SHOWA DENKO K.K.

Consolidated Financial Statements

For the first three quarters ended September 30, 2020

Ⅰ. Consolidated Financial Results

November 5th, 2020

(1) Results of operations:

(¥ in millions, US$ in thousands, except for net income attributable to owners of the parent per share)

	Results for the first three quarters (Jan.1–Sep.30)			
	2019	**2020**	Increase (Decrease)	**2020**
	¥	**¥**	%	**$**
Net sales	695,575	**635,977**	(8.6)	**6,011,128**
Operating income	109,313	**(15,410)**	—	**(145,652)**
Ordinary income	107,587	**(36,776)**	—	**(347,600)**
Net income attributable to owners of the parent	80,963	**(57,654)**	—	**(544,938)**
Net income attributable to owners of the parent per share: Basic	555.01	**(395.22)**	—	**(3.74)**
Net income attributable to owners of the parent per share: Diluted	—	**—**	—	**—**

Showa Denko K.K. made Hitachi Chemical Company, Ltd. a consolidated subsidiary, whose current name is Showa Denko Materials Co., Ltd. (Showa Denko Materials), and started on July 1, 2020 to incorporate Showa Denko Materials' sales figures and incomes/losses into its consolidated financial statements.

Notes

Important changes in accounting policies : not applicable

Comprehensive income :

Results for the year ended September 30,2020 ¥−63,046 million

Results for the year ended September 30,2019 ¥75,929 million

(2) Financial position:

(¥ in millions, US$ in thousands, except for stockholders' equity ratio)

	Dec.31, 2019	**Sep.30, 2020**	**Sep.30, 2020**
	¥	**¥**	**$**
Total assets	1,076,381	**2,072,016**	**19,584,270**
Total equity	519,433	**726,185**	**6,863,748**
	%	**%**	**%**
Stockholders' equity ratio	46.4	**20.2**	**20.2**

Showa Denko K.K. made Showa Denko Materials a consolidated subsidiary, considered June 30, 2020 as acquisition date, and started to incorporate Showa Denko Materials' sales figures and incomes/losses into its consolidated financial statements.

(3) Dividends:

	2019	**2020 Forecast**
Q1 dividends per share (¥)	—	**—**
Q2 dividends per share (¥)	50.00	**0.00**
Q3 dividends per share (¥)	—	**—**
End of Term dividends per share (¥)	80.00	**undecided**
Annual dividends per share (¥)	130.00	**undecided**

Ⅱ. Forecast of performance for the year ending December 31, 2020

(¥ in millions, US$ in thousands, except for net income attributable to owners of the parent per share)

	fiscal year	
	¥	$
Net sales	960,000	9,073,724
Operating income	(30,000)	(283,554)
Ordinary income	(55,000)	(519,849)
Net income attributable to owners of the parent	(90,000)	(850,662)
Net income attributable to owners of the parent per share: Basic	(616.94)	(5.83)

Showa Denko K.K. considered June 30, 2020 as the date on which it acquired Showa Denko Materials, and started to incorporate Showa Denko Materials' sales figures and incomes/losses into its consolidated financial statements. Forecast of Showa Denko K.K.'s consolidated performance for the year ending December 31,2020 includes forecast of Showa Denko Materials' sales figures and incomes/losses for the second half of 2020 (July 1 to December 31,2020).

The above forecast is based on the information available at this point of time. Actual results may differ materially due to a variety of reasons, including such economic factors as fluctuations in foreign currency exchange rates as well as market supply and demand conditions.

Note

Yen amounts have been translated into U.S.dollars for convenience only, at the rate of ¥105.80 to US$1.00, the approximate rate of exchange as of September 30, 2020.

[Business Results and Financial Conditions]
1. Analysis of consolidated business results

(1) Summary
With regard to the Japanese economy in the first three quarters of 2020 (January 1 – September 30), consumer spending deteriorated rapidly since February due to the influence of the coronavirus disease 2019 (COVID-19). Corporate earnings were greatly affected by a slowdown of the world economy caused by the pandemic of COVID-19, and there were also significant effects of a sudden slowdown in domestic consumer spending, a major reduction in export, a fast reduction in overseas production, and a sharp drop in crude-oil prices on corporate earnings. As a result, many companies showed serious deterioration in their business sentiment. As countermeasures against such an economic downturn, the major powers including Japan, the United States and the European Union are now taking stimulative monetary and fiscal policies, and there are signs of partial economic recovery. Although business environment of the Showa Denko Group hit the bottom in the second quarter, harsh economic situation and very slow recovery continues due to many unclear factors including US-China trade friction and the second wave of the spread of COVID-19 in Europe, the United States and other regions.

Taking the current situation into consideration and giving the highest priority to the preservation of safety and health of our stakeholders including customers, business acquaintances and employees, the Showa Denko Group is implementing various measures to prevent further spread of the infectious disease. To be specific, we are taking various measures to give the highest priority to keeping our employees' health and preventing the spread of COVID-19, including homeworking implemented by employees belonging to major plants, divisions and departments, and grant of special holidays. At the same time, in our production bases, we are making utmost efforts to fulfill our corporate social responsibility to continue providing our customers with products essential for infrastructural functions of society.

Medium-term business plan "The TOP 2021"
The Showa Denko Group set up its long-term vision and has been promoting its medium-term consolidated business plan "The TOP 2021" since January 2019. It is very important for the Showa Denko Group to enhance the value of the Group and satisfy all stakeholders including shareholders, customers, suppliers, local communities and employees in order that the Group continuously grows and becomes trusted and acclaimed by society. The Showa Denko Group defines this idea as the Group's business philosophy, thereby promoting management to maximize shareholders', customers' and social value.

In April 2020, the Showa Denko Group made then Hitachi Chemical Company, Ltd. a consolidated subsidiary through tender offer. World's industrial structure and competitive environment have been changing greatly, and the recent worldwide pandemic of COVID-19 will accelerate this change. In particular, it is expected that the spread of digitalization of social activities will be accelerated, including the diffusion of telework and online businesses, acceleration of introduction of factory automation to production sites, and further strengthening of cyber security. To survive as a global-top-level functional chemical manufacturer while coping with such changes in business environment, the Showa Denko Group must evolve into the "One-stop Advanced Material Partner" for our customers that provides the customers with solutions beyond materials and components.

The Group will strengthen its earning power and reduce the range of fluctuation in income through steady implementation of "The TOP 2021," enhance the value of the Group, realize

substantial business integration with Hitachi Chemical Company, Ltd. (changed its name into Showa Denko Materials Co., Ltd. on October 1, 2020) as soon as possible, and establish a stable business foundation which will continuously support the Group's growth far into the future. Now the Group is formulating a long-term vision for the future after the integration, and will have a briefing session to explain its management policy in December 2020.

The Group recorded consolidated net sales of ¥635,977 million in the first three quarters of 2020, down 8.6% from the same period of the previous year. Sales in the Showa Denko Materials segment increased due to consolidation which started at the beginning of the third quarter of 2020. However, sales in the Inorganics segment significantly decreased due to a decrease in shipment volumes and prices of graphite electrodes resulting from worldwide decrease in production of steel. The sales in the Petrochemicals segment decreased due to a drop in market prices of products resulting from a sharp fall in crude-oil prices. The sales in the Chemicals, Electronics, Aluminum, and others segments also decreased.

In the first three quarters of 2020, the Group recorded operating loss of ¥15,410 million, a significant deterioration of ¥124,723 million. In the Showa Denko Materials segment, operating income increased due to new consolidation. In the Electronics segment, operating income increased due to an increase in shipment volumes of HD media. However, the Inorganics segment recorded a sharp decrease in operating income due to a drop in book value of inventory of graphite electrodes resulting from a decline in market prices of products and application of the lower of cost or market valuation accounting method, in addition to a decrease in shipment volumes of graphite electrodes. Operating income in the Petrochemicals segment also decreased due to a negative impact of the negative spread between purchase and shipment prices of raw naphtha inventory. Operating income in the Chemicals, Aluminum, and Others segments also decreased due to a decrease in shipment volumes of products. The Group recorded ordinary loss of ¥36,776 million, a deterioration of ¥144,364 million from the same period of the previous year due not only to the recording of operating loss but also to the recording of non-operating loss of about ¥16,100 million incurred as temporary expenses pertaining to fund-raising for acquisition of shares in then Hitachi Chemical Company, Ltd.

The Group recorded net loss attributable to owners of the parent of ¥57,654 million in the first three quarters of 2020, a deterioration of ¥138,617 million from the same period of the previous year, due partly to the posting of extraordinary loss of ¥5,084 million to cover expenses related to closure of a graphite electrode plant in Germany.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	695,575	635,977	-59,598	220,081	309,357	89,276
Operating income	109,313	-15,410	-124,723	23,842	10,385	-13,457
Ordinary income	107,587	-36,776	-144,364	22,757	6,449	-16,309
Net income attributable to owners of the parent	80,963	-57,654	-138,617	15,149	-3,080	-18,229

(2) A breakdown of net sales and operating income by segment (January 1 - September 30, 2020)

[Petrochemicals segment]

In the Petrochemicals segment, sales decreased 24.8% from the year-before period, to ¥142,547 million. In our olefin business, sales decreased due to a drop in market prices of products including ethylene and propylene resulting from a fall in prices of crude oil and raw naphtha and softening supply-demand balance in East Asia in the first quarter caused by a slowdown in the Chinese economy. Sales of organic chemicals decreased due to a reduction in shipment volumes of ethyl acetate and vinyl acetate resulting from the periodic shutdown maintenance of facilities to produce these products, in addition to the effect of a drop in market prices of organic chemicals. The demand for olefin products in East Asia has been recovering since the second quarter. The Petrochemicals segment recorded an operating income of ¥1,284 million, down 90.3% from the year-before period due mainly to a remaining impact of the negative spread between purchase and shipment prices of raw naphtha inventory caused by a fall in raw naphtha price.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	189,578	142,547	-47,031	62,098	46,803	-15,295
Operating income	13,279	1,284	-11,995	4,814	4,950	137

[Chemicals segment]

In the Chemicals segment, sales decreased 2.2% from the year-before period, to ¥113,015 million. Sales of electronic chemicals increased due to an increase in shipment volumes resulting from a recovery of semiconductor industry's production. Sales of coating materials, which was newly consolidated in the second half of 2019, also increased. However, sales of basic chemicals decreased. Sales of liquefied ammonia and acrylonitrile decreased due to a decrease in shipment volumes caused by a decline in domestic demand resulting from the spread of COVID-19. Sales of chloroprene rubber decreased due to a decline in the amount of export. Sales of functional chemicals decreased due mainly to a fall in sales volumes in Japan and China. Sales of industrial gases decreased due to a decline in shipment volumes for use in production of beverages. Operating income of the segment decreased 2.0% from the year-before period, to ¥9,324 million.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	115,577	113,015	-2,562	42,052	40,974	-1,078
Operating income	9,514	9,324	-190	3,992	4,304	312

[Electronics segment]

In the Electronics segment, sales decreased 1.9% from the year-before period, to ¥68,721 million. Sales of lithium-ion battery (LIB) materials increased due to an increase in shipment volumes of Showa Denko Packaging's aluminum laminate film (*SPALF*™) used as packaging materials for LIBs. Sales of compound semiconductors increased due to an increase in export. Sales of HD media decreased due to a decrease in shipment volumes of media for PCs, despite an increase in shipment volumes of media for use in data centers. As for SiC epitaxial wafer business, sales decreased due mainly to a decrease in export, despite steady shipment volumes in Japan mainly for use in railcars. Operating income of the segment increased 61.1% from the year-before period, to ¥4,802 million.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	70,020	68,721	-1,299	25,432	24,147	-1,285
Operating income	2,981	4,802	1,820	2,034	3,034	1,000

[Inorganics segment]
In the Inorganics segment, sales decreased 67.7% from the year-before period, to ¥61,315 million. Sales of graphite electrodes significantly decreased due to a further reduction in the Company's production and sales volumes of graphite electrodes aiming to respond to the weakening supply-demand situation of graphite electrodes in the market resulting from a global slowdown in steel production and partial-clearance of our customers' graphite-electrode inventory. Sales of ceramics decreased due to a fall in sales volumes of abrasives and other products resulting from a decrease in production of automobiles and steel. Operating income of the segment recorded a decrease due to a drop in book value of inventory of graphite electrodes resulting from a decline in market prices of products and application of the lower of cost or market valuation accounting method. As a result, the segment recorded operating loss of ¥26,210 million, a deterioration of ¥111,113 million from the year-before period.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	190,119	61,315	-128,804	47,406	18,310	-29,096
Operating income	84,902	-26,210	-111,113	13,066	-3,305	-16,371

[Aluminum segment]
In the Aluminum segment, sales decreased 20.7% from the year-before period, to ¥58,438 million. Sales of rolled products decreased due to a decline in shipment volumes of high-purity aluminum foil for capacitors resulting from adjustment of production in customer industries for capacitors including the industrial equipment industry and the onboard equipment industry. Sales of aluminum specialty components decreased due mainly to a decline in sales volumes of those for use in the car industry resulting from a reduction in production of cars worldwide and those for use in office automation equipment and machine tools. Sales of aluminum cans decreased due to a reduction in the Group's domestic production capacity and, in the Vietnamese market, a significant fall in production of beer resulting from outing restrictions as a countermeasure against COVID-19. The segment recorded operating loss of ¥277 million, a deterioration of ¥1,701 million from the year-before period.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	73,698	58,438	-15,261	24,681	19,590	-5,091
Operating income	1,424	-277	-1,701	944	-72	-1,016

[Showa Denko Materials segment]
We started to consolidate Showa Denko Materials Co., Ltd. and its subsidiaries in the second quarter of 2020, and therefore, we created a new segment for reporting, and started to incorporate sales figures and operating income of the new segment into SDK's consolidated financial statements at the beginning of this third quarter. The Showa Denko Materials segment recorded net sales of ¥144,840 million in the third quarter. Sales of

electronic materials including abrasives for chemical mechanical planarization of the surface of semiconductor chips (CMP slurry) and materials for circuit boards including copper clad laminates remained strong. However, sales of mobility components including molded resins and carbon anode materials for lithium ion batteries (LIBs) remained sluggish. As a result, the segment recorded operating income of ¥2,788 million. Operating income of this segment includes depreciation of the goodwill of the former Hitachi Chemical amounting to about ¥6,000 million. This goodwill was posted as a result of acquisition of shares in former Hitachi Chemical.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	–	144,840	144,840	–	144,840	144,840
Operating income	–	2,788	2,788	–	2,788	2,788

[Others segment]
In the Others segment, sales decreased 16.5% from the year-before period, to ¥80,045 million. SHOKO CO., LTD.'s sales decreased due to a fall in market prices of products and reduced demand. Operating income of the segment decreased 34.2%, to ¥617 million.

(Unit: millions of yen)

	2019 1Q - 3Q (Jan.-Sept.)	2020 1Q – 3Q (Jan.-Sept.)	Increase/ decrease	2019 July-Sept.	2020 July-Sept.	Increase/ decrease
Sales	95,830	80,045	-15,785	31,527	24,485	-7,042
Operating income	937	617	-321	325	135	-190

(3) Major steps taken or decided after the settlement of accounts for the first half of 2020
[General]

- Hitachi Chemical changed firm name

  Hitachi Chemical Company, Ltd., a consolidated subsidiary of SDK, changed its firm name into Showa Denko Materials Co., Ltd. (SDMC) on October 1. 2020. We chose the new firm name because SDMC started its new history as a consolidated subsidiary of SDK, and now SDK and SDMC share the idea of offering their customers and society optimum solutions which can be realized through fusion of the Showa Denko Group's wide ranging material technologies and SDMC's material design technologies utilizing characteristics of raw materials, ability to evaluate functions leading to process technology, including module segmentation.

- Joined "The Valuable 500"

  In September 2020, SDK signed a document to declare joining "The Valuable 500," an international initiative to promote inclusion of persons with disabilities, because the Company endorsed the aim and activities of the initiative. The Valuable 500 was launched to promote inclusion of persons with disabilities under an idea that "inclusive business creates inclusive society." The Valuable 500 aims to encourage business leaders to make their own companies' businesses inclusive ones in order to let persons with disabilities demonstrate their potential to add value to businesses, society and economy. The Showa Denko Group will promote diversity and inclusion, aiming to let all employees shine in the company as a stage, regardless of whether each employee has been disabled or not. We will act to move people's heart and society, and provide the world with surprises and excitements.

1. Under the slogan that “We change unique personality into power” which aims to promote inclusion of persons with disabilities, the Showa Denko Group will promote establishment of inclusive workplaces where each employee, whether with or without disabilities or medical conditions, can feel peace of mind and show what everybody can do.

2. We will provide differently abled employees with environment and opportunities that enable them to show what they can do, career vision that fit to their personalities, and support to realize these.

3. We will promote employment of persons with disabilities (inclusion of persons with disabilities) with specific targets.

With this signing as motivation, the Showa Denko Group will start an in-house campaign named “Uniqueness Supporter 500.” In this campaign, we will call for 500 or more employees who voluntarily support the idea to establish inclusive workplaces.

- Merger between consolidated subsidiaries and change of company name

SDK decided at its Board of Directors meeting held on September 24, 2020 that its consolidated subsidiary Showa Denko Carbon Holding GmbH (SDCH) will merge with its consolidated subsidiary Showa Denko Europe GmbH (SDE), and that the surviving company SDCH will change its company name into Showa Denko Europe GmbH (new SDE) effective as of January 1, 2021. This time, SDK decided to merge these two companies for the purpose of expanding its business operation in Europe further by fusing SDCH’s business management function and SDE’s business support function into one. In order to clarify its business management function in Europe, SDCH will change its company name into “Showa Denko Europe GmbH” at the same date of the merger.

[Chemicals segment]

- Got a license to process industrial waste, aiming to promote plastic chemical recycling

In July 2020, SDK obtained a license to process industrial waste, and started to accept used plastics which were crushed and molded. Since 2003, SDK’s Kawasaki Plant has been operating “plastic chemical recycling business,” a business to recycle used plastics as raw materials for chemicals under the provisions of Containers and Packaging Recycling Law. We gasify used plastics under high temperature, and decompose them to the level of molecules. Then gasified plastics are converted into hydrogen (low-carbon hydrogen) and carbon dioxide (CO_2). We use low-carbon hydrogen as raw material to produce ammonia, and CO_2 as raw material to produce dry ice and carbonated drinks. This acquisition of the license to process industrial waste enables SDK to diversify sources of used plastics. Thus, SDK has established a used-plastics procurement system that supports stable operation of our plastic chemical recycling business. SDK has been promoting businesses that support resources-recycling oriented society, aiming to contribute to solution of issues related to SDGs. Through provision of various products and services, we will continue contributing to creation of society where affluence and sustainability are harmonized.

[Inorganics segment]

- Developed highly wet-resistant, highly heat-conductive aluminum nitride filler

SDK developed highly wet-resistant, highly heat-conductive aluminum nitride filler to be used as heat-radiation filler for semiconductor devices, and started to offer samples of the aluminum nitride filler in July 2020. In accordance with the development of more powerful

semiconductor devices, heat generated in semiconductor devices continues to increase. On the other hand, accumulated heat may have harmful effects including a decline in efficiency, reliability and safety not only on semiconductor devices themselves but also on electronic devices in which those semiconductor devices are installed. Thus, it is very important for electronic device manufacturers to remove generated heat quickly in order to avoid these harmful effects of accumulated heat. Aluminum nitride has excellent properties including high insulation against electricity, almost the same coefficient of thermal expansion as that of silicon, and corrosion resistance against chlorinated gases which are used in the process to produce semiconductors. Aluminum nitride also has thermal conductivity higher than those of other materials for fillers such as alumina and boron nitride. However, if moisture sticks to the surface of aluminum nitride, aluminum nitride starts to hydrolyze, and corrosive ammonia is produced. It is a weakness of aluminum nitride. This time, however, SDK successfully developed a technology to treat the surface of aluminum nitride with ultra-thin film which drastically reduces the amount of corrosive ammonia produced as hydrolysate of the material to ten-thousandth of that of aluminum nitride without the surface treatment. This surface treatment does not reduce thermal conductivity of aluminum nitride filler injected into resins. Through offer of samples, we will develop a new market for this aluminum nitride filler, and plans to start mass production of the filler in 2023. Through offer of best solutions, SDK will respond to the demands of customers in the semiconductor device industry which is expected to continue showing rapid growth in accordance with the development of new technologies including 5G mobile communication technology and CASE (Connected, Autonomous/ Automated, Shared, and Electric) related technologies in the automotive industry.

[Aluminum segment]

- Showa Aluminum Can had a ceremony to celebrate the compilation of the third production base in Vietnam

In July 2020, Showa Aluminum Can Corporation (SAC), a consolidated subsidiary of SDK, started operation of its third base in Vietnam to produce aluminum cans. This new production base (Ba Ria-Vung Tau Factory) is in Ba Ria-Vung Tau Province, which is in the southern part of Vietnam. Ba Ria-Vung Tau Factory is the third production base of Hanacans Joint Stock Company (Hanacans), which is a consolidated Vietnamese subsidiary of SAC, and has production lines with a capacity to produce 1.3 billion can bodies per year. In addition to the construction of Ba Ria-Vung Tau Factory, Hanacans is now installing an additional line to produce can ends in its Bac Ninh Factory located in Bac Ninh Province, which is in the suburb of Hanoi. SAC acquired shares in Hanacans in May 2014, and continues to have Hanacans introduce SAC's leading production technologies and quality control system since then. Hanacans has been successfully increasing the sales of aluminum cans in northern and central parts of Vietnam. As a result of the completion of Ba Ria-Vung Tau Factory, Hanacans has established an aluminum can production system with three production bases that covers northern, central, and southern parts of Vietnam. Now Hanacans has a capacity to produce 3.3 billion can bodies and 3.3 billion can ends per year. In Vietnam which extends north and south, the Showa Denko Group will make the most of its aluminum can production system that can quickly respond to the demand of the market. Thus, the Showa Denko Group will establish a KOSEIHA Business in the rapidly growing Vietnamese market.

[Showa Denko Materials segment]

- Showa Denko Materials launched mass production of 5G-compatible printed wiring board material "MCL-HS200" with low transmission loss and low warpage properties

Showa Denko Materials Co., Ltd. (SDMC) launched mass production of "MCL-HS200," an advanced functional laminate material for printed wiring boards, with low transmission loss

and low warpage properties required for semiconductor packaging substrates used in such fields as fifth-generation mobile communications systems (5G), advanced driver-assistance systems (ADAS)[*1], and artificial intelligence (AI) in March. With technological innovations like the Internet of Things (IoT) for electronics-related products, ADAS, and AI making strides in recent years, 5G networks providing high speed, high capacity, low latency, and multiple connections have become indispensable for the widespread use of these technologies. Demand for 5G is also rising as people around the world spend more time working remotely amid the coronavirus pandemic. Applications such as 5G and ADAS require higher frequency bands than electric signals used by fourth-generation mobile communications systems (4G), but with electric signals suffering significant attenuation (transmission loss) at higher frequencies, lower transmission loss is required for high frequency circuit boards. Reducing signal delay is also an important requirement. Furthermore, as devices mounted on smartphones, etc. become smaller and more functionally sophisticated, demand is growing for thinner circuit boards that also minimize warpage caused by semiconductor packaging. However, creating a material capable of not only reducing transmission loss and signal delay but also minimizing warpage presented a difficult challenge. By applying low polarity resin materials and low dielectric glass cloth, SDMC achieved lower transmission loss properties (low dielectric loss tangent) and lower dielectric constant[*2], reducing signal delay. In addition, SDMC attained superior low warpage properties required for thinner modules by using low coefficient of thermal expansion (CTE) resins and increasing the filler content. SDMC combined its low CTE technology for semiconductor packaging substrates and low dielectric constant technology for multilayer substrate materials designed for high-speed communications, which successfully developed a material with high-dimensional properties of low CTE 10 ppm/℃ and low dielectric constant (Dk) 3.4 (10 GHz). SDMC is currently pursuing the development of even thinner and lower dielectric constant materials. SDMC will continue to contribute to more advanced functional printed wiring boards through our superior technologies and new product development.

*1: Advanced driver-assistance systems (ADAS) are systems to prevent accidents by detecting the vehicle's surroundings through sensors mounted on its front, sides and rear.

*2: Dielectric constant is the value representing the degree of electronic polarization of a substance in an electric field that exerts force on a charged object, expressed as the ratio of the dielectric constants of two substances.

2. Consolidated financial conditions as of September 30, 2020

Total assets at September 30, 2020 amounted to ¥2,072,016 million, an increase of ¥995,634 million from the level at December 31, 2019. Total assets increased due mainly to an increase in cash and deposits, notes and accounts receivable-trade, inventories, tangible fixed assets, and goodwill resulting from consolidation of Showa Denko Materials Co., Ltd. and its subsidiaries. Total liabilities increased ¥788,883 million, to ¥1,345,831 million, due mainly to an increase in notes and accounts payable-trade, and an increase in interest-bearing debts resulting from acquisition of shares in Showa Denko Materials. Interest-bearing debts increased ¥694,463 million, to ¥997,655 million. Net assets increased ¥206,752 million from the level at December 31, 2019, to ¥726,185 million, due mainly to an increase in non-controlling interests resulting from the issuance of preferred stock to be allocated to non-controlling shareholders following the acquisition of shares in Showa Denko Materials, despite a decrease in retained earnings resulting from the posting of net loss attributable to owners of the parent and payment of dividends for the previous year.

Note: We started to include lease liabilities in interest-bearing debts in this third quarter, and retrospectively adjusted the balance of interest bearing debts as of the end of 2019 in the same way. SDK made former Hitachi Chemical Company, Ltd. a consolidated subsidiary through tender offer, considered June 30, 2020 as acquisition date, and consolidated former Hitachi Chemical's financial

results into SDK's consolidated financial statements. For the impact of this consolidation on SDK's consolidated balance sheet, please refer to SDK's consolidated financial statements for the first half of 2020.

3. Consolidated performance forecast

The consolidated performance forecast for full year 2020 we announced on August 12, 2020 remains unchanged.

(Unit: millions of yen)

	Net sales	Operating income	Ordinary income	Net income attributable to owners of the parent
Forecast of results for full-year 2020	960,000	-30,000	-55,000	-90,000

Consolidated Balance Sheets

(¥ in millions, US$ in thousands)

	Dec. 31, 2019	Sep. 30, 2020	Sep. 30, 2020
Assets	¥	¥	$
Current assets			
Cash and deposits	122,086	184,841	1,747,077
Notes and accounts receivable-trade	170,293	265,964	2,513,841
Merchandise and finished goods	70,140	109,101	1,031,203
Work in process	30,979	27,797	262,733
Raw materials and supplies	72,548	80,310	759,078
Other	31,765	57,774	546,068
Allowance for doubtful accounts	(754)	(1,617)	(15,281)
Total current assets	497,057	724,171	6,844,718
Noncurrent assets			
Property, plant and equipment			
Buildings and structures, net	77,123	145,345	1,373,772
Machinery, equipment and vehicles, net	140,349	224,108	2,118,219
Land	223,997	248,008	2,344,117
Other, net	31,700	96,995	916,779
Total property, plant and equipment	473,168	714,455	6,752,887
Intangible assets			
Goodwill	3,346	476,434	4,503,158
Other	19,304	30,545	288,701
Total intangible assets	22,650	506,979	4,791,859
Investments and other assets			
Investment securities	71,786	75,531	713,906
Other	19,846	58,932	557,009
Allowance for doubtful accounts	(8,125)	(8,052)	(76,109)
Total investments and other assets	83,506	126,410	1,194,805
Total noncurrent assets	579,325	1,347,845	12,739,552
Total assets	1,076,381	2,072,016	19,584,270
Liabilities			
Current liabilities			
Notes and accounts payable-trade	117,510	145,184	1,372,247
Short-term loans payable	52,720	76,358	721,720
Current portion of long-term loans payable	31,943	25,344	239,543
Commercial papers	—	44,000	415,879
Current portion of bonds	—	15,000	141,777
Provision	5,379	19,933	188,398
Other	55,323	92,965	878,688
Total current liabilities	262,875	418,783	3,958,251
Noncurrent liabilities			
Bonds payable	62,000	76,926	727,089
Long-term loans payable	151,861	734,788	6,945,065
Provision	3,045	3,465	32,747
Net defined benefit liability	9,969	25,477	240,803
Other	67,199	86,393	816,568
Total noncurrent liabilities	294,074	927,048	8,762,271
Total liabilities	556,949	1,345,831	12,720,522
Net assets			
Shareholders' equity			
Capital stock	140,564	140,564	1,328,578
Capital surplus	78,912	78,586	742,775
Retained earnings	249,246	180,386	1,704,970
Treasury stock	(11,664)	(11,656)	(110,169)
Total shareholders' equity	457,057	387,879	3,666,153
Accumulated other comprehensive income			
Valuation difference on available-for-sale securities	9,789	4,259	40,258
Deferred gains or losses on hedges	433	235	2,219
Revaluation reserve for land	33,060	32,848	310,468
Foreign currency translation adjustment	4,140	(1,979)	(18,705)
Remeasurements of defined benefit plans	(5,114)	(4,991)	(47,172)
Total accumulated other comprehensive income	42,309	30,372	287,068
Non-controlling interests	20,067	307,934	2,910,526
Total net assets	519,433	726,185	6,863,748
Total liabilities and net assets	1,076,381	2,072,016	19,584,270

Consolidated Statements of Income

(¥ in millions, US$ in thousands)

	Results for the first three quarters (Jan.1-Sep.30)		
	2019	2020	2020
	¥	¥	$
Net sales	695,575	635,977	6,011,128
Cost of sales	502,653	538,670	5,091,397
Gross profit	192,922	97,307	919,730
Selling, general and administrative expenses	83,609	112,717	1,065,382
Operating income (loss)	109,313	(15,410)	(145,652)
Non-operating income			
Interest income	825	599	5,658
Dividends income	987	895	8,457
Equity in earnings of affiliates	228	1,026	9,697
Rent income on noncurrent assets	1,017	1,120	10,583
Miscellaneous income	734	1,954	18,465
Total non-operating income	3,792	5,593	52,861
Non-operating expenses			
Interest expenses	1,761	4,191	39,615
Financing expenses	—	16,075	151,938
Miscellaneous expenses	3,757	6,692	63,256
Total non-operating expenses	5,517	26,959	254,809
Ordinary income (loss)	107,587	(36,776)	(347,600)
Extraordinary income			
Gain on sales of noncurrent assets	653	1,691	15,985
Other	1,500	798	7,547
Total extraordinary income	2,154	2,490	23,532
Extraordinary loss			
Loss on sales and retirement of noncurrent assets	1,939	2,231	21,085
Business structuring expenses	—	5,652	53,424
Other	2,345	4,258	40,248
Total extraordinary losses	4,284	12,141	114,757
Profit (loss) before income taxes	105,457	(46,428)	(438,825)
Income taxes	22,173	4,139	39,123
Net income (loss)	83,285	(50,567)	(477,948)
Net income attributable to non-controlling interests	2,322	7,088	66,990
Net income (loss) attributable to owners of the parent	80,963	(57,654)	(544,938)

Consolidated Statements of Comprehensive Income

(¥ in millions, US$ in thousands)

	Results for the first three quarters (Jan.1-Sep.30)		
	2019	2020	2020
	¥	¥	$
Net income (loss)	83,285	(50,567)	(477,948)
Other comprehensive income:			
Valuation difference on available-for-sale securities	1,642	(5,566)	(52,611)
Deferred gains or losses on hedges	(945)	(199)	(1,877)
Foreign currency translation adjustments	(9,391)	(6,804)	(64,314)
Remeasurements of defined benefit plans, net of tax	1,452	135	1,273
Share of other comprehensive income of entities accounted for using equity method	(114)	(45)	(421)
Total other comprehensive income	(7,355)	(12,479)	(117,951)
Comprehensive income	75,929	(63,046)	(595,898)
(Comprehensive income attributable to)			
Comprehensive income attributable to owners of the parent	73,988	(69,379)	(655,753)
Comprehensive income attributable to non-controlling interests	1,941	6,333	59,855

(Reference)

SEGMENT INFORMATION

Information about sales and operating income :

9 Months ended September 30, 2019	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Consolidated
Sales								
Outside customers	¥182,026	¥102,574	¥69,503	¥184,516	¥68,269	¥88,687	¥–	¥695,575
Inter-segment	7,552	13,003	517	5,603	5,429	7,143	(39,247)	–
Total	189,578	115,577	70,020	190,119	73,698	95,830	(39,247)	695,575
Operating income (loss)	¥13,279	¥9,514	¥2,981	¥84,902	¥1,424	¥937	(¥3,725)	¥109,313

9 Months ended September 30, 2020	Millions of yen								
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Showa Denko Materials	Others	Elimination	Consolidated
Sales									
Outside customers	**¥136,316**	**¥101,343**	**¥67,876**	**¥57,017**	**¥53,685**	**¥144,837**	**¥74,905**	**¥–**	**¥635,977**
Inter-segment	**6,231**	**11,673**	**845**	**4,298**	**4,753**	**3**	**5,141**	**(32,943)**	**–**
Total	**142,547**	**113,015**	**68,721**	**61,315**	**58,438**	**144,840**	**80,045**	**(32,943)**	**635,977**
Operating income (loss)	**¥1,284**	**¥9,324**	**¥4,802**	**(¥26,210)**	**(¥277)**	**¥2,788**	**¥617**	**(¥7,736)**	**(¥15,410)**

9 Months ended September 30, 2020	Thousands of U.S. dollars								
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Showa Denko Materials	Others	Elimination	Consolidated
Sales									
Outside customers	**$1,288,426**	**$957,872**	**$641,548**	**$538,910**	**$507,417**	**$1,368,970**	**$707,985**	**$–**	**$6,011,128**
Inter-segment	**58,894**	**110,327**	**7,987**	**40,624**	**44,924**	**28**	**48,589**	**(311,373)**	**–**
Total	**1,347,321**	**1,068,199**	**649,535**	**579,533**	**552,342**	**1,368,998**	**756,574**	**(311,373)**	**6,011,128**
Operating income (loss)	**$12,134**	**$88,131**	**$45,385**	**($247,736)**	**($2,622)**	**$26,347**	**$5,828**	**($73,119)**	**($145,652)**

SHOWA DENKO K.K.

November 5, 2020

Third Quarter, 2020 Consolidated Financial Results (Summary)

1. Third Quarter Results 2020

(1) Summary

(Unit: billions of yen)

Items	2019 Jan.1 - Sept.30	2020 Jan.1 - Sept.30	Increase/ decrease	2020 Forecast *
Net Sales	695.6	636.0	-59.6	960.0
Operating Income	109.3	-15.4	-124.7	-30.0
Net income attributable to owners of the parent	81.0	-57.7	-138.6	-90.0

*Forecast revised on Aug. 12, 2020.

Showa Denko K.K. made Hitachi Chemical Company, Ltd. a consolidated subsidiary, whose current name is Showa Denko Materials Co., Ltd. (Showa Denko Materials), and started on July 1, 2020 to incorporate Showa Denko Materials' sales figures and incomes/losses into its consolidated financial statements.

(2) Net Sales and Operating Income by Segment

(Unit: billions of yen)

Segment		2019 Jan.1 - Sept.30	2020 Jan.1 - Sept.30	Increase/ decrease	2020 Forecast *
Petrochemicals	Net Sales	189.6	142.5	-47.0	186.0
	Op. Income	13.3	1.3	-12.0	1.0
Chemicals	Net Sales	115.6	113.0	-2.6	155.0
	Op. Income	9.5	9.3	-0.2	13.0
Electronics	Net Sales	70.0	68.7	-1.3	100.0
	Op. Income	3.0	4.8	1.8	9.0
Inorganics	Net Sales	190.1	61.3	-128.8	91.0
	Op. Income	84.9	-26.2	-111.1	-23.0
Aluminum	Net Sales	73.7	58.4	-15.3	85.0
	Op. Income	1.4	-0.3	-1.7	1.5
Showa Denko Materials	Net Sales	-	144.8	144.8	280.0
	Op. Income	-	2.8	2.8	-20.0
Others	Net Sales	95.8	80.0	-15.8	109.0
	Op. Income	0.9	0.6	-0.3	1.0
Adjustments	Net Sales	-39.2	-32.9	6.3	-46.0
	Op. Income	-3.7	-7.7	-4.0	-12.5
Total	Net Sales	695.6	636.0	-59.6	960.0
	Op. Income	109.3	-15.4	-124.7	-30.0

(Unit: billions of yen)

Segment		2020 CQ1 Jan.1 - Mar.31	2020 CQ2 Apr.1 - Jun.30	2020 CQ3 Jul.1 - Sept.30
Petrochemicals	Net Sales	55.0	40.7	46.8
	Op. Income	-0.2	-3.5	5.0
Chemicals	Net Sales	36.3	35.7	41.0
	Op. Income	2.3	2.7	4.3
Electronics	Net Sales	23.6	21.0	24.1
	Op. Income	1.0	0.8	3.0
Inorganics	Net Sales	21.4	21.6	18.3
	Op. Income	0.8	-23.8	-3.3
Aluminum	Net Sales	19.2	19.7	19.6
	Op. Income	0.0	-0.3	-0.1
Showa Denko Materials	Net Sales	-	-	144.8
	Op. Income	-	-	2.8
Others	Net Sales	28.6	27.0	24.5
	Op. Income	0.2	0.3	0.1
Adjustments	Net Sales	-12.3	-10.8	-9.8
	Op. Income	-1.7	-4.6	-1.4
Total	Net Sales	171.7	154.9	309.4
	Op. Income	2.5	-28.3	10.4

Showa Denko K.K. started on July 1, 2020 to incorporate Showa Denko Materials' sales figures and incomes/losses into its financial statements as "Showa Denko Materials segment."

2. Cash dividends

Items	2019	2020 Forecast
Cash dividends per share (yen)	130.0	undecided

3. Reference

Items	2019 Jan.1 - Sept.30	2020 Jan.1 - Sept.30	Increase/ decrease
Exchange rate (yen/US$)	109.2	107.6	Yen appreciated by 1.6
Domestic naphtha price (yen/kl)	42,250	33,350	-8,900

(Unit: billions of yen)

Items	Dec. 31, 2019	Sept. 30, 2020	Increase/ decrease
Total assets	1,076.4	2,072.0	995.6
Interest-bearing debt	303.2	997.7	694.5

Showa Denko K.K. made Showa Denko Materials a consolidated subsidiary, considered June 30, 2020 as acquisition date, and started to incorporate Showa Denko Materials' financial results into its financial statements.
Showa Denko K.K. started to include leasing liabilities in interest-bearing debts in this third quarter, and retrospectively adjusted the balance of interest-bearing debts as of the end of 2019 in the same way.

Note : The above forecast is based on the information available as of today and assumptions as of today regarding risk factors that could affect our future performance. Actual results may differ materially from the forecast due to a variety of risk factors, including, but not limited to, the influence of the coronavirus disease 2019 (COVID-19) on the world economy, the economic conditions, costs of naphtha and other raw materials, demand or market conditions for our products such as graphite electrodes and other commodities, and foreign exchange rates. We undertake no obligation to update the forward-looking statements unless required by law.