

**MEC CO., LTD (4971 JP)**

FULL RECOVERY IN PCS AND SERVERS THAT AFFECT CZ-8101 WILL LIKELY BE AFTER FY24 2H, LATER THAN PREVIOUSLY ASSUMED

**FY23 Q3 RESULTS SUMMARY**

MEC (4971 JP) reported FY23 Q3 (Dec year-end) earnings with OP of ¥1,671mil (-46.4% YoY) on sales of ¥9,981mil (-19.3% YoY). Cumulative Q1~Q3 sales exceeded the firm's budget on the back of peak out of inventory adjustments.

Budgeted expenses – for travel and subsistence, and distribution – were not spent, so better than expected profits were recorded.

<b>Earnings Summary (Cumulative)</b>								
Dec year-end (¥mil)	FY22		FY23					
	Q3	FY	Q1	1H	Q3	YoY (%)	FY CE	YoY (%)
Sales	12,364	16,329	2,765	6,198	9,981	-19.3	13,800	-15.5
incl. Chemicals	12,214	16,042	2,712	6,085	9,834	-19.5	NA	NA
GP	7,414	9,803	1,583	3,646	5,886	-20.6	NA	NA
GPM (%)	60.0	60.0	57.3	58.8	59.0	-1.0ppt	NA	NA
SG&A	4,295	5,799	1,414	2,807	4,214	-1.9	NA	NA
SG&A/Sales (%)	34.7	35.5	51.2	45.3	42.2	+7.5ppt	NA	NA
OP	3,118	4,004	168	838	1,671	-46.4	2,250	-43.8
OPM (%)	25.2	24.5	6.1	13.5	16.7	-8.5ppt	16.3	-8.2ppt
RP	3,438	4,246	223	1,003	1,878	-45.4	2,500	-41.1
RPM (%)	27.8	26.0	8.1	16.2	18.8	-9.0ppt	18.1	-7.9ppt
NP	2,382	3,064	82	1,076	1,707	-28.4	2,150	-29.8
EPS (¥)	125.35	161.22	4.32	56.79	90.39	-27.9	114.07	-29.2
DPS (¥)	NA	45.00	NA	20.00	NA	NA	45.00	0.0

Source: Nippon-IBR based on MEC's results presentation material

FY23 Q3 Chemical segment sales, which constitutes nearly 98.5% of the firm's total revenue, fell -19.5% YoY to ¥9,834mil (Q1 sales of ¥2,712mil / Q2 sales of ¥3,372mil / Q3 sales of ¥3,749mil): Adhesive Enhancer chemical sales declined -21.3% YoY to ¥6,813mil primarily with adjustments in sales of CZ series.

In the Q3 alone, MEC recorded Adhesive Enhancer sales of ¥2,608mil (-15.1% YoY / +11.7% QoQ). Cumulative Q1~Q3 Etching Chemicals sales also declined -17.3% YoY to ¥2,436mil due to the expected slump in sales of SF (-37.7% YoY). However, sales of Etching Chemicals showed signs of recovery with a gain of +2.2% YoY / +14.0% QoQ to ¥928mil, thanks to a pickup in sales of EXE to ¥312mil (+66.8% YoY / -2.2% QoQ) as display production is recovering.

FY23 Q1~Q3 Chemical segment gross profit margin [GPM] contracted -0.9ppt YoY to 59.6% on the back of drop in sales volume, which reduced segment OP by -¥1,969mil.

**EXECUTIVE SUMMARY**

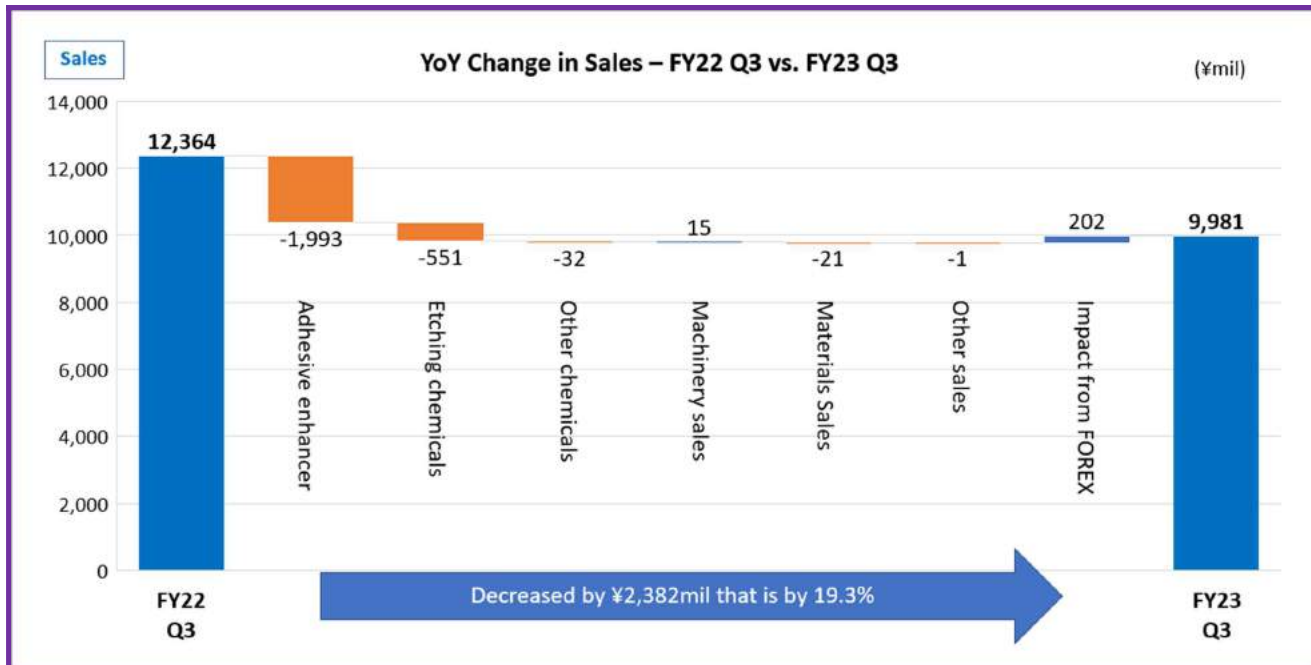
- MEC (4971 JP) reported FY23 Q3 (Dec year-end) OP of ¥1,671mil (-46.4% YoY) on sales of ¥9,981mil (-19.3% YoY). Cumulative Q1~Q3 sales of Adhesive Enhancer and Etching Chemicals both exceeded MEC's budget as inventory adjustments have peaked. The upward revision to FY23 OP was primarily because budgeted expenses were not spent in FY23.
- FY23 Q3 Chemical segment sales, which constitutes nearly 98.5% of MEC's total revenue, fell -19.5% YoY to ¥9,834mil (Q1 sales of ¥2,712mil / Q2 sales of ¥3,372mil / Q3 sales of ¥3,749mil): both Adhesive Enhancer Chemicals and Etching Chemicals showed signs of a recovery in the Q3, thanks to the peak out of inventory adjustment.
- Amid better-than-expected earnings for the nine-month period, MEC revised its full year FY23 guidance from an OP of ¥1,800mil (-55.1% YoY) on sales of ¥13,500mil (-17.3% YoY) to an OP of ¥2,250mil (-43.8% YoY) on sales of ¥13,800mil (-15.5% YoY).
- Management had previously expected end markets, such as PCs and servers, to recover from FY23 2H. However, although Q3 sales showed signs of a recovery as inventory adjustments were completed, a full-fledged rebound in PC and server markets will likely be after FY24 2H.
- However, since the revision of profit is primarily due to unspent budgets, the annual dividend of ¥45.00/share remains unchanged.

There was a positive impact of +¥307mil from the improvement in GPM of chemicals to FY23 Q1~Q3 OP, thanks to 1) an improved sales mix reflecting the recovery in EXE sales, and 2) price hikes of CZ series implemented in FY22.

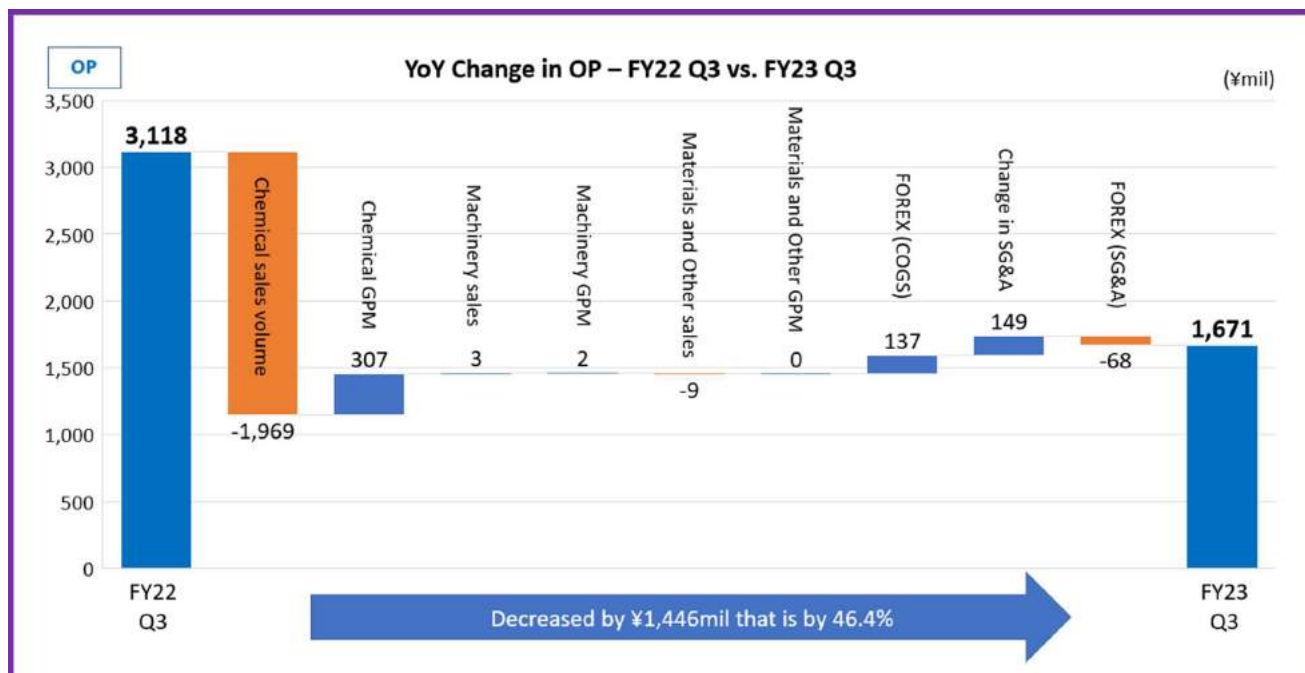
Regarding the performance of CZ-8101 – MEC’s core adhesion enhancing chemical product – sales bottomed in Q1. Sales in Korea, which is included in Japan sales [NB: MEC doesn’t have a factory in Korea, so it exports to distributors there] are improving as inventory adjustments in Korea have run their course. The recovery in sales to Korea, therefore, is apparent in the Japan QoQ performance:

Although FY23 Q1~Q3 Japan OP fell -67.2% YoY to ¥678mil on sales of ¥3,898mil (-20.4% YoY), in Q3 alone, OP was ¥433mil (-36.7% YoY / +45.8% QoQ) – moving into the black in Q2 from Q1’s ¥52mil loss – on sales of ¥1,474mil (-9.9% YoY / +7.2% QoQ).

Although the inventory adjustment at MEC’s customers and distributors in Korea seems to have run its course, demand for CZ-8101 remained weak, as an end application, demand for end applications such as PCs and servers still remains lacklustre. Meanwhile, demand for some high-performance servers has gradually started to recover, though it was not enough to lead the growth of CZ-8101 sales afresh. Earnings in Taiwan showed the similar trend as in Japan, given sluggish demand for PCs and servers affecting demand for packages. In Q1~Q3, the Taiwan segment reported OP of ¥185mil (-47.6% YoY) on sales of ¥1,917mil (-27.6% YoY).



Source: MEC Co., Ltd. FY23 Q3 earnings results presentation



Source: MEC Co., Ltd. FY23 Q3 earnings results presentation

## SEGMENTS PERFORMANCE

### Adhesive Enhancers

FY23 Q1~Q3 Adhesive Enhancer sales (-21.3 % YoY to ¥6,813mil) declined, as did CZ series sales (-22.8% YoY to ¥6,020mil). Quarterly sales of CZ series, however, appear to have bottomed in Q1, which saw sales of ¥1,638mil -31.8% YoY / -34.9% QoQ, as evidenced by the Q2 performance (¥2,071mil -20.6% YoY / +26.4% QoQ), followed by Q3 CZ series sales of ¥2,311mil (-17.0% YoY / +11.6% QoQ).

MEC's core product in this product group, CZ-8101 – an adhesive-enhancing chemical used in packages primarily for PCs, servers and chiplet packaging – which had enjoyed sales growth in FY22, also started trending down in FY23 Q1 to ¥883mil (-30.8% YoY / -30.8% QoQ). However, in Q2 alone, sales recovered ¥1,080mil (-23.4% YoY / +22.3% QoQ), then further increased to ¥1,229mil (-16.1% YoY / +13.8% QoQ), thanks to 1) inventory adjustments at customers and distributors being cleared, 2) recovery in demand for memory, and 3) the impact of price hikes implemented in FY22.

During FY21~FY22, the main growth driver behind the strong CZ-8101 sales was the rising demand for packages used in servers and base stations, bolstered by the increase in data transmission as the penetration of 5G communication progresses. However, although MEC's CZ-8101 sales were strong up to FY22 Q3, demand turned down in the Q4 due to (1) production adjustments in packages as demand for PCs and smartphones waned, and (2) a temporary adjustment in demand for servers. In FY23 Q1~Q3, demand still remains weak given the lacklustre demand for PCs and a slow recovery in demand for servers, although CZ-8101 sales started to show signs of a recovery from Q2 onwards.

The cumulative nine-month performance of Other CZ chemicals sales, which includes adhesive chemicals using pre- and post-adhesive processes, fell -24.5% YoY to ¥2,019mil. In the FY22 Q1~Q3 period, sales of these chemicals had benefited from an increase in demand from package makers as they boosted the density of packages used in servers – particularly as they have become larger and, therefore, have more layers during. However, in FY22 Q4, sales peaked, and in FY23 Q1, they slumped -45.6% QoQ to ¥505mil (-37.7% YoY). Sales of the newer generation of CZ series products used in chiplet packaging such as EMIB and CoWos, CZ-8201 and CZ-8401, are also included in this category. In Q3 alone, sales of other CZ chemicals recovered +11.7% QoQ to ¥799mil (-18.5% YoY).

The CZ-8100 product, which is partly used in packages for auto components, had also reported record annual sales of ¥1,284mil (+4.8% YoY) in FY22, despite the semiconductor and components shortage affecting auto production. However, FY23 Q1 sales declined -20.1% QoQ to ¥250mil (-20.6% YoY), partly on the back of a slower-than-expected

recovery in auto production but also due to inventory adjustments of memory package substrates. However, from Q2 onwards, sales of CZ-8100 has been gradually recovering, thanks to a pickup in demand for packages used in EVs. In Q2 and Q3, MEC reported quarterly CZ-8100 sales of ¥276mil (-12.7% YoY / +10.4% QoQ) and ¥283mil (-16.8% YoY / +2.5% QoQ), respectively.

V-Bond, another adhesive-enhancing chemical used in multilayer substrates for autos and mid-end smartphones, reported FY23 Q3 sales of ¥198mil (+4.8YoY / +11.2% QoQ).

### Etching Chemicals

FY23 Q1~Q3 Etching Chemicals sales fell -17.3% YoY to ¥2,436mil. In Q3 alone, the segment saw sales recover +14.0% QoQ to ¥928mil (+2.2% YoY) thanks improved sales in EXE, as Chip-on-Film [COF] sales bottomed out on the back of a recovery in TV monitor production post-production adjustments during FY22. FY23 Q1~Q3 sales of EXE recovered to +0.1% YoY to ¥855mil. In Q3 alone, EXE sales improved +66.8% YoY to ¥312mil (-2.2% QoQ). On the other hand, sales of SF, a key material used in displays, remained weak with Q1~Q3 sales of ¥426mil (-37.8% YoY) as the new models of high-end smartphones now use a different technology. In Q3 alone, SF sales dipped -21.7% YoY to ¥184mil (+64.3% QoQ), though the weak sales in SF were expected as this technology shift had already been factored in.

Chemical Sales by Products (Quarterly)									
(¥mil / Dec year-end)	FY22				FY23				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	QoQ (%)	YoY (%)
Copper surface treatment chemicals	3,695	3,931	3,981	3,660	2,564	3,150	3,536	12.3	-11.2
Adhesive enhancer (CZ, V-Bond etc.)	2,676	2,911	3,073	2,797	1,870	2,335	2,608	11.7	-15.1
CZ Series Total	2,402	2,609	2,784	2,517	1,638	2,071	2,311	11.6	-17.0
CZ-8100	315	316	340	313	250	276	283	2.5	-16.8
CZ-8101	1,276	1,410	1,464	1,276	883	1,080	1,229	13.8	-16.1
Other CZ chemicals	811	883	980	928	505	715	799	11.7	-18.5
Etching chemicals (EXE, SF etc.)	1,019	1,020	908	863	694	814	928	14.0	2.2
SF	204	246	235	192	130	112	184	64.3	-21.7
EXE	360	308	187	226	224	319	312	-2.2	66.8
Other surface treatment chemicals	202	202	200	166	148	222	213	-4.1	6.5
Chemical Sales Total	3,898	4,134	4,181	3,827	2,712	3,372	3,749	11.2	-10.3

Source: Nippon-IBR based on MEC's earnings presentation materials

Chemical Sales by Products (Cumulative)									
(¥mil / Dec year-end)	FY22					FY23			
	Q1	Q2	Q3	Q4	YoY (%)	Q1	Q2	Q3	YoY (%)
Copper surface treatment chemicals	3,695	7,626	11,607	15,267	11.7	2,564	5,714	9,250	-20.3
Adhesive enhancer (CZ, V-Bond etc.)	2,676	5,587	8,660	11,457	23.9	1,870	4,205	6,813	-21.3
CZ Series Total	2,403	5,011	7,795	10,312	26.1	1,638	3,709	6,020	-22.8
CZ-8100	315	631	971	1,284	5.2	250	526	809	-16.7
CZ-8101	1,276	2,686	4,150	5,426	27.2	883	1,963	3,192	-23.1
Other CZ chemicals	811	1,694	2,674	3,602	33.9	505	1,220	2,019	-24.5
Etching chemicals (EXE, SF etc.)	1,019	2,039	2,947	3,810	-13.4	694	1,508	2,436	-17.3
SF	204	450	684	877	-19.3	130	242	426	-37.8
EXE	360	668	855	1,081	-34.2	224	543	855	0.0
Other surface treatment chemicals	202	404	604	770	10.8	148	370	583	-3.5
Chemical Sales Total	3,898	8,032	12,213	16,043	11.6	2,712	6,085	9,834	-19.5

Source: Nippon-IBR based on MEC's earnings presentation materials

## FY23 OUTLOOK

Amid better-than-expected earnings for the nine-month FY23 Q1~Q3 period, MEC revised its full year guidance from an OP of ¥1,800mil (-55.1% YoY) on sales of ¥13,500mil (-17.3% YoY) to an OP of ¥2,250mil (-43.8% YoY) on sales of ¥13,800mil (-15.5% YoY). The better-than-expected Q1~Q3 earnings were largely due to a delay in spending planned in the SG&A budget, though this will be realised at some point in FY24. Since the upward revision at the time of Q3 results was not due to improvement in the business environment but rather due to a delay in expensing the budget, MEC has maintained the FY23 annual dividend at ¥45.00/share.

MEC's assumptions, however, have been altered as follows:

1. The firm now assumes a full-fledged recovery of server demand, which likely affects earnings of MEC's core product CZ-8101, from FY24 2H. However, while the demand cycle seems to have bottomed in FY23 Q1, the current improvement still does not suggest signs of a PC and server-related recovery.
2. A cautious view on sales of Etching Chemicals, SF and EXE. Sales of EXE have been unexpectedly solid on the back of surge in production of TV displays after inventory adjustment peaked, which might further improve sales mix.
3. V-Bond sales will also decline due to weakness in demand for multilayer substrates used in automobiles and middle-end smartphones. Although the semiconductor shortage situation has been improving in the auto sector, demand for middle-end smartphone remains weak.

FY23 Guidance								
(¥mil)	FY22		FY23 (Previous CE, 23 May '23)				FY23 (Revised CE, 10 Nov. '23)	
	1H	FY	1H	YoY (%)	FYCE	YoY (%)	FYCE	YoY (%)
Sales	8,127	16,329	6,198	-23.7	13,500	-17.3	13,800	-15.5
Operating Profit [OP]	2,084	4,004	838	-59.8	1,800	-55.1	2,250	-43.8
OP Margin [OPM] (%)	25.6	24.5	13.5	-18.1ppt	13.3	-11.2ppt	16.3	-8.2ppt
Recurring Profit [RP]	2,374	4,246	1,003	-57.8	1,900	-55.3	2,500	-41.1
NP for the parent's s/holders	1,661	3,064	1,076	-35.2	1,730	-43.5	2,150	-29.8
EPS (¥)	87.40	161.22	56.79	-35.0	91.89	-43.0	114.07	-29.2

Source: Nippon-IBR based on MEC Co., Ltd.'s FY23 Q3 Earnings Results Material

### Adhesive Enhancers

MEC had expected that recovery in demand for its core product, CZ-8101, would be slow in the short-term. However, as of Q3, end application markets such as PCs and servers remain lacklustre.

Moreover, although the new processor for high-performance servers is said to deploy chiplet technology that requires die-stacking and larger size packages, such as MEC's EMIB, therefore likely further boost package makers' demand for adhesive chemicals, contributions to earnings are not yet evident.

Although MEC changed the FY23 sales forecast, it has not yet provided a breakdown for each product group. Previously, MEC estimated FY23 CZ chemicals sales of ¥8,450mil (-18.1% YoY), based on the assumption that during FY23, sales of CZ chemicals will be affected by weak semiconductor markets.

Similarly for V-Bond, MEC was previously guiding for sales to decline -8.1% YoY to ¥705mil as it anticipates both a gradual recovery in auto production, and further inventory adjustments of auto parts. Additionally, given the current macroeconomic climate, demand for smartphones continues to be weak.

### Etching Chemicals

Previously, MEC assumed that Etching Chemicals would likely remain weak during FY23. While SF sales to high-end smartphones are expected to continue declining due to the well-flagged shift to a new technology, demand for tablet

PC touch panels will remain stable from 2H onwards as sales of EXE have recovered after inventory adjustments at display makers have run their course.

MEC previously estimated FY23 sales of SF to fall -19.8% YoY to ¥703mil and EXE sales to decline -18.9% YoY to ¥877mil. However, sales have already hit ¥855mil as of Q3, suggesting upside in the full year FY23 performance, provided the current solid demand continues.

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## CAPITAL ALLOCATION POLICY

**CAPEX:** Although the demand for CZ remains sluggish due to the lacklustre semiconductor market, the firm reckons that the growth potential of the CZ chemicals, over the long-term, is solid on the back of the increase in the number of packages, and an increase in the size and layers of packages used in high-performance servers. Given the potential demand for CZ chemicals, MEC boosted production capacity at the Nagaoka (Japan) and Zhuhai (China) factories in FY22. This raised the group's total production capacity by +10%. In addition, the firm plans to expand production capacity at its facility in Suzhou, Jiangsu Province, China in FY23.

For FY23, MEC has allocated ¥1,763mil for CAPEX, of which approx. ¥400mil will be spent on the Suzhou plant expansion. Depreciation costs are estimated to rise from ¥759mil in FY22 to ¥827mil in FY23. In addition, the company is preparing to commence production at a new factory in Kita Kyushu City, Fukuoka, Japan in FY25.

MEC plans to spend approx. ¥4,000mil including cost of the land, financed by cash flow as well as long-term debt. The new factory will meet the expected rapid surge in demand for CZ chemicals as this is when package makers start full mass production of packages using chiplet packaging such as EMIB, and also improve distribution network to the firm's Korean customers.

**Shareholder Return:** MEC has maintained its annual dividend payment of ¥45/share despite the drastic revisions to its FY23 guidance. Based on the FY23 EPS estimate of ¥114.07, the dividend pay-out ratio will be 39.4%. Management's target is to achieve a dividend pay-out ratio of at least 30% under the ongoing medium-term management plan.

Between 11 May~23 June 2023, the firm also completed a share buyback of 286,000 shares at a total cost of ¥899,860,700 (of a maximum of 300,000 shares / ¥900mil, which amounts to approx. 1.56% of shares outstanding). Repurchased shares will be used as remunerations to directors.

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