BENEFITS OF INTEGRATING SUSTAINABILITY INTO INSURANCE COMPANIES

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Abstract
The integration of sustainability in insurance companies has become a priority of the boards and constitutes a strategy in increasing resilience, in terms of improving financial performance and developing innovation. In this article, we will synthesize various studies and perspectives regarding the integration of sustainability in insurance companies, emphasizing both the financial advantages, as well as the operational and reputational ones. In the scientific literature review part, we touched on the research methodologies that highlighted the global sustainability development frameworks. The results obtained suggest that adopting sustainability is essential for long-term success and relevance in a rapidly changing global landscape. Furthermore, the analysis reveals that nearly 50% of the published articles originate from the fields of business, engineering, economics, and social sciences, underscoring the interdisciplinary nature of sustainability research. Future research, as we have seen in studying the activity of BNP PARIBAS CARDIF, should focus on developing comprehensive frameworks for sustainability management in the insurance sector, addressing local and global challenges.

Keywords
Insurance, Sustainability, Development, Green, Responsible

JEL Classification
G22, Q1, Q56

Introduction

In recent years, the urgency of integrating sustainability into business practices has gained significant traction across various sectors, including the insurance industry. Scholars have emphasized the need for a paradigm shift in finance theory to accommodate sustainable practices, particularly in light of the financial crises that have exposed the limitations of traditional models (Sood, 2024; Marti, 2024). The adoption of the Sustainable Development Goals (SDGs) in 2015 has further catalysed this

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transformation, prompting organizations to align their operations with global sustainability objectives (United Nations, 2015).

The insurance sector, as a critical component of the financial system, plays a pivotal role in promoting sustainability. Unique characteristics of this sector include its function as a risk manager, its long-term investment horizon, and its exposure to climate-related risks, which require a robust integration of ESG factors into decision-making processes. Although natural disasters affect all economic sectors, there is one that is particularly hard hit: the insurance sector (Montero, J.-M., Naimy, V., Abi Farraj, N. & El Khoury, R. 2024). Insurers are uniquely positioned to influence sustainable development through their investment strategies and risk management practices (Scholtens, 2011). By integrating Environmental, Social, and Governance (ESG) factors into their decision-making processes, insurance companies can not only mitigate risks associated with climate change and social inequality but also enhance their financial performance (Bressan, 2023;).

Moreover, the increasing frequency and severity of extreme weather events underscores the necessity for insurance companies to adopt sustainable practices. These events pose significant risks to both the insurance industry and the broader economy, necessitating innovative solutions that address environmental and social challenges (World Economic Forum, 2019). As noted by Pfeifer and Langer (2020), the growing emphasis on climate change and ESG issues has profoundly influenced the insurance sector, leading to the development of new sustainable business models and practices.

Despite the progress made, research on the implementation of ESG practices within the insurance industry remains limited (Marti, 2024). This article aims to contribute to the growing body of literature by exploring the importance of sustainability in insurance companies and examining the strategies that can be employed to integrate ESG considerations into their operations effectively.

In this article we aimed to synthesize the existing literature and the case study of BNP PARIBAS CARDIF regarding the integration of sustainability in insurance companies, highlighting the benefits, the methodologies and the discussions surrounding this critical topic. Recent studies have shown that insurers adopting sustainable practices can improve their operational efficiency, attract socially conscious investors and enhance their brand reputation (Chiaramonte & D'Auria, 2020; Jomaa & Bidin, 2018). Additionally, as global regulations evolve and consumer demands shift toward businesses with responsible practices, the insurance industry must adapt to remain competitive.

BNP PARIBAS CARDIF has established a proper corporate governance framework to integrate sustainability into its operations. The Board of Directors, together with specialist committees, oversees the responsible investment strategy, ensuring that social and environmental challenges are prioritized. The Asset Liability and Insurance Risk Management Committee (AIRMC) focuses on managing social and environmental risks, while the Nomination and Compensation Committee (ACC) ensures that executives possess the necessary skills to address sustainability challenges (Kajwang, 2022).

By reviewing the current state of research and providing insights into best practice, this article aims to inform insurance industry stakeholders about the importance of sustainability and how it can be achieved. The novelty of this research lies in its focus on the unique characteristics of the insurance sector and the specific challenges it faces in adopting sustainability practices.

1. Review of the scientific literature

The literature on sustainability in the insurance sector has expanded significantly, yet it remains fragmented. While various studies have explored the integration of ESG practices across different industries, the unique characteristics of the insurance sector necessitate a more focused examination. For instance, Henderson discusses the importance of tailored frameworks for specific sectors, which can be applied to the insurance industry to enhance ESG integration. Furthermore, Young highlights the challenges faced by insurers in adapting to regulatory changes and consumer expectations regarding sustainability. Recent research indicates that insurers adopting sustainable practices can improve their operational efficiency, attract socially conscious investors, and enhance their brand reputation. However, gaps remain in understanding how these practices specifically impact the insurance sector compared to other industries. For example, while Peng assesses sustainability in long-term care insurance systems, similar analyses are lacking in the broader insurance context. Moreover, studies such as those by Luiz and Sood emphasize the growing importance of ESG factors within the insurance sector, yet they do not adequately address the unique challenges and opportunities that insurers face in implementing these practices.

Following the review of the scientific literature on sustainability in the insurance sector, as in other financial-banking fields, we have noticed a growing interest in bibliometric methods as a means of evaluating and mapping research specialties. Župič and Čater (2014) discuss various bibliometric methods, including citation analysis and co-citation analysis, which can introduce objectivity into the evaluation of scientific literature and remove the subjectivity of researchers. These methods are essential for aggregating the views of multiple researchers and providing a comprehensive picture of the research landscape.

Baier-Fuentes, Merigó, Amorós, & Gaviria-Marín (2018) highlight the importance of using databases such as Web of Science (WoS) for literature searches and citation analysis. Their findings suggest that these databases are crucial to understanding the impact of research in various fields, including international entrepreneurship and sustainability.

Furthermore, Oliveira, Da Silva, Juliani & Ferreira (2019) emphasize the importance of bibliometric analysis in identifying research gaps and trends. Their study presents a method for mapping the current state of scientific knowledge that can support the development of scientific projects. This approach is particularly relevant to the insurance sector, where identifying emerging trends in sustainability can inform strategic decision-making.

A contingent claim model has been proposed to address the complexities of global climate policy, emphasizing the importance of carbon tariffs and cap-and-trade initiatives to mitigate carbon leakage and incentivize emission reductions Zhou, Xuelian, Tang & Jyh-Horng (2022). This model illustrates how manufacturers in exporting countries can collaborate with life insurance companies to acquire carbon allowances, thereby aligning financial interests with sustainability goals.

The urgency of implementing effective climate policies is underscored by the increasing number of carbon pricing mechanisms worldwide, which now encompass 68 distinct systems (World Bank, 2022). These mechanisms, including carbon taxes and emissions trading systems, collectively address approximately one-quarter of global greenhouse gas emissions. The introduction of Carbon Border Adjustment Mechanisms (CBAM) has further intensified discussions around carbon tariffs, particularly in the European Union, which is set to implement additional tariffs on high-carbon-emitting products starting in 2023 (European Commission, 2022).

Research indicates that carbon pricing mechanisms can enhance environmental conditions while also presenting economic challenges. For instance, Emodi, Caechi & Beg (2019) argue that while carbon emission reduction policies may incur additional costs, they can also yield economic benefits. Conversely, Rocco, Golinucci, Ronco & Colomboet (2020) suggest that transitioning from production-based to consumption-based carbon emission policies is more effective in preventing carbon leakage. This highlights the need for a nuanced understanding of the interplay between regulatory frameworks and market dynamics in the insurance sector.

The literature also emphasizes the critical role of effective carbon tariffs in safeguarding import-substitution industries and promoting employment opportunities (Zhao & Yarime, 2022). By supporting these industries through well-structured carbon tariffs, governments can stimulate job creation and enhance economic stability. Furthermore, the alignment of carbon tariffs with the United Nations Sustainable Development Goals (SDGs) underscores the potential for these policies to contribute to broader sustainability objectives, particularly in promoting affordable and clean energy (SDG 7) and decent work and economic growth (SDG 8).

Despite the growing body of literature on sustainability in the insurance sector, significant gaps remain in understanding the implications of ESG practices and the effectiveness of carbon pricing mechanisms. The interaction between cap-and-trade systems and carbon tariffs presents a complex regulatory landscape that requires further investigation (Li, Zhow, Lo & Lin, 2023). This paper aims to contribute to the existing literature by exploring these dynamics and proposing innovative solutions to enhance the effectiveness of sustainability measures in the insurance industry.

According to the data extracted from various articles, the number of publications related to sustainability has increased significantly in the last decade. For example, a bibliometric analysis by Jiale Zhang, Farzana Quoquab & Jihad Mohammad (2023) on plastics and sustainability research revealed a substantial increase in publications highlighting the growing importance of sustainability in various sectors, including insurance.

This paper aims to fill these gaps by providing a comprehensive analysis of the insurance sector's unique characteristics in relation to sustainability and ESG practices.

2. Research methodology

The literature on sustainability in the insurance sector uses various research methodologies, including case studies, quantitative analyses and systematic reviews. For the systematic literature review we used the Web of Science and Scopus databases, focusing on studies related to sustainability practices in the insurance industry. This review included a descriptive analysis using Excel and Scopus Analyse tool to extract the number of citations, research areas and publication years.

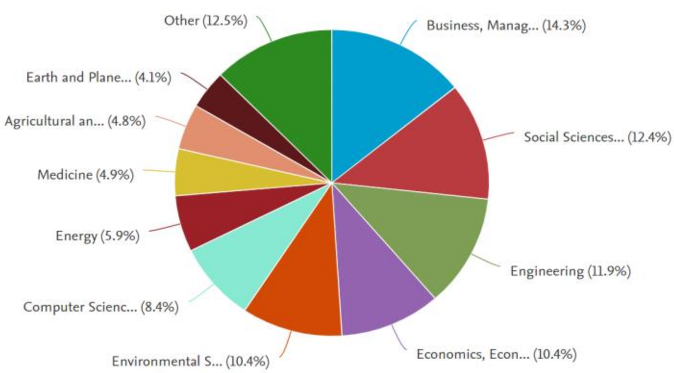
In addition, we did the bibliometric analysis using VOSviewer, a software tool that allows the visualization of bibliometric networks. This review identified current trends and influential work in the field, which revealed a comprehensive overview of the insurance sustainability research landscape. The findings of this review revealed a growing body of literature, with a notable increase in publications over the last decade, indicating a growing interest in this topic (Castelló-Sirvent & Meneses-Eraso, 2022).

3. Results and discussion

One of the primary advantages of adopting sustainable practices is the enhancement of financial performance. Research indicates that insurance or other companies and banks that incorporate ESG criteria into their operations can achieve better financial stability. The insurance sector's unique characteristics, such as its long-term investment horizon and risk management capabilities, position it to leverage sustainability as a means of enhancing profitability and resilience.

An examination of the Scopus database reveals that nearly 50% of the published articles addressing sustainability implementation across various domains originate from the fields of business, engineering, economics, and social sciences. This trend underscores the interdisciplinary nature of sustainability research, highlighting the significant contributions of these disciplines to the understanding and application of sustainable practices (figure no. 1). The prominence of these fields suggests that sustainability is recognized as an area of inquiry that intersects with economic viability, technological advancement, and social responsibility (Lozano, 2015).

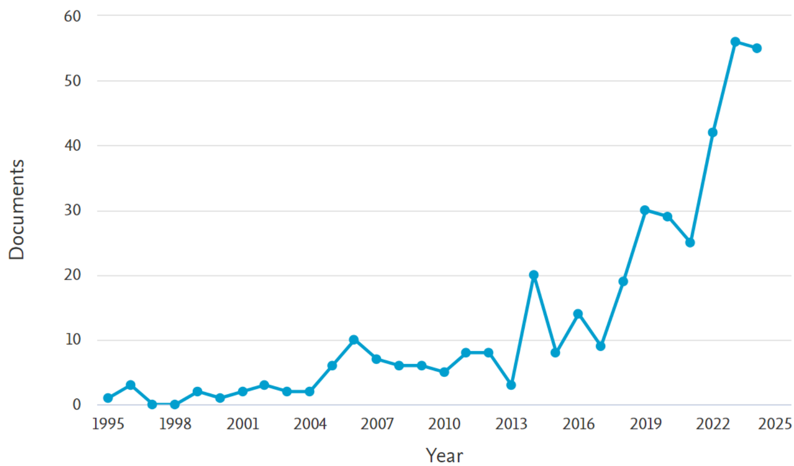
Figure no. 1. Documents by subject areas



Source: Scopus

It is noteworthy that among the 384 articles identified in the Scopus database, a significant portion began to be published in 2016, with a significant increase in the number of publications in subsequent years (Figure no. 2). This upward trend in sustainability-related literature can be attributed to the introduction of new regulations, particularly the Sustainable Development Goals (SDGs) established in 2015, which have significantly influenced corporate practices and priorities (United Nations, 2015). The implementation of these goals has prompted companies to adopt more sustainable strategies, thereby driving an increase in academic research focused on sustainability across various sectors (Lozano, 2015).

Figure no. 2. Documents by years



Source: Scopus

Research on BNP PARIBAS CARDIF initiatives shows us that insurers, as long-term investors, are increasingly focused on the implementation of sustainable development actions. The alignment of their investment strategies with the company's sustainable development goals indicates that this company can derive significant benefits from these sustainable practices. A clear direction is the improvement of risk management, and another direction is that of improving financial returns (Chiaramonte & D'Auria, 2020;). Such a strategic approach underlines the growing recognition in the insurance sector of the importance of sustainability in driving long-term value creation.

In addition, sustainability initiatives can support innovation in product offerings and competitive positioning in the market. Insurance companies are increasingly developing products that promote sustainable behaviours among their customers, such as offering lower premiums for electric vehicles or insurance policies that support renewable energy projects. Risi (2018) points out that the initiatives used by insurance companies to assess potential sustainability risks are often long-term oriented.

Regarding risk management, we have observed that integrating sustainability into business models has proven to be a crucial strategy for resilience; this is particularly relevant in light of the increasing frequency of climate-related disasters, which pose significant risks to the insurance industry and beyond. Gatzert and Kosub (2020) elaborate on sustainability risks and opportunities in the insurance sector, noting that although climate change is an increasingly critical factor, it is not the only sustainability challenge facing insurers.

BNP PARIBAS CARDIF's investment strategy incorporates adverse sustainability impacts across various asset classes. The company employs tailored methodologies for each asset class, collecting ESG data from external providers to evaluate sustainability performance (Muthulakshmi & Muthumoni, 2023). This investment process, which integrates non-financial criteria, is reviewed annually by the Board of Directors, reflecting a commitment to responsible investment practices (table no. 3).

Table no. 3. Commitments concerning sectors of activity that are particularly harmful to public health and the environment, in order to avoid or mitigate adverse impacts

Commitments applied by Cardif Assurance Vie in respect of commitments made by BNP Paribas Cardif				
Sectors	Description	Thematic		
		E	S	G
Tobacco	Since 2017, Cardif Assurance Vie has excluded from its euro fund companies that produce, wholesale and distribute, and whose income mainly stems from tobacco. The signing of the Tobacco Pledge in 2018 reinforced this position.		x	
Exiting the thermal coal value chain once and for all	Final exit from thermal coal value chain by 2030 at the latest for European Union and OECD countries, and at the latest by 2040 in the rest of the world. A detailed timetable, published in 2020 and setting out the criteria and thresholds, is available in the Responsible Investor Report published on the BNP Paribas Cardif website: Responsible Investor Report[7]	x		
Reduce the carbon footprint of its investment portfolios[8]	Reduce the carbon footprint (scopes 1 and 2) of directly-held corporate equity and corporate bond portfolios by at least 23% between the end of 2020 and the end of 2024 (53% reduction has already been achieved between 2017 and 2020). This target is aligned with the IPCC SR1.5°C scenarios no or limited overshoot[9]. Commitment made in September 2022	x		
	Achieve a carbon intensity below 125 gCO_2/kWh by end 2024 on electricity producers in directly held equity and corporate bond portfolios. This target is aligned with the International Energy Agency's (IEA) Net Zero Emissions scenario for power generation[10]. Commitment made in June 2023	x		
	Reduce the carbon intensity (scopes 1 and 2) of directly owned office buildings by at least 12% between 2020 and 2030 (47% reduction has already been achieved between 2011 and 2020). Commitment made in September 2022	x		

Source: Principal Adverse Sustainability Impact Statement CARDIF ASSURANCE VIE, 2023, p. 11

The risk management framework at BNP PARIBAS CARDIF includes sector policies that identify companies to be excluded from the investment universe, thereby mitigating adverse impacts (Xiao & Qiu, 2021). Additionally, the company engages with stakeholders through committees like the Risk Committee, which monitors sustainability risks, and implements a shareholder engagement policy to promote sustainability initiatives (Nistor, 2015).

Below we present the ESG Analysis and Integration Process at BNP PARIBAS CARDIF:

In the study of the insurance company's reports, we noticed that BNP PARIBAS CARDIF implements a responsible investment policy for its euro fund, which is reviewed annually by the Board of Directors. This policy incorporates an analysis of environmental (E), social (S) and governance (G) issues, using both quantitative and qualitative methods. The company collects ESG data specific to each asset class, which is integrated into the investment process, thus aligning with its responsible investment philosophy (Muthulakshmi & Muthumoni, 2023).

The ESG analysis is part of a continuous improvement framework that considers evolving regulations and data availability (Newell & Marzuki, 2022). BNP PARIBAS CARDIF has committed to a carbon-neutral trajectory by 2050 as a member of the Net Zero Asset Owner Alliance (BNP PARIBAS CARDIF, 2021).

In evaluating sovereign and supranational investments, BNP PARIBAS CARDIF excludes countries with poor ESG ratings based on external data. Only countries with satisfactory ESG scores are included in the investment universe, assessed through criteria such as energy mix, carbon footprint, and treaty ratifications (Thistlethwaite & Wood, 2020).

The responsible investment process for direct securities involves:

- Compliance Analysis: Verifying adherence to international standards and treaties (Thistlethwaite & Wood 2020).
- Sector Exclusions: Applying specific sector exclusion policies.
- ESG Data Analysis: Using external data to assess companies, focusing on those in the top seven deciles (Thistlethwaite & Wood, 2022).
- Carbon Transition Filter: Identifying companies transitioning to a low-carbon economy, excluding those with high emissions (Thistlethwaite & Wood, 2022).

BNP PARIBAS CARDIF manages its real estate portfolio to enhance environmental and social performance. Key practices include:

- Renovation Standards: Certification of renovated buildings when feasible.
- Energy Monitoring: Continuous analysis of energy consumption and carbon footprint.

BNP PARIBAS CARDIF’s prioritization of principal adverse impacts demonstrates its proactive approach to integrating sustainability into its investment strategy. By systematically analysing ESG factors, the company not only complies with regulatory standards but also positions itself as a responsible investor in the evolving financial landscape (table no. 4).

Table no. 4. List of prioritized adverse impacts for BNP PARIBAS CARDIF

Adverse Impacts	Exclusion policies (sector and regulatory)	Analysis and integration of extra-financial criteria	Shareholder engagement policy	Indicators
Social Violations	x	x		- Countries subject to social violations (PAI 16)
Greenhouse gases	x	x	x	- Carbon emissions (PAI 1) - Carbon footprint (PAI 2) - Carbon intensity (PAI 3) - Exposure to companies active in fossil fuels (PAI 4) - Share of non-renewable energy production (PAI 5)
Global Compact principles	x	x	x	- Companies identified in the controversial arms sector (PAI 11)
Controversial weapons	x	x		- Companies identified in the controversial arms sector (PAI 14)
Energy efficiency		x		- Exposure to energy-inefficient real estate assets (PAI 18)

Source: Principal Adverse Sustainability Impact Statement CARDIF ASSURANCE VIE, 2023, p. 14

The implementation of sustainable development practices increases the general reputation of companies in general, as well as insurance companies in particular. We have noticed that consumers want more transparency and responsibility, and companies like BNP PARIBAS CARDIF that give priority to sustainability obtain increased brand loyalty and trust. Companies that effectively communicate their sustainability efforts can differentiate themselves in a competitive market, thereby attracting and retaining customers (Gatzert & Kosub, 2020; Nguyen & Pramoolsook, 2016).

Finally, the integration of sustainability into insurance practices is only an alignment with global initiatives such as the United Nations Sustainable Development Goals (SDGs). By engaging in these frameworks, insurance companies can contribute to broader societal goals while improving their operational frameworks. This alignment not only fosters a positive corporate image, but also opens up new avenues of collaboration with governments and non-governmental organizations focused on sustainable development.

Conclusions

Integrating sustainability into insurance companies brings them numerous benefits, such as improved financial performance, enhanced reputation, innovation in product offerings for clients and increased resilience during crises. As we've seen in most reviews, as the insurance industry continues to evolve, embracing sustainability will be critical to long-term success and relevance in this rapidly changing global landscape. This study highlights the unique characteristics of the insurance sector that distinguish it from other industries, particularly in the context of ESG practices.

The implications of these findings suggest several practical strategies for insurance companies. First, firms should prioritize the integration of ESG criteria into their investment and risk management frameworks, ensuring that sustainability is a core component of their operational strategies. This can involve developing tailored ESG policies that align with the specific risks and opportunities inherent in the insurance sector. Additionally, fostering a culture of sustainability within organizations can enhance employee engagement and drive innovation in product offerings, such as insurance products that incentivize sustainable behaviors among clients. However, this research is not without limitations. One significant limitation is the focus on a single case study, BNP PARIBAS CARDIF, which may not fully represent the diversity of practices across the insurance sector globally. This could impact the generalizability of the findings. Furthermore, the reliance on existing literature may overlook emerging trends and practices that have not yet been extensively documented. Future research should aim to conduct comparative studies across different insurance companies and regions to provide a more comprehensive understanding of sustainability integration in the sector.

Future research will need to continue to focus on developing frameworks for sustainability management in insurance, addressing local and global challenges. As we have shown, BNP PARIBAS CARDIF exemplifies among the best practices in the integration of sustainability through its governance structure, investment strategy and stakeholder involvement. These practices not only address sustainability challenges, but also position the company as a leader in the insurance sector.

Additionally, research could investigate the effectiveness of specific sustainability initiatives and their impact on financial performance and customer loyalty. By addressing these gaps, researchers can contribute to the development of robust frameworks that guide insurance companies in their sustainability journeys.

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