This is a similar result compared to certifications per PSI or ISO 26000 with the total of 13 companies. Additional 10% showed similar certifications, such as PAS 2060, analysing carbon neutrality.

Interestingly, certifications for environmental management (ISO 14064), quantification, and reporting of greenhouse gas emissions (ISO 14247), and energy accounting (ISO 16247) were only found at two companies.

Theme 3: Net Zero

Many industries have committed themselves to becoming GHG neutral by 2050, fulfilling the Net Zero Goal by the United Nations²⁰. This trend is also present within the insurance industry and was confirmed within this analysis. Thirteen companies joined the Net Zero alliance, with one committing itself to reach the goal by 2030. Two companies stated similar ambitions and set the goal to reduce GHG emissions.

All of these companies formed ESG task forces on corporate level. The remaining four companies not stating a clear goal, focused on analysing their GHG emissions, being the first step for further actions.

Given the companies clear and concise commitment, we decided to maintain and form this theme despite showing similarities with others (Net Zero, Sustainable Development).

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18. Federico G. Topolansky Barbe, Magdalena M. Gonzalez-Triay, and Anna Hensel, „Eco-Labels in Germany“, *Journal of Customer Behaviour* 12, Nr. 4 (31. Dezember 2013): 341–59, <https://doi.org/10.1362/147539213X13875568505868>; Fabio Iraldo, Rainer Griesshammer, and Walter Kahlenborn, „The Future of Ecolabels“, *The International Journal of Life Cycle Assessment* 25, Nr. 5 (Mai 2020): 833–39, <https://doi.org/10.1007/s11367-020-01741-9>; Jorge A. Valenciano-Salazar, Francisco J. André, and Gregorio Martín-de Castro, „Sustainability and firms' mission in a developing country: the case of voluntary certifications and programs in Costa Rica“, *Journal of Environmental Planning and Management* 65, Nr. 11 (19. September 2022): 2029–53, <https://doi.org/10.1080/09640568.2021.1950658>; Lorena Para-González and Carlos Mascaraque-Ramírez, „The Importance of Official Certifications in Globalized Companies' Performance: An Empirical Approach to the Shipbuilding Industry“, *Corporate Social Responsibility and Environmental Management* 26, Nr. 2 (März 2019): 408–15, <https://doi.org/10.1002/csr.1692>.
 19. Maximilian Prell u. a., „Sustainability Certifications and Product Preference“, *Marketing Intelligence & Planning* 38, Nr. 7 (9. April 2020): 893–906, <https://doi.org/10.1108/MIP-12-2019-0616>; Patricia Martínez, Ángel Herrero, and Raquel Gómez-López, „Corporate Images and Customer Behavioral Intentions in an Environmentally Certified Context: Promoting Environmental Sustainability in the Hospitality Industry“, *Corporate Social Responsibility and Environmental Management*, 10. April 2019, [csr.1754](https://doi.org/10.1002/csr.1754), <https://doi.org/10.1002/csr.1754>.
 20. „Net Zero Coalition | United Nations“, zugegriffen 4. September 2022, <https://www.un.org/en/climatechange/net-zero-coalition>.

Theme 4: Sustainable Insurance Products

In line with the companies' overall sustainable strategy, insurance products are also turning green. Yet, from insurance and contractual perspective, first restrictions are based on a selective underwriting approach excluding specific occupancies. In total, eleven companies followed this approach.

The majority of these companies (64%) restricted fossil fuel extraction such as coal, oil shale or oil sand. A common view across the companies was the restriction of energy or GHG – intense businesses without specifically naming any of those, however, most likely including but not limited to molten metal, and pulp and paper. Two companies expressed the impact of ESG on their underwriting and within their decision-making process with the goal of establishing a “fair concept” within their portfolio. It remains, however, unclear how a “fair concept” materializes.

Besides these restrictions, hampered risk transfer and climate risks further increase barriers for such energy-intensive industries. These barriers are already evident across the insurance industry in respect of anti-personnel mine manufacturing or nuclear power plants.

On the other hand, green insurance products stimulate and promote the transition towards green technologies and sustainable investments. Almost every third company offered green insurance products promoting green reconstructions (e.g., by LEED standards) following loss events or subsidising green technologies through premium discounts. One insurance company stated their insurance products are being developed considering the 17 UN SDGs.

Theme 5: Sustainable Investments

The insurance industry is a major institutional investor able to establish, accelerate or influence market trends²¹. The insurance industry manages over USD 31 trillion globally per year, taking over a significant role as an institutional investor. Investments should be placed responsibly and promote actions across society on environmental and social issues²². Such investments in decarbonization portfolios, capital allocations to low-carbon and green assets and disinvestments in fossil fuels are important and further raise awareness of environmental and social issues²³. Investments could either be placed actively, by means of insurance companies investing their surplus in sustainable funds or projects, or passively, through providing sustainable investment opportunities to their clients. Active and passive investments are not mutually exclusive.

In line with these principles, 14 insurance companies actively support sustainable investments, and seven companies do it passively. These investments are often closely related to FTSE4Good Index, or the Dow Jones Sustainability Index.

21. Raimond Maurer, „Institutional Investors in Germany: Insurance Companies and Investment Funds“, *Goethe University Frankfurt – Finance Department*, 27. Juli 2003, 41, <https://doi.org/10.2139/ssrn.414100>; Rong, Zhang, and Liu, „The Impact of Insurance Institutional Investors on Corporate Value from Selection and Creation Perspective“.

22. Jeremy McDaniels, Nick Robins, and Butch Bacani, „Sustainable Insurance: The Emerging Agenda“, *UN Environment's Principles for Sustainable Insurance*, August 2017, 50; Leanne Bouvet and Pavel Kirjanas, „Global Climate 500 Index 2016: Insurance Sector Analysis“, 2016, <https://doi.org/10.13140/RG.2.2.31666.32964>.

23. Maryam Golnaraghi, „Climate Change and Insurance Industry: Taking Action as Risk Managers and Investors“, *The Geneva Association*, o. J., 23.

Interestingly, international companies holding subsidiaries in Germany advertised more strongly their active role as part of an institutional investor, whereas German companies provided more investment opportunities to their customers. No correlation was evident in respect of revenue or company size.

Theme 6: Self-Analysis

The component of Self Analysis is crucial for the determination of action fields and strategy formulation. By completing this assessment individual metrics focusing on the footprint based on GHG Scope 1–3 analysis, total energy consumption and employee contribution can be established.

Furthermore, this Self Analysis contributes to the c-Level statement and demonstrates past and current achievements. The Self Analysis is often combined with the Task Force on Climate Related Financial Disclosures (TCFD).

Ten companies published their self-analysis providing details on their energy consumption and GHG emission. Seven companies specifically analysed and provided details on their GHG scope 1–3 emissions, while two selectively analysed their supply chain.

On average, the analysed companies emit a CO₂ equivalent of 3.6 tons per full-time employee and year. This figure is based on pre-covid data from 2019/20. The following year, the CO₂ equivalent emissions dropped on average by 43%. The authors consider the pre-covid data more relevant, being a more representative business year including full office operations and travel.

It surfaced that fewer companies reported their self-analysis compared to their Net Zero efforts. Therefore, it is believed that all companies which joined the Net Zero alliance perform some kind of self-analysis.

Theme 7: Defining Mega Trends

Sustainability has opened the door for the consideration and adaption of global Mega Trends as part of non-financial reporting. The importance of exposure-based trends has significantly grown given an increased interest of stakeholders. In this context these Mega Trends are closely related and developed for the insurance industry, and rely on a fact-based approach. Yet, besides Sustainability, Circular Economy, as well as Inclusion and Diversity, strongly resonate within the industry with reference to in all annual or sustainability reports.

Circular Economy describes the trend insurance companies often seek within their clients and insurance portfolio. Key characteristic of Circular Economy is an optimized life cycle design minimizing waste and consumption.

Inclusion and Diversity plays a crucial role on multiple levels. In 2014, Derven described the importance of inclusion and diversity for international companies²⁴. The findings reveal that global programs need to be embedded to the extent of local needs within the organization stimulating

24. Marjorie Derven, „Diversity and inclusion by design: best practices from six global companies“, *Industrial and Commercial Training* 46, Nr. 2 (1. Januar 2014): 84–91, <https://doi.org/10.1108/ICT-09-2013-0063>.

multiple impact through external partnership and leveraging this as a source of innovation²⁵. Economic benefits of diversity and inclusion were later confirmed by Norbash et al. in 2020²⁶.

Theme 8: Sustainable Development

The majority of insurance companies within this analysis approached sustainability from the perspective of the UN Sustainable Development Goals (SDGs). In total, twelve companies aligned their strategy with the UN SDGs. The majority highlighted Goal 13, relating to Climate Action (92%), Goal 8 – Decent Work & Economic Growth, Goal 7 – Affordable & Clean Energy and Goal 4 – Quality Education (83%).

The companies set themselves targets among these goals. An example to cover Climate Action besides the reduction of GHG emissions are the coverage and technical expertise provided for renewable energy plants as offshore wind farm projects. Poverty or Hunger are tackled by means of securing supply chains and providing local coverage to smallholder farmers.

Interestingly, the reviewed data appeared to be very homogeneous within the group, with similar actions being described. Company size or internationality shows no effects on the aforementioned in these respects. This may be a result based on the broad scope of the SDGs allowing a high level of ambiguity. An overview in descending order is provided in *Table 2*.

Table 2: UN SDG Ratings

Rank	Goal	Responses	Rank	Goal	Responses
1	Goal 13: Climate Action	11 (92%)	4	Goal 11: Sustainable Cities & Communities	8 (67%)
2	Goal 8: Decent Work & Economic Growth	10 (83%)	5	Goal 17: Partnerships	7 (58%)
	Goal 7: Affordable & Clean Energy	10 (83%)		Goal 14 and Life Below Water	7 (58%)
	Goal 4: Quality Education	10 (83%)		Goal 15: Life on Land	7 (58%)
3	Goal 9: Industry, Innovation & Infrastructure	9 (75%)		Goal 5: Gender Equality	7 (58%)
	Goal 12: Responsible Consumption & Production	9 (75%)		Goal 6: Clean Water & Sanitation	7 (58%)
	Goal 3: Good Health & Well-Being	9 (75%)	6	Goal 16: Peace, Justice & Strong Institutions	6 (50%)
	Goal 10: Reduced Inequalities	9 (75%)		Goal 2: Zero Hunger	6 (50%)
	Goal 1: No Poverty	9 (75%)			

Theme 9: Greenprints

The last theme incorporates strategy-related codes used by the companies and organizations to formulate a roadmap. A general pattern emerging from the data was the general commitment towards an ESG or sustainability strategy. All but three companies gained C-level/ management

25. Derven.

26. Alexander Norbash and Nadja Kadom, „The Business Case for Diversity and Inclusion“, *Journal of the American College of Radiology* 17, Nr. 5 (Mai 2020): 676–80, <https://doi.org/10.1016/j.jacr.2019.11.018>.

support with eleven formulating a strategy/ Greenprints on how to transform the company. However, these Greenprints do not relate to the company's direct business or value chain.

These strategies emphasize the company's role of corporate citizenship relating it towards emerging risks. Companies describe their collaborations with independent organizations and forge future alliances.

Conclusions and research opportunities

Within this paper we defined the role of sustainability within the context of commercial property insurance and identified nine reoccurring themes by means of a thematic analysis, providing details of how commercial property insurance companies relate to sustainability. For this purpose, 19 companies and some 2,800 pages of data and company reports were reviewed.

An interesting observation was the influence of the cultural background on how companies communicate sustainability. German companies show a stronger communication with increasing revenue. The authors suggest that this goes hand in hand with the public role and perception of larger companies often being publicly traded.

A similar influence of revenue and cultural background was observed with German and Japanese companies while analysing their regional focus. With decreasing revenue, regionality increased. The threshold value for this effect could be identified at EUR 10 billion.

Surprisingly, this was not found to apply within the analysed American, Swiss, Italian, or Japanese companies. A possible explanation for this might be that the public awareness and responsibility resulting from corporate citizenship holds a higher value in these countries compared to Germany. This could be explored in further research.

The analysed group showed to be very homogeneous with regards to their responses towards the UN SDGs, with the majority applying and incorporating those in their goals. A reason for this is likely related to general character of the UN SDGs, further leading to similar statements and responses among all companies.

Overall, this study identified nine themes highlighting the importance of sustainability in the commercial property insurance industry. Common trends and patterns have been recognized and summarized within nine themes. It was evident that the industry shows awareness towards sustainability, which is also perceived by the public.

The key challenge across the analysis was to identify an adequate level of themes. The level was kept general enough to allow the resulting themes to apply to any type of sustainability, allowing a holistic approach and individualization during future analysis of commercial property insurance companies.

The identified themes from the thematic map may also apply to other forms of sustainability outside of commercial property insurance with some limitations, as industry specifics and circumstances have to be considered.

This analysis focused on the current state of the commercial property insurance industry, neglecting the time dimension, hence development or evolution.

Sustained efforts are necessary to oversee and assess the efficacy of the implemented actions described by commercial property insurance companies, while concurrently ensuring both the relevance and accuracy of the data published by these companies. The challenge now is to create

a reasonable image while avoiding exaggerated statements of compliance with ecological criteria and associating the cost of transformation with respect to sustainability.

With the debate moving forward, it may be suggested to the commercial property insurance industry to take the information mandate rather than work through the legal requirements. Concerns should, however, be raised with coordinated actions including indications of the un-insurability of certain activities or industries across the commercial property insurance industry potentially infringing prohibited cartel agreements.

Despite this analysis being limited to the commercial property insurance industry, the identified themes are believed to be consistent across the entire insurance industry. This would be a fruitful area for further research.

Literature

- Arena, Marco. „Does Insurance Market Activity Promote Economic Growth? A Cross-Country Study for Industrialized and Developing Countries“. *The Journal of Risk and Insurance* 75, Nr. 4 (2008): 921–46.
- Batten, Sandra, Rhiannon Sowerbutts, and Misa Tanaka. „Let’s Talk About the Weather: The Impact of Climate Change on Central Banks“. *SSRN Electronic Journal*, 2016. <https://doi.org/10.2139/ssrn.2783753>.
- Böhringer, Christoph, and Patrick E.P. Jochem. „Measuring the Immeasurable — A Survey of Sustainability Indices“. *Ecological Economics* 63, Nr. 1 (Juni 2007): 1–8. <https://doi.org/10.1016/j.ecolecon.2007.03.008>.
- Bouvet, Leanne, and Pavel Kirjanas. „Global Climate 500 Index 2016: Insurance Sector Analysis“, 2016. <https://doi.org/10.13140/RG.2.2.31666.32964>.
- Braun, Virginia, and Victoria Clarke. „Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning“. *The Psychologist* 26, Nr. 2 (Februar 2013): 120–23.
- Braun, Virginia and Victoria Clarke. „Using Thematic Analysis in Psychology“. *Qualitative Research in Psychology* 3, Nr. 2 (Januar 2006): 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Brocke, Michaela. „Welche Versicherungen am besten zu Nachhaltigkeit passen – und welche Abschlusspotenziale nachhaltige Versicherungsprodukte haben“. *Heute und Morgen*, 10. Juni 2021.
- Brundtland, Gro Harlem. „Report of the World Commission on Environment and Development: Our Common Future“. Oslo: United Nations, 20. März 1987.
- Chang, Tsangyao, Chien-Chiang Lee, and Chi-Hung Chang. „Does Insurance Activity Promote Economic Growth? Further Evidence Based on Bootstrap Panel Granger Causality Test“. *The European Journal of Finance* 20, Nr. 12 (2. Dezember 2014): 1187–1210. <https://doi.org/10.1080/1351847X.2012.757555>.
- Chun, R, and G Davies. „E-Reputation: The Role of Mission and Vision Statements in Positioning Strategy“. *Journal of Brand Management* 8, Nr. 4 (Mai 2001): 315–33. <https://doi.org/10.1057/palgrave.bm.2540031>.
- Derven, Marjorie. „Diversity and inclusion by design: best practices from six global companies“. *Industrial and Commercial Training* 46, Nr. 2 (1. Januar 2014): 84–91. <https://doi.org/10.1108/ICT-09-2013-0063>.

- Golnaraghi, Maryam. „Climate Change and Insurance Industry: Taking Action as Risk Managers and Investors“. *The Geneva Association*, o. J., 23.
- Grosse, Walter. *Allgemeine Versicherungslehre*. 4. Aufl. Aachen/ München: Springer Fachmedien Wiesbaden, 1991.
- Iraldo, Fabio, Rainer Griesshammer, and Walter Kahlenborn. „The Future of Ecolabels“. *The International Journal of Life Cycle Assessment* 25, Nr. 5 (Mai 2020): 833–39. <https://doi.org/10.1007/s11367-020-01741-9>.
- Jolliffe, Ian. *Principal Component Analysis*. 2nd Aufl. New York: Springer New York, 2002. [http://cda.psych.uiuc.edu/statistical_learning_course/Jolliffe%20I.%20Principal%20Component%20Analysis%20\(2ed.,%20Springer,%202002\)\(518s\)_MVsa_.pdf](http://cda.psych.uiuc.edu/statistical_learning_course/Jolliffe%20I.%20Principal%20Component%20Analysis%20(2ed.,%20Springer,%202002)(518s)_MVsa_.pdf).
- Kantabutra, Sooksan, and Gayle C. Avery. „The Power of Vision: Statements That Resonate“. *Journal of Business Strategy* 31, Nr. 1 (5. Januar 2010): 37–45. <https://doi.org/10.1108/02756661011012769>.
- Martínez, Patricia, Ángel Herrero, and Raquel Gómez-López. „Corporate Images and Customer Behavioral Intentions in an Environmentally Certified Context: Promoting Environmental Sustainability in the Hospitality Industry“. *Corporate Social Responsibility and Environmental Management*, 10. April 2019, csr.1754. <https://doi.org/10.1002/csr.1754>.
- Maurer, Raimond. „Institutional Investors in Germany: Insurance Companies and Investment Funds“. *Goethe University Frankfurt – Finance Department*, 27. Juli 2003, 41. <https://doi.org/10.2139/ssrn.414100>.
- Mayer, Audrey L. „Strengths and Weaknesses of Common Sustainability Indices for Multidimensional Systems“. *Environment International* 34, Nr. 2 (Februar 2008): 277–91. <https://doi.org/10.1016/j.envint.2007.09.004>.
- McDaniels, Jeremy, Nick Robins, and Butch Bacani. „Sustainable Insurance: The Emerging Agenda“. *UN Environment’s Principles for Sustainable Insurance*, August 2017, 50.
- „Net Zero Coalition | United Nations“. Zugegriffen 4. September 2022. <https://www.un.org/en/climatechange/net-zero-coalition>.
- Niemeijer, David, and Rudolf S. de Groot. „Framing Environmental Indicators: Moving from Causal Chains to Causal Networks“. *Environment, Development and Sustainability* 10, Nr. 1 (Februar 2008): 89–106. <https://doi.org/10.1007/s10668-006-9040-9>.
- Norbash, Alexander, and Nadja Kadom. „The Business Case for Diversity and Inclusion“. *Journal of the American College of Radiology* 17, Nr. 5 (Mai 2020): 676–80. <https://doi.org/10.1016/j.jacr.2019.11.018>.
- Owen, William Foster. „Interpretive Themes in Relational Communication“. *Quarterly Journal of Speech* 70, Nr. 3 (August 1984): 274–87. <https://doi.org/10.1080/00335638409383697>.
- Para-González, Lorena, and Carlos Mascaraque-Ramírez. „The Importance of Official Certifications in Globalized Companies’ Performance: An Empirical Approach to the Shipbuilding Industry“. *Corporate Social Responsibility and Environmental Management* 26, Nr. 2 (März 2019): 408–15. <https://doi.org/10.1002/csr.1692>.
- Parris, Thomas M., and Robert W. Kates. „Characterising and Measuring Sustainable Development“. *Annual Review of Environment and Resources* 28, Nr. 1 (November 2003): 559–86. <https://doi.org/10.1146/annurev.energy.28.050302.105551>.

- Pillarisetti, J. Ram, and Jeroen C.J.M. van den Bergh. „Sustainable Nations: What Do Aggregate Indexes Tell Us?” *Environment, Development and Sustainability* 12, Nr. 1 (Februar 2010): 49–62. <https://doi.org/10.1007/s10668-008-9179-7>.
- Prell, Maximilian, Marco Tulio Zanini, Fabio Caldieraro, and Carmen Migueles. „Sustainability Certifications and Product Preference”. *Marketing Intelligence & Planning* 38, Nr. 7 (9. April 2020): 893–906. <https://doi.org/10.1108/MIP-12-2019-0616>.
- Rong, Xing, Tingting Zhang, and Kai Liu. „The Impact of Insurance Institutional Investors on Corporate Value from Selection and Creation Perspective”. *PLOS ONE* 17, Nr. 7 (1. Juli 2022): e0269520. <https://doi.org/10.1371/journal.pone.0269520>.
- Shea, Matthew, and James Hutchin. „The Insurance Industry Must Champion Sustainability”. *Thunderbird International Business Review* Vol. 55, Nr. No. 6 (Dezember 2013): 659–72. <https://doi.org/10.1002/tie.21582>.
- Siche, J.R., F. Agostinho, E. Ortega, and A. Romeiro. „Sustainability of Nations by Indices: Comparative Study between Environmental Sustainability Index, Ecological Footprint and the Emergy Performance Indices”. *Ecological Economics* 66, Nr. 4 (Juli 2008): 628–37. <https://doi.org/10.1016/j.ecolecon.2007.10.023>.
- „sustainability noun – Definition, pictures, pronunciation and usage notes | Oxford Advanced Learner’s Dictionary at OxfordLearnersDictionaries.com”. Zugegriffen 13. März 2022. <https://www.oxfordlearnersdictionaries.com/definition/english/sustainability>.
- Topolansky Barbe, Federico G., Magdalena M. Gonzalez-Triay, and Anna Hensel. „Eco-Labels in Germany”. *Journal of Customer Behaviour* 12, Nr. 4 (31. Dezember 2013): 341–59. <https://doi.org/10.1362/147539213X13875568505868>.
- Valenciano-Salazar, Jorge A., Francisco J. André, and Gregorio Martín-de Castro. „Sustainability and firms’ mission in a developing country: the case of voluntary certifications and programs in Costa Rica”. *Journal of Environmental Planning and Management* 65, Nr. 11 (19. September 2022): 2029–53. <https://doi.org/10.1080/09640568.2021.1950658>.
- Webb, Lynne M. „Online Research Methods, Qualitative”. In *The International Encyclopedia of Communication Research Methods*, herausgegeben von Jörg Matthes, Christine S. Davis, and Robert F. Potter, 1. Aufl., 1–9. Wiley, 2017. <https://doi.org/10.1002/9781118901731.iecrm0173>.
- Welsch, Heinz. „Environmental Welfare Analysis: A Life Satisfaction Approach”. *Ecological Economics* 62, Nr. 3–4 (Mai 2007): 544–51. <https://doi.org/10.1016/j.ecolecon.2006.07.017>.

Analiza tematyczna postrzegania zrównoważonego rozwoju w branży komercyjnych ubezpieczeń majątkowych w wybranych firmach działających w Niemczech

Zrównoważony rozwój jest kluczowym tematem definiującym w tym stuleciu priorytetowe wyzwania. Indywidualny wkład i wzajemne zrozumienie są niezbędne, ponieważ trendy zaczynają na nowo definiować zrównoważone działania i wyznaczać nowe cele. Jest to szczególnie prawdziwe w kontekście komercyjnym i branżowym, w tym w komercyjnych ubezpieczeniach majątkowych. Branża ta stanowi podstawę, stabilizuje gospodarkę i zabezpiecza rozwój przemysłowy. Uczestnicy przedmiotowego rynku, klienci i łańcuch dostaw zaczynają podkreślać rolę zrównoważonego rozwoju i wywierają presję na branżę komercyjnych ubezpieczeń majątkowych. Jednak już na etapie definicji i wspólnego rozumienia

używanych terminów zaczyna pojawiać się niejednoznaczność. Niniejszy artykuł bada i ocenia w jaki sposób zakłady ubezpieczeń zajmujące się komercyjnymi ubezpieczeniami majątkowymi odnoszą się do zrównoważonego rozwoju. W tym celu przeprowadzono analizę tematyczną 19 niemieckich i międzynarodowych firm ubezpieczeniowych działających na terenie Niemiec. Analiza ta ma na celu identyfikację i ocenę wątków wspólnych w tej branży. W sumie udało się zidentyfikować dziewięć takich wątków. Przedstawione wyniki stanowią swego rodzaju pierwsze spojrzenie na tę kwestię i wsparcie przy stosowaniu wspólnych wzorców zarówno w obszarze zrównoważonego rozwoju jak i komercyjnych ubezpieczeń majątkowych.

Słowa kluczowe: analiza tematyczna; zrównoważony rozwój; ekonomia ekologiczna; ubezpieczenia majątkowe

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