

We consider we face the risks, as explained below, that could adversely affect our future performance, financial conditions, and cash flows. The Showa Denko Group is taking steps to prevent the realization of these risks and minimize impact on its operations.

The following covers important risk factors considered being present as of March 28, 2019. This list is not inclusive.

1. Substantial fluctuations in the performances of individual businesses

The Group is manufacturing and selling a wide variety of products, such as petrochemicals, chemicals, electronics, inorganics, and aluminum. The following risks are expected in major business fields, but those are not limited to the businesses mentioned below.

(1) Petrochemicals

The Group purchases and imports a large amount of feedstock, including naphtha. When the price of naphtha or other types of feedstock fluctuates due to a change in crude oil prices, a change in supply-demand balance, or a currency fluctuation, and when we cannot secure sufficient spreads between the manufacturing cost and selling prices of products, the Group's performance and financial conditions can be affected. Furthermore, earnings from petrochemicals largely depend on the supply-demand balance. Construction of large plants by competitors and resultant oversupply as well as a sharp decrease in demand due to unfavorable changes in the Japanese or world economies can affect the Group's performance and financial conditions.

(2) HD media

In the Group's HD media business, the sales volume is largely influenced by demand for IT devices and electric appliances. The business requires innovations at a rapid pace and involves fierce international competition. Fluctuations in demand and intensification of competition will cause fluctuations in selling prices. The Group is prepared to develop and provide products meeting the market requirements and has established a global production/marketing setup. However, when market requirements change more quickly than we expected, when supply-demand balance changes substantially, and when exchange rates sharply fluctuate, the Group's performance and financial conditions can be affected.

(3) Inorganics

The Group produces graphite electrodes in Asia, North America, and Europe, and sells those products globally. When the demand for graphite electrodes suddenly decreases due to unfavorable changes in the Japanese or world economies, deterioration in supply-demand balance may not allow us to secure sufficient spreads between the manufacturing cost and selling prices of products, and can affect the Group's performance and financial conditions.

(4) Aluminum

The Group imports a large amount of aluminum metal from overseas sources. When the aluminum ingot price rises due to a rise in LME prices, a rise in premium on aluminum, or a weaker yen, and when we cannot absorb the manufacturing cost increase in the form of higher product prices, the Group's performance and financial conditions can be affected. Furthermore, most of our products are sold as materials and components for the automobile, electric appliance, and electronics sectors. Trends of

those industries, which are beyond our control, can substantially affect such businesses.

(5) Overseas operations

The Group is producing and selling in Asia, North America, and Europe. Operations overseas involve such special risks as unexpected changes in laws and regulations, deterioration in political/economic situations, and social disorder due to war and terrorism. Such risks can become real and affect our overseas operations, resulting in adverse impact on the Group's performance and financial conditions.

(6) Mergers, acquisitions, capital tie-up, business reorganization and restructuring

The Group implements mergers, acquisitions, capital tie-up, business reorganization and restructuring at home and abroad with the view of expanding scope of businesses and improving profitability. If these measures do not allow the Group to achieve desired results due to changes in business environment surrounding the Group or other companies to which the Group invests money, these measures may have bad influences upon the Group's performance and financial conditions. In addition, when the Group implements restructuring of its businesses, including withdrawal from unprofitable businesses and restructuring of affiliated companies, the Group's performance and financial conditions can be affected.

2. Unexpected fluctuations in financial conditions and cash flows

(1) Substantial fluctuations in exchange rates

As for foreign-currency-based transactions centering on exports/imports, the Group makes its best efforts to minimize relevant exchange rate fluctuation risks, mainly through exchange contracts. However, substantial fluctuations in exchange rates can affect the Group's performance and financial conditions. In particular, a sharp appreciation of the yen against other currencies can affect the Group's performance. Exchange rate fluctuations can also affect the Group's performance and financial conditions through the conversion of overseas subsidiaries' financial statements into Japanese yen.

(2) Trends in financial markets and changes in the fund-raising environment

The trends in the financial markets and deterioration in the Group's financial indexes can affect the Group's fund-raising and interest expenses: for example, in the form of prompt repayment of a loan owing to the terms of financial covenants. In that event, the Group's performance and financial conditions could be affected.

(3) Employees' severance indemnities

The Group's employees' severance indemnities and expenses are calculated based on various basic rates and the yield of pension assets used in pension calculations. Fluctuations in the current price of pension assets, trends in interest rates, and changes in the retirement benefit/pension systems can affect the Group's performance and financial conditions.

(4) Securities

As the Group owns securities with current prices, fluctuations in stock prices can result in valuation losses, affecting the Group's performance and financial conditions.

(5) Accounting for impairment of fixed assets

The Group has adopted the accounting standard regarding the impairment of fixed assets. The Group may incur additional losses from the impairment of fixed assets as a result of future changes in the current prices of land and other fixed assets or a substantial change in the business environment.

(6) Deferred tax assets

The Group's financial statements include deferred tax assets in relation to temporary differences (differences between the assets/liabilities on the consolidated financial statements and the assets/liabilities in calculation of taxable income). The calculation of deferred tax assets is based on various projections for future taxable income. Thus, when actual taxable income differs from the projections or in case of a revision of the taxation system (including tax rates), it becomes necessary to revise deferred tax assets. That situation could affect the Group's performance and financial conditions.

3. Specific regulations

The Group's businesses are subject to various restrictions as stipulated by laws and regulations. The restrictions relate to industrial safety (such as the Law for Prevention of Disasters at Petroleum Complexes, Etc.; the Fire Service Law; and the High Pressure Gas Safety Law) and the environment and chemical substances (such as the Basic Environment Law; the Air Pollution Control Law; and the Law concerning the Examination and Regulation of Manufacture, Etc. of Chemical Substances). The Group observes these laws and regulations as it conducts its respective businesses. In the event the Group fails to observe any of the laws and regulations, the Group's activities could be restricted. In case stricter regulations are introduced, resulting in higher costs, the Group's performance and financial conditions can be affected.

4. Important lawsuits

While the Group makes its best efforts to observe laws and agreements, the Group may be sued as it conducts its wide-ranging businesses.

5. Others

(1) R&D

Making "Create new value by forging, polishing, and linking diverse individualized technologies" as its basic policy in R&D, the Group concentrates its R&D resources upon research and business development that leads to strengthening of its core businesses and expansion of businesses in their surrounding fields. On the other hand, the Group also strives to create next-generation businesses that make the most of open innovation and M&As. Through strengthening of its core technologies that covers such diverse fields as inorganics, organics and aluminum, and achievement of synergies among these technologies, the Group promotes its R&D programs that aim to create individualized products, technologies, and high-value-added businesses. However, in case the actual results materially differ from original plans, the Group's performance and financial conditions could be affected.

(2) Intellectual property

The Group is making its best efforts to obtain, use, and protect intellectual property, such as industrial property rights and know-how, in recognition of their ability to make the Group's businesses more competitive. The Group also respects other companies' rights. However, in the event of failure to duly obtain or use the rights, infringement by a third party, or

if the Group is considered to have infringed a third party's intellectual property, the Group's operations can be hindered and the Group's performance and financial conditions could be affected.

(3) Quality assurance and product liability

The Group has established its internal rules on quality assurance and quality control, as well as organizations for managing and promoting quality assurance. Furthermore, the Group has obtained certification under ISO 9001 standards to ensure strict quality control. However, in the event of a serious quality defect or being sued for product liability, the Group's reputation could be damaged and the Group may be forced to pay compensation to customers. This could affect the Group's performance and financial conditions.

(4) Accidents and disasters

The Group is committed to securing steady and safe operations. The Group conducts regular inspections of all manufacturing facilities in an effort to minimize any risk factors pertaining to the suspension of operations or accidents due to problems with manufacturing facilities. In the event of injury or damage to property due to an accident, a large-scale natural disaster, a cyberattack, etc., the Group's reputation could be damaged. The Group may incur substantial costs in dealing with the situation and may lose business opportunities due to the suspension of production. This could affect the Group's performance and financial conditions. Furthermore, even when the Group's manufacturing facilities are not directly influenced, the Group's production activities may be restricted by trouble with procurement or disruption of supply chains due to accidents at suppliers' sites or a natural disaster, or by a shortage of power supply. These factors could affect the Group's performance and financial conditions.

(5) Impact on environment

The Group is committed to the principles of Responsible Care, which means that we are working to ensure the health and safety of everyone and to protect the environment from harm caused by chemical substances throughout their life cycles, namely, the development, production, distribution, use, and disposal. In the event of causing impact on the environment, the Group's reputation can be damaged. The Group may incur costs, including compensation, lose business opportunities due to the suspension of production, and/or pay compensation to customers. These factors can affect the Group's performance and financial conditions.