

Risks from plastic waste crisis and trend toward low-carbon economy causing changes in consumer behavior

Scenario and Risk Assessment:

Issues caused by climate change has become more severe, resulting in a trend toward economic activities designed to reduce carbon pollution and to achieve the goal of net zero emission, creating transition risks from technological and market shift in at least the next three to five years.

The global plastic waste issue both on land and in the oceans inflicting vast adverse impacts on the environment has prompted stakeholders, investors, NGOs, and shareholders to wage a battle against single-use plastics and ineffective waste management, pressuring corporates to set and achieve net-zero targets. These concerning issues could significantly cause consumer behaviors and demand to shift as consumers are also increasingly demanding for lower carbon fuels or substitution of existing products or services by opting for eco-friendly products and services with lower emissions through the value chain from raw material sourcing to production process, and product use, or by buying products and services that promote maximum resource efficiency from the start such as looking for products and services from manufacturers or providers who minimize resource consumption or use recycled materials in their productions. Moreover, the issues have caused new technological improvement and innovation to emerge, such as technologies relating to Carbon Capture Utilization and Storage (CCUS) and Direct Air Capture (DAC), to support the transition. This shift will require carbon intensive operation to adopt the technologies to reduce the footprint.

Impact:

The changes and support by both public and private sectors in tackling the environmental and plastic waste issues present business opportunities for SCG to roll out new offerings. However, they could also disrupt existing business models because products made from plastics are perceived as one of the causes of environmental pollution, potentially resulting in decreases in revenues of existing products and negative stakeholder feedback. They could also increase in production costs, expenditures on research and development activities, and operating costs from higher tariffs related to environmental issues, as well as affect the Company's reputation and competitiveness.

Mitigating Action and How to Convert to Opportunities:

To address these issues, SCG has transformed business strategies accordingly to cope with the climate change and plastic waste issues, as well as the changes in consumer needs toward the circular economy approach. The efforts encompass strategy formulation, product and service development, production processes, and supply chains. SCG's key collective measures are as follows:

- Sets a long-term goal to reduce greenhouse gas emissions by 28% in 2030 (compared to the base year 2007) and takes aim at achieving net zero emission in 2050 by increasing production efficiency through various initiatives. Central to these are development of innovations that reduce carbon and greenhouse gas emissions, investment in renewable energy projects, focus on selling products that help minimize greenhouse gas emissions, and investment in new projects by taking into account the amount of carbon emission and costs associated with the efforts to reduce greenhouse gas emissions from the new business. Internal Carbon Pricing (ICP) is also introduced and taken into consideration when making investment in projects that contribute to greenhouse gas emission reduction.

- The Chemical Business plans to expand recycled/renewable base polymer products 200,000 tons per year.

- Reduces resource consumption in the manufacturing process and designs products with longer useful life. Key efforts include development of plastic resins using SMX Technology that allows for easy formability of thinner products with the same level of strength and facilitates recycling; polymer food packaging that is lightweight and recyclable; Prestige X-Shield concrete roof tiles that incorporate innovative special coating formulation to ensure longer lasting color than other concrete roof tiles; and building materials that minimize waste at the construction sites such as precast concrete slabs, cut- to- size autoclaved aerated concrete, modular toilets, and prefabricated building.

- Collects and manages waste for reuse. For example, broken plastic pallets can be crushed, shredded, and made into pellets for use to make new pallets. In addition to using cut-off portions of piles as aggregate in concrete, the Company collaborated with DOW Thailand Group on using plastic waste to build the recycled plastic road. The Company's latest progress includes the development of chemical recycling technology that turns post-consumer plastics into renewable feedstock for virgin plastic resin production. This advanced technology utilizes catalyst to promote energy saving and environmental friendliness for the recycling process. The Chemicals Business has constructed Thailand's first demonstration plant in its complex in Rayong. The demonstration plant will produce approximately 4,000 tons of renewable feedstock per year.

- Built new businesses in line with the concept of turning products into services. For example, ALLRENT is a marketplace platform that gathers the ecosystem of businesses' machineries for renting. The initiative promotes resource sharing in alignment with the circular economy.

Source: 2020 SCG Annual Report (Page 72)

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