Sustainable Products in Insurance

AAE Working Group on Sustainability and Climate Related Risks
Authors: Clara Armengol Vivas, David Bogataj, Mike Clark, Jérôme Crugnola-Humbert, Melissa Leitner, Dr. Frank Schiller

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Sustainability has become a key topic for the insurance industry. The main stakeholders of the insurance industry, i.e. investors, regulators and also to some extent policyholders and employees, address clearly that they expect the industry to transform itself and become a provider of sustainable solutions. That not only means that insurers have to transform their own operations and investments, but they also have to develop their products and services they offer to the end consumer into more sustainable versions. Actuaries' skillsets and the public interest calling of the profession mean that we have a responsibility to steer the organisations we work for and insurance industry as a whole towards propositions that deliver a greater net positive contribution to environmental and social sustainability.

The main challenge in this exercise is not the transformation itself, but the target: what makes an insurance product really "sustainable"? In the modern economy, the notion of sustainability was first discussed with strong repercussions in 1987 with the final report of the UN-appointed Brundtland Commission, where environmentalism was closely linked to social and economic concerns and brought together with the concept of sustainable development. In this report sustainable development is defined as **development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."**[1] Sustainable insurance products support such sustainable development.

Hence, when asking how to design a sustainable insurance product, it is important to clarify the role of the insurer and the insurance industry in society and the economy. In later chapters, we also discuss that the role cannot be only to provide monetary cover for some climate-related events. Insurance industry experts need to advise governments and consumers how to manage the increasing risks, both physical and transitional, as the climate changes, to increase the economic resilience of society. **We actuaries must support our companies in the best way forward to develop sustainable insurance products** as solutions for relevant climate risks (combining public and private coverage), improve transparency on these risks and their mitigation, and support society to become more resilient against those risks.

In contrast to the more popular everyday use of "sustainability" we do not limit this paper to **environmental** aspects or climate change only but will also consider **social** and **governance** aspects. However, as the discussion on sustainable products is still ongoing, the paper cannot provide final solutions of what a sustainable product should look like. Some concepts described in the following chapters are still under discussion and some contradict each other to some extent. We try to provide an overview on the current status of the discussion and also explicitly state open questions and topics that need to be further discussed and clarified.

We see the following initiatives as especially helpful and, in the following chapters, we discuss how to reflect those when designing sustainable insurance products. Chapter 1 provides an overview of the EU's Sustainable Finance Disclosure Regulation (SFDR) that aims to improve transparency about the ESG features of investment portfolios and support a shift to more sustainable investment and savings products. In this context already very comprehensive regulation on product design, distribution and reporting are defined and must be followed. For other insurance products, i.e. with a focus on insurance risks in Life, Health and Property & Casualty lines, product-specific regulation and reporting taxonomy are still in development. In the following chapters we provide an overview of the current status. The application of the UN Environment Programme Finance Initiative (UNEP FI) Principles for Sustainable Insurance (PSI) in Chapter 2 can represent a key element of a sustainable product strategy bringing all stakeholders together, i.e. insurer, customer and government. Furthermore, sustainable solutions and actions can be benchmarked against the UN Sustainable Development Goals (SDGs), as discussed in Chapter 3. Several approaches to increase transparency by providing a taxonomy for

[1] https://www.brundtland.co.za/2022/08/03/brundtland-report-1987-our-common-future/

sustainable products also give an idea around how certain products will be perceived especially by investors, as discussed in Chapter 4.

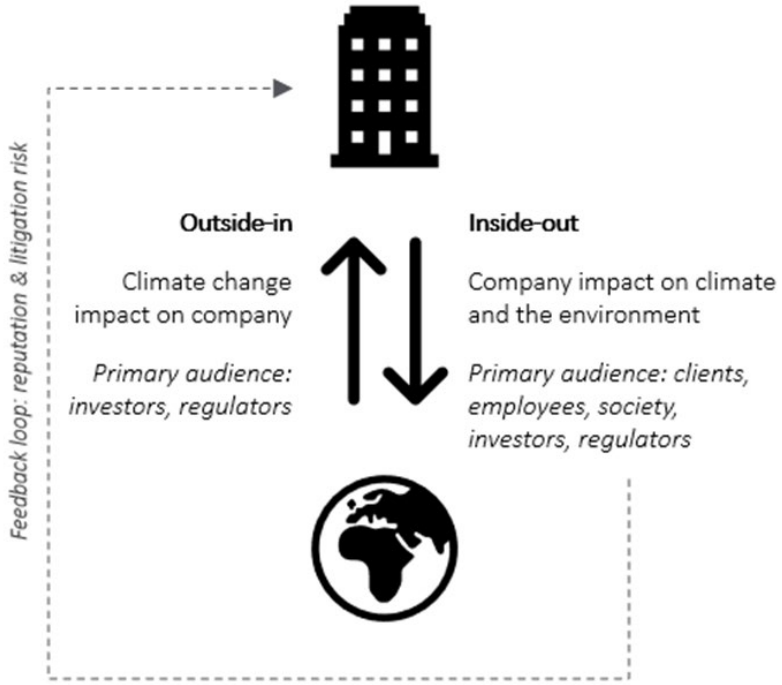

Figure 1: Illustration of the concept of double materiality, here for the example of climate, but can also be applied on a more general concept of sustainability

Under the principle of double materiality[2], this paper explores approaches for understanding only the second domain of double materiality (inside-out): in other words, if and how the products provided by and underwriting activities of an insurance company have an impact upon ESG themes. The double materiality concept is illustrated in Figure 1.

1 Sustainable Savings Products

In this first section, we focus on an important but very specific subset of all insurance products, i.e. saving products sold by life insurers, since this is the category of products where the discussion is currently most advanced. Other types of products for life, health and non-life (for which there is currently no clear standard regarding what sustainability means) will be addressed with more general approaches in later sections.

One of the main objectives of the EU Sustainable Finance Plan is to reorient capital flows towards a more sustainable economy and thus to promote sustainable investments across the 27 nations. The EU is examining how to integrate sustainability considerations into its financial policy framework to mobilise finance for supporting the sustainable growth of Europe. Several new regulations have been introduced, aiming to create a more transparent playing field, partly to prevent greenwashing, and to ensure the protection of end-consumers – and is therefore relevant for the design of sustainable products.

The EU taxonomy provides companies, investors, and policymakers with definitions for which economic activities can be considered environmentally sustainable. It should create security for investors, protect private investors from greenwashing, help companies to become more climate-friendly,

[2] ‘ Double materiality is an extension of the key accounting concept of materiality of financial information. Information on a company is material and should therefore be disclosed if “a reasonable person would consider it [the information] important”, according to the US Securities and Exchange Commission. The concept of double materiality takes this notion one step further: it is not just sustainability-related impacts on the company that can be material but also impacts of a company on the sustainability of the outside world.

mitigate market fragmentation, and help shift investments to where they are most needed for managing the transition. We discuss taxonomies further in Chapter 4.1.

On the other hand, the EU's Sustainable Finance Disclosure Regulation (SFDR) aims to improve transparency about the ESG features of investment portfolios by having firms classify them accordingly as Article 8 or Article 9 products – the explicit definition is in Figure 2. Financial market participants and financial advisers should be required to disclose specific information regarding their approaches to the integration of sustainability risks and the consideration of adverse sustainability impacts. However, the definitions of Articles 8 and 9 are quite broad and require better comprehension and understanding.

Article 6	Article 8	Article 9
Non ESG	ESG	Sustainable
NOT GREEN	LIGHT GREEN	DARK GREEN
▪ Products with **no specific ESG criteria** other than basic group exclusions ▪ Mainstream products ▪ All products that are neither Art. 8 nor Art. 9	▪ Products which "promote environmental or social characteristics, or a combination" ▪ They have an explicit ESG commitment as part of their investment objective and/or process description	▪ In addition to the points covered by Art. 8 products, they must have **"a sustainable investment objective"** ▪ Need to have **measurable goals** in place aligned with the investment objective **which can be reported** to clients
Requirements: ▪ ESG risk integration ▪ Pre-contractual disclosures requirement ▪ Optional consideration PASI[3]	Requirements: ▪ ESG risk integration ▪ Pre-contractual disclosures requirement ▪ Specific pre-contractual information ▪ Specific post-contractual information ▪ Optional consideration PASI	Requirements: ▪ ESG risk integration ▪ Pre-contractual disclosures requirement ▪ Specific pre-contractual information ▪ Specific post-contractual information ▪ **Need to consider PASI and DNSH[4] principle**

Figure 2: Product classification as defined by the EU's Sustainable Finance Disclosure Regulation (SFDR)

Under SFDR, Article 8 products should promote, "environmental or social characteristics, or a combination of those characteristics, provided that the companies in which the investments are made follow good governance practices." While an Article 9 product is "a financial product that has sustainable investment as its objective and an index has been designed as a reference benchmark". For the rest of the products that are neither Article 8 nor 9, they will be considered as Article 6. But what does this really mean?

- Article 9 products, also known as "dark green", cover products targeting bespoke sustainable investments and applies "…where a financial product has sustainable investment as its objective and an index has been designated as a reference benchmark." A financial product will fall within the scope of Article 9 when its objective is specifically to have a positive impact on the environment and society. A product fits under Article 9 if it meets the following requirements:
  - ✓ The product contributes to an ESG objective as measured, for example, by key resource efficiency indicators on the use of renewable energy, greenhouse gas emissions, by its impact on biodiversity and the circular economy, or by its social impact.

[3] Principal Adverse Sustainability Indicators

[4] Do Not Significantly Harm: means not supporting or carrying out economic activities that do significant harm to any environmental objective, where relevant, within the meaning of Article 17 of Regulation (EU) 2020/852

- ✓ Simultaneously, the product does not significantly harm any of those environmental or social objectives as defined in Art. 9 of the Taxonomy regulation (a. climate change mitigation; b. climate change adaptation; …)
- ✓ The target company follows good governance practices, particularly with respect to sound management structures, employee relations, remuneration of staff, and tax compliance.

If all the above is confirmed, the financial product may be claimed to have "sustainable investments" as its objective, triggering additional pre-contractual disclosures under Art. 5 of the Taxonomy regulation. I.e., it should explain a) the sustainable investment objective pursued by the product, the investment strategy followed by the product, including its Article 9 objective, the planned asset allocation for the product in terms of sustainable investments versus non-sustainable, and b) the details of any index that has been designated as a reference benchmark, and under the SFDR regulatory technical standards (once final).

- Article 8 products, also known as "light green", cover financial products that promote, among other characteristics, environmental or social (E/S) characteristics, or a combination of those. In addition, the companies in which the investments are made follow good governance practices. In other words, Article 8 covers products that promote E/S features, regardless of whether the investment outcome is actually produced by that promotion, which means:
  - ✓ Investment does not have sustainable investments as its primary objective as described for Article 9 SFDR.
  - ✓ Investment is in companies that follow good governance practices
  - ✓ The product is marketed as promoting E/S characteristics or a combination of both.

  For products classified as Article 8 under SFDR, there are additional pre-contractual disclosures under Art. 6 of the Taxonomy regulation. I.e., there should be transparency on the E/S characteristics promoted by the products, the product's investment strategy, including to meet the binding Article 8 criteria, the product's planned asset allocation in terms of ESG vs. non ESG products, and under the SFDR regulatory technical standards (once final).

- Article 6 of SFDR covers products which do not integrate any specific criteria of sustainability into the investment process, apart from considering ESG risks as a global obligation under SFDR. While these will be allowed to continue to be sold in the EU, provided they are clearly labelled as non-sustainable, they may face considerable market misalignment when compared against more sustainable funds. Article 6 includes obligations on financial market participants and financial advisers to make pre-contractual disclosures regarding the financial product information on the impacts of sustainability risk in the performance of their activities and on the products' returns.

In 2022 we observed high uncertainty and confusion about the interpretation of this regulation and the reporting requirements. Many funds have been recently reclassified by investment firms, notably from Article 9 to 8[5]. This uncertainty increases the risk of greenwashing and might result in reputational issues for the insurer. On the other hand, not being able to provide Article 8 or 9 savings products will endanger the attractivity of the product portfolio. For more details in reputational risks, please also refer to an article from the AAE on "Sustainability Issues and Reputational Risks for Insurance Companies and Pension Funds" published in 2022[6]. Several regulators already reflect these developments and try to provide more guidance, e.g. the Swiss Federal Council recently published a position on the prevention of greenwashing in the financial sector[7].

2 Sustainable Insurance Products and Insurers as Long-Term Partners

Another perspective towards sustainable products is based on the question: "Can this product or service be provided by the insurance industry on a long-term basis, given the changes and transitions to be expected, and how will it increase society's resilience against climate change?". Under this perspective, the insurance industry is not only seen as a provider of risk coverage, but as an influencer of more holistically sustainable solutions for mitigating climate risks. This explicitly means that risks are

[5] https://www.marketscreener.com/news/latest/Trackinsight-Why-Asset-Managers-are-Reclassifying-Funds-From-Article-9-to-Article-8--43151619/

[6] https://actuary.eu/memos/aae-position-on-sustainability-issues-and-reputational-risk-for-insurance-companies-and-pension-funds/

[7] https://www.newsd.admin.ch/newsd/message/attachments/74580.pdf

not only absorbed and managed by the (re)insurance industry, but that governments and policyholders also have to take accountability for comprehensive and sustainable risk management. Only then can the insurance industry maintain its role as a long-term partner providing adequate cover by sustainable products.

2.1 A Principles Based Approach as Proposed by the PSI

The UN Environment Programme Finance Initiative (UNEP FI) provided some very helpful thoughts and principles on this[8]. Based on a precisely formulated aspiration:

> *Sustainable insurance is a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability.*

the UNEP FI defined four general principles, and they also expressed explicitly what should be considered when designing sustainable insurance products[9]:

1. We will embed in our decision-making environmental, social and governance issues relevant to our insurance business.

   Risk management and underwriting

   - Integrate ESG issues into risk management, underwriting and capital adequacy decision-making processes, including research, models, analytics, tools and metrics

   Product and service development

   - Develop products and services which reduce risk, have a positive impact on ESG issues and encourage better risk management
   - Develop or support literacy programmes on risk, insurance and ESG issues

   Claims management

   - Respond to clients quickly, fairly, sensitively and transparently at all times and make sure claims processes are clearly explained and understood
   - Integrate ESG issues into repairs, replacements and other claims services

   Sales and marketing

   - Educate sales and marketing staff on ESG issues relevant to products and services and integrate key messages responsibly into strategies and campaigns
   - Make sure product and service coverage, benefits and costs are relevant and clearly explained and understood
2. We will work together with our clients and business partners to raise awareness of environmental, social and governance issues, manage risk and develop solutions.

   Clients and suppliers

   - Dialogue with clients and suppliers on the benefits of managing ESG issues and the company's expectations and requirements on ESG issues
   - Provide clients and suppliers with information and tools that may help them manage ESG issues
3. We will work together with governments, regulators and other key stakeholders to promote widespread action across society on environmental, social and governance issues.

   Other key stakeholders

[8] https://www.unepfi.org/psi/the-principles/

[9] Note that some of the bullet points not directly reflecting topics with respect to product development have been omitted.

- Dialogue with intergovernmental and non-governmental organisations to support sustainable development by providing risk management and risk transfer expertise
- Dialogue with business and industry associations to better understand and manage ESG issues across industries and geographies
- Dialogue with academia and the scientific community to foster research and educational programmes on ESG issues in the context of the insurance business
- Dialogue with media to promote public awareness of ESG issues and good risk management

4. We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing the Principles.
   - Assess, measure and monitor the company's progress in managing ESG issues and proactively and regularly disclose this information publicly
   - Participate in relevant disclosure or reporting frameworks and support further development of the current status quo as described in Section 4
   - Dialogue with clients, regulators, rating agencies and other stakeholders to gain mutual understanding on the value of disclosure through the Principles

Based on these principles, insurance products and services are proposed to be designed in such a way that the whole process of risk-taking and mitigating is fairly, transparently and openly tackled so that all participants and stakeholders benefit in the long-term. Full transparency on the process and an open and well-informed dialogue with all stakeholders and partners ensure that all involved parties can share the same vision of how such a solution that reduces sustainability risks and increases systemic resilience can be implemented. The target is a sustainable society where general sustainable development goals are supported mutually.

2.2 A Simple Example for such a Sustainable Product

To make this whole idea clearer, we discuss an example. In 2021, some European countries suffered a severe flood event due to the extreme low-pressure area "Bernd". The Ahr valley was especially heavily hit. The economic loss in Germany alone amounted to about €33bn, of which about €8bn was insured – i.e. revealing a protection gap of around 75%. Yet it was not because the insurance industry was unwilling to provide cover. The problem was lack of demand. People either did not even consider insurance in the first place, or they did not want or could not afford to pay the price. Even now, only about every second building in Germany is insured against heavy rain, flooding and inundation. Such a 50% insurance rate is rather low compared to other European countries[10].

On the other hand, in some places in the Ahr valley, the risk is indeed so material that any new structures would simply be washed away again. However, rebuilding in the dangerous areas has been forbidden or property owners have decided against it in only a few cases. It is expected that the exposure to flood risk in this area will not be significantly lower in the near future.

What could be features of a sustainable building insurance product then?

- It should be attractive and attainable for house owners. This includes that its price is fair, well understood and accepted by the house owners.
- It should include an element to identify extreme flood risk for the building, and as part of the insurance cover, sales advisors and underwriters should discuss openly with the policyholder what can be done to mitigate the identified risks.
- For heavily exposed areas, claims payments could be linked to the request to rebuild the house in a less exposed area – this would implement a sustainable "build back better" component in the insurance contract to better manage also future risks.

[10] EIOPA's dashboard on insurance protection gap, https://www.eiopa.europa.eu/tools-and-data/dashboard-insurance-protection-gap-natural-catastrophes_en

- The product's sustainable features are broadly discussed in public and co-created jointly with representatives from the government, consumers, and consumer protection.

For those who judge this example, that follows some of the relevant principles of PSI, to be extreme, note a new regulation that was established in the US after Hurricane Ian: if the cost to repair a building damaged by a hurricane exceeds 50% of its market value, the building must be brought into compliance with the National Florida Insurance Program's current mapping requirements.[11] This regulation effectively enforces the "build back better" principle for heavily damaged buildings.

However, it is acknowledged that it is not easy to implement such a solution and establish broad market acceptance. Often, such sustainable developments need strong support by the government, accompanied by more restrictive regulation and an enforceable legal framework. That being said, the right time to start the discussion to find a commonly accepted step forward for introducing a more sustainable product than before, might be especially after extreme events,.

3 Insurance Products that Support the Economy in Achieving Sustainability Goals

In this section, we will discuss approaches for defining and measuring the sustainability impacts of insurance products. Importantly, assessments of impact should go beyond the simple terms and conditions of the policy, and also include the way customers are served at each point in the insurance value chain, and the extent to which the product and services provided are inclusive to all communities who have a need for them.

3.1 Framework around the UN Sustainable Development Goals

Figure 3: The 17 Sustainable Development Goals as defined by the United nations.

The 2030 Agenda for Sustainable Development[12], adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet. Central to it are the 17 Sustainable Development Goals (SDGs). These UN SDGs provide a useful and holistic

[11] https://www.propertyinsurancecoveragelaw.com/2022/10/articles/insurance/hurricane-ian-victims-learn-about-femas-50-rule/

[12] https://sdgs.un.org/2030agenda

reference list of considerations for structuring an analysis of the sustainability impacts stemming from any insurance product and the underwriting activities associated with it. In particular, the SDGs aim to ensure that social development needs are fully considered, acknowledging the complex interdependencies between them.

A 2022 report by the Geneva Association, "The Role of Insurance in Promoting Social Sustainability"[13] is an exploration of how life and non-life insurance drives social sustainability, with reference to the UN SDGs, and how insurers can extend and strengthen their social utility to better address the 'S' dimension of ESG. Inspired by the three-scope carbon emission model, it proposes a three-scope model for social sustainability, to help insurers evaluate their social impacts on employees, local communities and customers.

Figure 4: The Three Scope model applied to the social impacts of the insurance industry as proposed by the Geneva Association

An insurer's analysis of its underwriting activities using the UN SDGs may be conducted as follows:

1. Identify which of the 17 goals are affected in any relevant way by the product, and whether that impact is negative (harmful) or positive (beneficial)
2. For each of the relevant goals that are harmful or beneficial:
   2.1. Describe the ways in which that goal is harmed or benefits
   2.2. Assign a measurement to the extent of harm or benefit. It is likely this would be a rudimentary and possibly subjective approach. For example, on a high/medium/low scale.
   2.3. Describe what risks exist that threaten to increase the harm or reduce the benefits from the product against that goal
   2.4. Similarly, describe what opportunities exist to reduce harm and increase benefits
   2.5. Translate the risks and opportunities into actions which improve the performance of the product w.r.t. the goal
3. Aggregate the product's measurements from step 2.2 across all 17 SDGs, allowing appropriately for the negatives and positives, to obtain an overall measurement of impact.

The result of the analysis is a thorough description of what, how and how much the product drives ESG impact, as well as an exploration of what can be done to improve. Such a systematic analysis can influence strategic decision-making and prioritisation of effort towards the overarching sustainability objectives of the insurer.

For example, if the product is a standard underwritten term life insurance, under SDG 1 (No Poverty), a risk might be identified where the product imposes a minimum premium threshold that is well above what would be affordable for low-income customers. While that may be justified by the insurer's operational costs and commissions required for sales and distribution, the insurer may challenge whether that excludes vulnerable customers who are in fact most in need of the product from being able to fairly access and afford the product. That poses an opportunity for innovation, and in particular, investigating how more efficient, digital and tech-enabled processes could help to reduce per-policy costs,

[13] https://www.genevaassociation.org/publication/socio-economic-resilience/insurance-promoting-social-sustainability

thereby improving the commercial viability to reduce or remove the product's minimum premium threshold. In non-life insurance similar considerations resulted in parametric crop insurance based on low-cost remote-sensing and satellite imagery sold in bundle with the crop itself or using cost-efficient mobile phones instead of more expensive distribution channels. Such products are already well established to cover small farmers, e.g., in poorer African or South American countries.

3.2 Framework around Self-Defined Sustainable Product Characteristics

As we still lack a consistent reporting framework (see also Chapter 4), especially larger insurers may want to develop their own frameworks for assessing product sustainability impacts, according to a self-defined list of favourable and unfavourable product characteristics, and a system of scores and weights to quantify what proportion of that product's sales production is considered sustainable. With this approach it might be possible to indirectly set industry standards without compromising the comparability of such approaches. However, if methodologies and results of such assessments are not consistent – at least to a minimal extent – or do not converge over time to a certain transparent standardisation, then they may attract criticism and jeopardise the benefits for key stakeholders like investors, policyholders and regulators. A step-by-step process might proceed as follows:

1. Engage a multi-disciplinary team of product and sustainability experts to formulate a list of characteristics, both positive and negative, that help a product meet a sustainability need or detract from one.
2. For each chosen characteristic, unless it is clearly binary (yes/no), attribute a scoring scale to rate the product, being clear on what would constitute the maximum possible score.
3. Where certain characteristics may be deemed more impactful than others or deemed more fitting to a pre-determined sustainability focus topic, agree on a set of weights across all characteristics.
4. Measure the product against each characteristic.
5. Aggregate the measurements for all characteristics, applying the set of weights.
6. Apply the aggregated product score to its financial metrics in the insurer's portfolio, such as gross written premium, or net operating profit, to indicate what proportion of the overall financial results can be considered consistent with the self-defined characteristics of sustainable products.

Examples of characteristics could be:

- Value-added services that assist the customer in preventing the insured peril from occurring. Such as health prevention and chronic disease management programmes for life and health insurance, or access to theft prevention systems (alarms, geolocation devices) at discounted rates for motor insurance.
- Non-financial compensation or support that aims to restore the wellbeing of the customer, prior to the occurrence of the insured event. Such as rehabilitation services before or during the payment of a temporary disability annuity.
- Usage of circular economy principles in the restoration of assets that have been damaged as a result of an insured event, such as recycled auto parts in motor insurance claims.
- Deployment of technological innovation in such a way that it materially increases the ease of access or affordability of the product, for an otherwise disadvantaged customer group. Such as simple underwritten life products of low face value, that can be managed by an underwriting rules engine instead of requiring the intervention of an experienced medical underwriter to assess the policy for acceptance and terms of cover.

For both approaches it will be important to provide transparency to investors, customers and regulators how these products will have an impact on sustainability and how successfully they have been implemented. Qualitative and quantitative measurements of these improvements will be important to prove the positive effect on ESG criteria. The company might also want to comply with already existing or still developing reporting standards to enable stakeholders to compare their achievements with those of the company’s peers.

4 Sustainability Reporting and Taxonomies

Sustainable taxonomies are classification systems which play an important role to provide transparency and comparability to an organisation's stakeholders with respect to sustainability goals and their achievements. Sustainable taxonomies aim to help investors and other stakeholders (such as clients, business partners etc.) to understand the degree of alignment of the company's activities with certain ESG requirements, customers, and supply chain partners. They can also support supervisors in assessing climate and other systemic sustainability risks at the micro (company) and macro (industry) levels.

It should also be noted that products or activities which do not meet the set criteria in a specific sustainable taxonomy, to the degree that they are considered to positively contribute towards sustainability-related goals, are not necessarily 'unsustainable'. They might also be considered as 'neutral' or 'in transition', and there may be products and sub-portfolios of an insurer's business which do not materially influence sustainability in either a positive or negative way. This will however depend on the exact framing of the criteria for sustainable products in a given taxonomy. In other words, does the taxonomy framework require a minimum set of standards to be met across the portfolio, or does this framework propose a more ambitious and aspirational set of standards, aiming to steer more of insurers' underwriting activities towards those standards? Any given framework may employ both approaches, creating a challenge to classify and measure the sustainable contribution of business that meets minimum standards but not aspirational ones.

An overview of the various sustainable taxonomies proposed across the world can be found in the report on Climate-Related Disclosures and Risk Management: Standards and Leading Practices published by the International Actuarial Association in October 2022[14].

4.1 EU Corporate Sustainability Reporting Directive and Taxonomy

The sustainability reporting landscape in the European Union will be transformed following the entry into force of the Corporate Sustainability Reporting Directive (CSRD) in January 2023, which succeeds the Non-Financial Reporting Directive (NFRD). The reporting scope will be extended to all large companies and listed Small and Medium Enterprises (SMEs), as well as to non-EU companies with EU subsidiaries or branches that meet certain revenue thresholds. Double materiality and multi-stakeholder reporting will be included. The first reporting requirements are for financial year 2024 for companies already in the scope of the NFRD and will be extended to all large companies for financial year 2025, to listed SMEs for financial year 2026 with an opt-out option for two more years, and to certain non-EU companies for financial year 2028.

The associated reporting standard is currently being developed by the European Financial Reporting Advisory Group (EFRAG), with simplified standards for SMEs and non-EU companies. The architecture of EFRAG's European Sustainability Reporting Standards (ESRS) consists of three layers (sector agnostic, sector specific, entity specific), covering three main reporting areas (strategy, implementation, performance measure) and the three sustainability categories of Environmental, Social and Governance. EFRAG submitted its technical advice to the European Commission on a first set of 12 reporting standards in November 2022, after a public consultation period which opened in April 2022.

Together with CSRD, the EU Taxonomy will specifically ensure that companies falling under the scope of the CSRD disclose the proportion of environmentally sustainable economic activities in their business, investments, or lending activities. The EU Taxonomy Regulation, which originally entered into force in July 2020, aims to create security for investors, fight greenwashing, help companies to become more climate-friendly, and help shift investments towards sustainable projects. It should be noted that the EU Taxonomy does not impose any hard obligation to create or invest in sustainable products, only to report the level of alignment to create softer incentives. The approach behind the EU Taxonomy regulation is that the problem is mostly a lack of reliable information, which can be solved through giving the financial markets more details about what is sustainable, and then expect the economy to self-correct and capital to flow towards greener economic activities.

[14] CRTF_Paper5_Final_October2022.pdf (actuaries.org), Section 2.4.

The EU Taxonomy is science-based and considers six environmental objectives[15]:

- Climate change mitigation;
- Climate change adaptation;
- The sustainable use and protection of water and marine resources;
- The transition to a circular economy;
- Pollution prevention and control; and
- The protection and restoration of biodiversity and ecosystems.

So far, the EU Taxonomy Regulation has provided detailed criteria only for the first two objectives: climate change mitigation and climate change adaptation. Within the whole financial sector, only a subset of non-life insurance and reinsurance activities are considered eligible, and then only for the climate adaptation objectives (other financial activities, including life insurance protection business, are currently not eligible for a potential Taxonomy alignment).[16] Under Article 8 of the EU Taxonomy Regulation (not to be confused with Article 8 of the SFDR, see Chapter 1), EIOPA advised in 2021[17] that the insurance industry will have to disclose two indicators:

- The percentage of non-life gross premium written which aligns with the EU Taxonomy objectives ('green premium ratio'), with supplementing disclosures explaining the extent to which the taxonomy aligned underwriting activities are reinsured or are stemming from reinsurance activities, and
- The proportion of investments in Taxonomy-aligned activities ('green asset ratio'), with additional disclosures distinguishing the proportion of the investments in relation to the general account and unit-linked/index-linked portfolios.

In practice, EU Taxonomy alignment requires that the economic activity makes a significant contribution to at least one of the six objectives and Does Not Significantly Harm (DNSH) any other environmental objectives. In addition, it requires that minimum standards, such as minimum social safeguards, are complied with and that the economic activity meets all sector-specific Technical Screening Criteria. For non-life insurance, these criteria are:

- Advanced modelling and pricing of climate risks;
- Product design offering risk-based rewards for preventive actions taken by policyholders;
- Innovative insurance coverage solutions for climate-related perils;
- Sharing loss data with public authorities for research purposes;
- High level of claims service in post-disaster situation.

In addition, a DNSH criterion related to climate mitigation requires the exclusion of insurance activity for the extraction, storage, transport or manufacture of fossil fuels, and the insurance of vehicles, property or other assets dedicated to such purposes. Taking together this set of criteria, the EU Taxonomy offers a definition of what a sustainable (non-investment) insurance product is, but this is a very ambitious and restrictive one, where Taxonomy-alignment might be achieved for a very small percentage of a given insurer's total premiums.

4.2 IFRS International Sustainability Standards Board (ISSB)

Another relevant global standard for the classification of products and activities is currently being developed by the IFRS Foundation and its International Sustainability Standards Board (ISSB). The

[15] Plans were originally made for the development of other Taxonomies regarding for instance Social objectives, but this work has been paused at the time of writing.

[16] More detailed information on how the EU Taxonomy applies to Financial and Insurance Activities can be found in Annex 2, pages 270-276: Annex 2 (on Climate Adaptation) of the Taxonomy Regulation

[17] https://www.eiopa.europa.eu/system/files/2021-03/eiopa-21-184-sustainability-non-financial-reporting-advice-art8-taxonomy-regulation.pdf

ISSB's objective is to give companies a unified framework for the integrated reporting of climate and other sustainability risks that financial reporting may not yet capture. The proliferation of sustainability frameworks and standards has led to a certain confusion and inconsistent disclosures in the market, so the IFRS Foundation launched the ISSB to create standardized ESG reporting rules that will complement the International Accounting Standards Board (IASB) financial accounting regime. Several already existing sustainability reporting frameworks have been considered for this exercise, including the Global Reporting Initiative (GRI), Taskforce on Climate-related Financial Disclosures (TCFD, which also issued sector-specific guidance for the insurance sector in 2021), Value Reporting Foundation (VRF), Climate Disclosure Standards Board (CDSB), and Carbon Disclosure Project (CDP).

In March 2022, the ISSB released its first two exposure drafts on IFRS Sustainability Disclosure Standards: IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and IFRS S2 (Climate-related Disclosures). The reporting for insurance will be based on three main blocks:

- IFRS S1 will focus on general aspects of sustainability-related risks and opportunities that are not yet addressed and is based on the TCFD's four-pillar approach (governance, strategy, risk management, and metrics & targets).
- IFRS S2 will focus on specific climate-related risks and opportunities and is again based on TCFD.
- IFRS S2 Appendix B (sector disclosure requirements) will add insurance-specific metrics and will be based on the Sustainability Accounting Standards Board (SASB).

Following a consultation period on the two exposure drafts, the ISSB has confirmed it will issue its final reporting standards at the end of Q2 2023 and has agreed that IFRS S1 and IFRS S2 will be effective from January 2024. This means companies would collect sustainability disclosure information for the 2024 reporting cycle and publish reports in 2025. However, it is important to note that so far, the ISSB (like the TCFD) has not included double materiality considerations (as opposed to CSRD and the EU Taxonomy), focussing instead on risks and opportunities financially material to reporting companies, rather than their external impact on climate, the environment and other sustainability issues.

4.3 Outlook

In the context of reporting on the sustainability of its products, the insurance industry must address several key challenges:

1. Complex and dynamic requirements:
   - High regulatory dynamics ('moving targets') complicate implementation and target-setting and can create reputational risks.
   - Need to maintain consistency across multiple frameworks, and to combine qualitative information and quantitative measures.
   - The insurance industry's own ambitions sometimes already go beyond legal requirements, for example through the Net Zero Insurance Alliance, which has published its first target-setting protocol for climate change mitigation in January 2023[18].
   - The timely integration of sustainability considerations into established processes (e.g., assurance, strategy, steering and governance) is also a challenge.

[18] World-Leading Insurers and United Nations Launch Pioneering Target-Setting Protocol to Accelerate Transition to Net-Zero Economy – United Nations Environment – Finance Initiative (unepfi.org)

2. Lack of data and the need for expert judgment:
   - Requirements must be interpreted, in some cases without suitable detailed guidance being available. As market practice is still evolving, there is a high risk of inconsistencies between (and even within) companies, as well as over time between successive reporting exercises.
   - Very granular assessments are often needed at the activity-, product- or client-level (for instance for the exclusion of fossil fuel insurance for EU Taxonomy alignment).
   - For climate change mitigation, the measurement of financed emissions and insurance-associated emissions is also challenging.
   - Look-through for investment indicators is not always feasible (e.g. in the case of externally managed funds and fund of funds).

Therefore, the insurance sector faces the problem of creating sustainable products which can support environmental and social advancement for the economy and society, while regulatory and reporting requirements are changing rapidly, sometimes contradictory, or sometimes open to interpretation, making this transition demanding and difficult to navigate. Companies who want to provide transparency on their activities and the performance of their products must continuously monitor a moving regulatory and industry landscape to prove that they act in a sustainable way. Otherwise, they might find themselves accused of greenwashing and exposed to significant reputation and litigation risks if they are perceived to exaggerate their sustainability credentials.

5 Conclusions

With a continuously increasing focus, sustainable products will become more and more relevant for all stakeholders, especially investors and policyholders. As most of the described concepts are based on principles and some of them are still under discussion, the insurance industry has a wide scope for interpretation when implementing such concepts. For this reason, some companies refrain from acting now and rather want to wait for more specific regulation. However, waiting too long might even be the greater risk. Not starting early in considering and discussing these new concepts and implementing first approaches despite all the open questions, might prove to be even more problematic as the company is seen by its stakeholders to be a laggard.

This is even more true as the insurance industry plays a relevant role in mitigating and helping societies adapt to physical and transitional risks of the climate change. The insurance industry should advise government when certain risks are but weakly amenable to private sector insurance. Beyond the basic insurance “product” we need to think of broader insurance solutions and services which incentivise the policyholder to take risk mitigation action. One could formulate the insurance industry’s sustainability goal to be

Offer insurance and related services,
at a fair and reasonable price,
for securing a world worth living in.

Sustainability is a broad concept. Delivering sustainability is associated with the proper management of societal risks, especially risks that are more systemic in nature. One challenge is the gap that can arise when public policy struggles to manage systemic risk. We can rely too much on the theory of externalities whose assumptions assume identification of the culprits, some quantification of risk, and constraining the actions of the culprits. This can result in risks migrating to the financial system, to markets which may not have been designed for this. Climate change risks are perhaps the prime example: the annual repricing process in general insurance may be seen as unhelpful for climate-related risks, at least in the long-term as climate-related losses lead to exploding premiums or exclusions undermining the social aspect of insurance. On the other hand, price adjustments adequately reflecting the increasing climate risks are also important to support the transition and change the behaviour of the insured to proactively reduce risks in the first place and be more mindful of their climate impacts. Designing sustainable products as we have described in this paper is a remedy to this potential conflict.

As actuaries, we need to follow these ongoing developments closely and support our companies in the best way forward: to manage the inherent risks during the transition, and to develop opportunities around innovative products and solutions that convey attractive benefits to our policyholders in a more sustainable way. In addition, we might have important advice for other stakeholders, the regulators and standard-setters, to support the development of a transparent financial system for the management of sustainability risks and potential solutions.

Given actuaries' skillsets across finance, risk, and uncertainty, and the public interest calling of the actuarial profession, actuaries have a responsibility to apply those skills in the area of systemic risk management and hence make a contribution to societal sustainability.

6 References

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7 Glossary

Adaptation	When used in relation to climate, it is the process of adjustment to actual or expected climate and its effects
Biodiversity	The variety of life forms in the world or in a particular habitat, at all levels of biological systems (molecular, organisms, population, species and ecosystems). A high level of biodiversity is generally considered to be important and desirable.
Carbon Disclosure Project (CDP)	An international non-profit organisation that supports companies, cities, states and regions to measure and manage their environmental impact.
Circular economy	Model of production and consumption which aims to avoid waste and conserve value through sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products for as long as possible.
Climate	The long-term average and variability of weather, typically averaged over a period of 30 years
Climate change	The statistically defined change in the average and/or variability of the climate system, which includes the atmosphere, water cycle, land surface, cryosphere and biosphere and their interactions.
Climate Disclosure Standards Board (CDSB)	Non-profit organization which was working to provide material information for investors through the integration of climate change-related information into financial reporting. CDSB has now been consolidated into the IFRS Foundation and ISSB.
Climate-related risk	The potential negative impacts of climate change, and society's responses to it.
Corporate Sustainability Reporting Directive (CSRD)	EU directive which strengthens the rules about the social and environmental information that companies have to report. The CSRD replaces and extends NFRD.
Double materiality	Double materiality refers to considering not just the impact of climate change on an organization, but also the impact of the organization's activities on the climate. The double materiality concept can be extended to other sustainability-related matters (e.g. biodiversity and ecosystem services).
Ecosystem service	All the goods and services provided by natural systems to support human life and well-being (for instance the pollination of crops by bees). All human life and economy ultimately depend directly or indirectly on ecosystem services.
Environmental sustainability	The aspects of sustainability that relate to nature, notably the conservation of natural resources and protection of ecosystems in order to support health and wellbeing now and in the future.
ESG	Environmental, Social and Governance – factors measuring the sustainability and social impact of investments and businesses
European Financial Reporting Advisory Group (EFRAG)	Private association established by the European Commission to influence the development of IFRS Standards from a European perspective and to develop European Sustainability Reporting Standards, notably for CSRD.
Financed emissions	GHG emissions generated as a result of financial services, investments, and lending by investors and financial services companies. Financed emissions fall under scope 3, category 15 in the Greenhouse Gas Protocol.
Global Reporting Initiative (GRI)	An international independent organization which develops global standards for how organizations communicate and demonstrate accountability for their impacts on the environment, economy and people.
Greenhouse gas (GHG)	Greenhouse gas – gas that absorbs and emits radiant energy within the thermal infrared range. Greenhouse gases in the Earth's atmosphere are primarily carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF6). Ozone (O3) is technically a greenhouse gas depending on where it is in atmosphere and included in clean air legislation and the Montreal Protocol, not in climate agreements.

Greenwashing	Making false or misleading claims about the environmental benefits of a product, service or technology. This may include material discrepancy between long-term environmental commitments and short-term action.
Insurance-associated emissions	GHG emissions associated with re/insurance underwriting portfolios for accounting purposes, due to the facilitating role that insurance plays in enabling economic activities. Insurance-associated emissions can be reported as a supplementary accounting note within re/insurers' scope 3, category 15 in the Greenhouse Gas Protocol.
International Sustainability Standard Board (ISSB)	An independent body that develops and approves International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards under the oversight of the IFRS Foundation
Mitigation	When used in relation to climate, efforts to reduce or prevent emission of greenhouse gases. In the context of climate, mitigation is different from adaptation
Net Zero Insurance Alliance (NZIA)	Net-Zero Insurance Alliance, a global group committed to transition its insurance and reinsurance underwriting portfolios to net zero greenhouse gas emissions by 2050 or sooner.
Non-financial reporting directive (NFRD)	The European Union (EU) Non-Financial Reporting Directive (Directive 2014/95/EU) lays down the rules on disclosure of non-financial and diversity information by large EU companies. The NFRD will be replaced by the CSRD (Corporate Sustainability Reporting Directive) with a broader application scope.
Physical risks	Risks resulting from climate can be event-driven (acute) or longer-term (chronic) shifts in climate patterns. Physical risks may have financial implications for organizations, such as direct damage to assets and indirect impacts from supply chain disruption. Organizations' financial performance may also be affected by changes in water availability, sourcing and quality; food security; and extreme temperature changes affecting their premises, operations, supply chain, transport needs and employees' safety
Protection gap	In an insurance context, the difference between the amount of insurance that would be economically beneficial and the amount of coverage which is actually purchased. The insurance protection gap is hard to measure and subjective.
Renewable energy	Generated from resources which are naturally replenished on a human time scale; for example, from wind, sunlight, rain, tides, waves, or geothermal heat.
Social (or societal) sustainability	The aspects of sustainability that relate to people, notably the identification and management of positive and negative business impacts on employees, workers in the value chain, customers and local communities.
Sustainability Accounting Standards Board (SASB)	A non-profit organization which develops sustainability accounting standards
Sustainability reporting	The public disclosure of an organization's ESG goals, the measures they implement to achieve them, and their current state of progress towards these objectives.
Sustainability risk	Uncertain environmental or social event or condition that can cause significant negative impact on an organization (downside risk). In the wider sense, it can also include positive opportunities that may become available to an organization because of changing social or environmental factors (upside risk).
Sustainable development	"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UN Brundtland report, 1987)
Sustainable investment	A range of practices in which investors aim to achieve financial returns while promoting or preserving long-term environmental and social value.
Sustainable taxonomies	Classification systems establishing a list of environmentally sustainable economic activities. The EU Taxonomy is a science-based example of sustainable taxonomy.

Taskforce on Climate-related Financial Disclosures (TCFD)	Task Force on Climate-related Financial Disclosure, established by the Financial Stability Board (FSB), with members chosen by the FSB to include both users and preparers of disclosures from across the G20's constituency, covering a broad range of economic sectors and financial markets.
Theory of externalities	In economics, an externality is an indirect cost or benefit to an uninvolved third party that arises as an effect of another party's activity. Pollution is a typical negative externality.
Transitional risk	Risks emanating from transitioning to a lower-carbon economy that may entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate. Depending on the nature, speed and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations.
UN Environment Programme Finance Initiative (UNEP FI)	United Nations Environment Programme Finance Initiative, created in 1992 following the Earth Summit in Rio de Janeiro as a global partnership established between the UNEP and the financial sector.
UN Principles for Sustainable Insurance (PSI)	The United Nations Environment Programme Finance Initiative's Principles for Sustainable Insurance initiative provides global guidance on the integration of environmental, social and governance risks into all activities in the insurance value chain.