

Sustainability Blog

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ESG trends in the insurance sector – A 2050 perspective

Climate change and its impacts on the insurance sector

The rise in sea levels, increasingly frequent extreme weather events, and the loss of biodiversity are consequences of climate change that will have a lasting impact on the environment, society, and the economy. In this context, two socio-economic meta trends are particularly prominent. The first concerns the effects from changes in global population implying new generational influences on innovation, the second pertains to transportation systems and mobility. Both these changes will also affect the insurance sector. How will the expected socio-economic changes influence the design of insurance products? In our recently published PwC Point of View "How Climate Change Affects Insurance: A 2050 Perspective," we conducted a comprehensive analysis of four key sectors: the energy and global food supply sector, the IT & digital sector, and the construction & building sector.

In accordance with the goals of the Paris Climate Agreement, governments and businesses are striving for a transition to Net Zero. This transition, along with other dynamic factors, particularly changes within the population structure and ongoing globalization, will lead to structural socio-economic changes, which will have consequences for the insurance sector. Firstly, through the increased risk to insured assets and the resulting loss of income due to extreme weather events, and secondly, through the response of economies and societies to climate change, which in turn affects insurance products.

The PwC Point of View "How Climate Change Affects Insurance: A 2050 Perspective" focuses on the socio-economic impacts on insurance products and underwriting. For this purpose, the three modelled ("C1") scenarios of the Intergovernmental Panel on Climate Change (IPCC) are used, which are based on the assumption that global warming will not or only slightly exceed 1.5°C by 2100. Based on these scenarios, ESG trends up to 2050 are examined in more detail. The focus here is on two meta-changes:

1. The impacts of socio-economic factors on the insurance sector in the context of general behavioural changes within the population as well as technological developments, and
2. the expected changes in mobility behaviour.

On the other hand, sector-specific impacts on the insurance industry are analysed in four areas:

1. Energy (electricity and industry)
2. Global food supply
3. IT & digital systems
4. Construction & building sector

In the following, we would like to give you a brief insight into the results of the analyses.

1. Socioeconomic meta changes and their impacts on the insurance sector

The socioeconomic impacts of climate change on the insurance sector can be considered by taking into account two meta changes that are expected by 2050 and are already noticeable today. The first change

concerns behavioural changes within society, while the second change is related to altered mobility behaviour.

With regard to societal changes, it can be assumed that prevailing generation-specific attitudes and values will be influenced. By 2050, a "virtual-industrial" revolution can be expected, based on the use of IT, digital tools, and artificial intelligence in various economic sectors. This will accelerate global networking and lead to new corporate structures. As a result, it will become more difficult for insurance companies to strictly define the exact scope of the insured business with corporate customers. At the same time, the "virtual-industrial" revolution will provide insurers with metadata and new methods based on IT analytics, enabling them to analyse specific customer behaviour and better tailor insurance offerings to customer needs. Additionally, the composition of personal, customized insurance business will continue to evolve, including different preferences regarding asset ownership among younger generations.

The second change concerns the transport system and mobility. A closer examination of the impacts of climate change in this area implies that the transportation sector will be dominated by public transportation as well as electric vehicles in the future. New ownership structures will develop in this area, shared ownership and shared use of vehicles will become more common. These changes will impact the insurance industry by, for instance, increasing the demand for insurance of public assets, while the demand for insurance for privately owned cars will shrink. Additionally, the risk profile of some asset classes will be novel, as there will be many self-driving electric vehicles in the transportation sector.

2. Sector-specific impacts of climate change on the insurance sector

In the following section, the sector-specific impacts of climate change on the insurance sector will be examined in more detail with a spotlight on the building & construction sector.

Key changes in the building & construction sector

The market value of real estate will increase with regional differences due to severe climate and biodiversity risks posed to cities and housing settlements and there will be an increased demand for new, renovated, and environmentally friendly buildings. Particularly in urban areas, the demand for housing will remain high, with a significant increase in smaller one-person households due to urbanization. Additionally, building costs will rise due to increasing material prices and carbon neutrality regulations. This will lead to existing real estate requiring significant investments to retain its value. In urban areas, there will be an increased diversity of use of buildings, for example through shared offices, smaller homes and more public spaces.

Impact on the insurance sector

Due to the increased demand for new, renovated, and environmentally friendly buildings, there will be a high demand for investments to improve the climate and energy performance of new and existing buildings in the residential and building sector. This can lead to a growing market for property insurance, also due to the larger number of households in urban areas. At the same time, higher insurance premiums for housing in areas with high climate-related risks (e.g., coastal regions) must be expected, and in some cases, buildings

may even become uninsurable. The increased construction and material costs, and circular economy approaches, will enable new types of insurance. Additionally, increased government involvement will be necessary to better cover for risk areas that are vulnerable to extreme weather events.

3. Further trends for 2050 in the fields of energy, global food supply, as well as IT & digital system

2050 trends for energy

Impacts on the insurance sector

- Substantial increase in stranded assets due to transition risks (e.g. diesel vehicles)
- Liability, such as product design and climate change liabilities, will be a major issue for the insurance sector and will come with an increase in litigation activities
- Significant growth opportunities for insurers as there will be new energy suppliers and new markets (e.g. energy storage)
- Supervisory authorities will closely monitor the risk management capabilities of insurers, in particular for climate and environmental risks. Closer monitoring means a necessary adjustment of risk management policies for insurance companies

2050 trends for global food supply

Impacts on the insurance sector

- Agricultural insurance will be more responsive to impacts from extreme weather events and practices of sustainable agriculture to mitigate adverse impacts
- Improved risk assessment models for extreme weather events will require better data (e.g. catastrophe models)
- Incentives in insurance premiums for sustainable agriculture as preventive mechanisms
- Uninsured market disruption resulting from food insecurity will be more common. New insurance solutions for small local farms will have to be developed, e.g. smart insurance based on block chain technology
- Further growth and diversification in food production will become more rapid innovative and increase the demand for insurance

2050 trends in the area of IT & digital systems

Impacts on the insurance sector

- The insurance services landscape will become a highly sophisticated digital-enabled marketplace
- In 2050, customers will demand more personalization, more access, more security and more options, hence insurance will need partnerships to provide a seamless product offering that supports changing customer needs
- Insurers will reshape to become more like high-tech companies with a mindset shift in the industry and a new attitude about data, partnerships, service and success
- IT insurance will become a large share of the market and financial services will be integrated into IT services
- Regulators will focus on risk management capabilities of insurers, in particular for climate and environmental risks
- Insurers will need to follow and understand current trends in order to keep up with their capability to assess and mitigate risks

The outlined trends illustrate that the transition to Net Zero will bring about significant structural changes in the insurance industry. On the one hand, this means new challenges, but at the same time, it opens up new opportunities and business fields for the insurance sector.

More on this topic, as well as a detailed explanation of the points mentioned above, can be found in our Point of View [“How Climate Change Affects Insurance: A 2050 Perspective.”](#)

Further links:

- [PwC Point of View: How Climate Change Affects Insurance: A 2050 Perspective](#)
- [Sustainability in the real estate industry](#)
- [PwC & WWF Study \(2023\) on nature and biodiversity protection in the German financial sector \(only available in german\)](#)
- [PwC Study: Nature is our Capital – Biodiversity: An Underrated Issue in the Real Estate Sector \(only available in german\)](#)
- [Sustainable Finance –Webcast “Staying Ahead of the Curve” \(only available in german\)](#)

Get ongoing updates on the topic via regulatory horizon scanning in our research application, PwC Plus.
Read more about the opportunities and offerings here.

To further PwC Blogs

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