

## Hitachi Maxell (6810, JP)

Exchange: Tokyo Stock Exchange 1

Sector: Electric Parts

Market Cap: JPY118.0 billion

P/B: 1.0x (3/17 act)

Recommendation: Outperform

Share Price: JPY2,213 (6/6/2017)

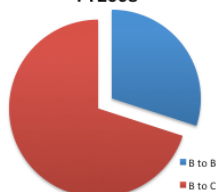
Target Price: JPY2,984

P/E: 23.4x (8/17 CE)

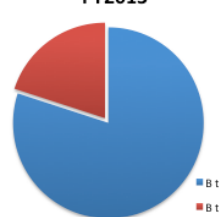
Div. Yield: 1.6% (3/17 CE)



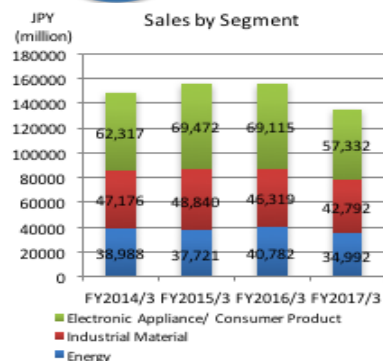
FY2008



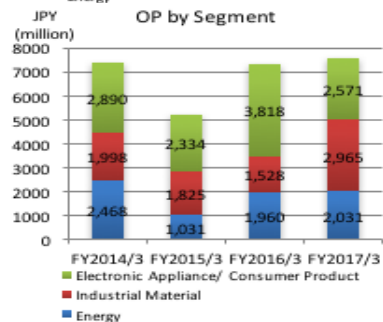
FY2013



Sales by Segment



OP by Segment



### Highlight

METRICAL maintains 'Outperform' and raises target price to from JPY2,826 to JPY2,984. Maxell increases its profitability, improving its business portfolio for a few years. OP margin incrementally rose from 3.3% for FY03/2015 to 4.7% for FY03/2016 and 5.6% for FY03/2017 and expected to rise to 6.0% for FY03/2018 (E) by METRICAL forecast (5.7% by Company guidance), while sales are likely to remain standstill. Automotive 3 products such as TPMS use battery, car camera lenses and car LED headlamp lenses are expected to continue expanding. The cash flows generated from such growth products will lower its valuation such as EV/EBITDA and Sum-Of-the-Parts value. The soft sales expectation keeps eyes of investors off the shares but should be focused on its change of business portfolio, which should accelerate improving profitability to 6.8% for FY03/2019 (E) and 7.4% for FT03/2020 (E) in OPM after restructuring of legacy business such as magnetic tapes.

### Business Description

Hitachi Maxell was established in 1961 and has expanded its business from battery and magnetic tape of its core products since founded. Maxell has once become a wholly owned subsidiary of Hitachi Ltd. in 2010 and went to public again, relisted in Tokyo Stock Exchange in 2014 after strengthening its business to shift to B to B from B to C (see 2 pie charts on the left). The current business is divided to 3 segments of Energy, Industrial Material and Electronic Appliance/Consumer Product. Sales and OP by business segment are shown 2 bar charts on the left.

### Energy

Energy segment consists mainly of lithium-ion rechargeable batteries for mainly smartphones, micro batteries and other battery products. Of micro-batteries, heat-resistant coin-type lithium manganese dioxide batteries are a growth driver used for tire pressure monitoring systems (TPMS). Sale and OP of this segment accounts 26% and 27% for FY03/2017.

### Industrial Material

Industrial Material consists of 2 growth products that support automotive technology as high-precision lens units for car camera and LED car headlamp lenses. Other products include Adhesive tape used for packing, protection, and building, and is also combined with new functions for use in the semiconductor manufacturing process and in electronics, and Magnetic tape. Sale and OP of this segment accounts 32% and 39% for FY03/2017.

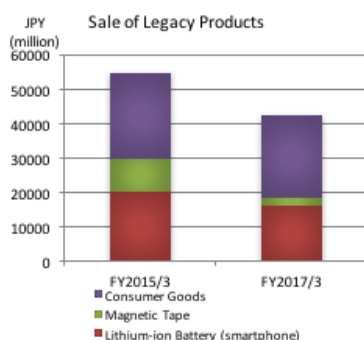
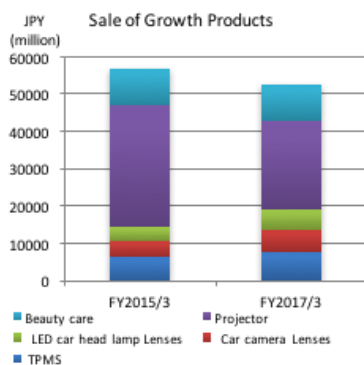
## Electronic Appliance/Consumer Product

Electronic Appliance and Consumer Product sells small electrical equipment, accessories and recording media and dry batteries for consumer market. Projectors and Beauty care appliances have been driving earnings of the segment. Projectors are provided to companies and educational institutions. Sale and OP of this segment accounts 42% and 34% for FY03/2017.

## Industry Overview and Competitive Positioning

### Industry Overview

Maxell is shifting from B to C to B to B, but each segment is comprised of mixed portfolio of growth and legacy products. 2 bar charts on the left show sales of growth and legacy products for FY03/2015 and FY03/2017 respectively. Of growth products, heat-resistant coin-type lithium micro battery is expanding, as an increasing number of countries legislate a law for equipping TPMS (Tire Pressure Monitoring System) in a car. TPMS battery market in the world is expected to grow 11% per annum from 150 million units for 2015 to 219 million units for 2020. Car camera lenses are expected to benefit from ADAS (Advanced Driving Assistant System) that will replace from car view camera to car 'sensing' camera. For instance, more than 10 lenses are used for sensing camera in high-end car models. Car camera (view camera + sensing camera) is expected to increase from 16% per annum from 65 million units for 2014 to 160 million units for 2020. LED car headlamp lenses are also growing on increasing demand of low electricity consumption lights in addition to 'Daytime Running Light' legislated in Europe and U.S. The number of cars equipped LED car headlamp lenses are expected to grow 5% for 2014 to more than 20% for 2020 in worldwide. Projectors have grown, focusing on high-end market for mainly education institutions. Beauty Care appliances maintain upbeat due to growing sale to foreign visitors as well as increasing demand of health and beauty conscious of consumers. Conversely, Lithium-Ion Battery for smartphone has grown slower in line with soft growth of smartphone devices. Magnetic Tape has declined due to substitution by newer technology. Consumer Appliances such as audio accessory and dry battery have deteriorated profitability due to commodity products.



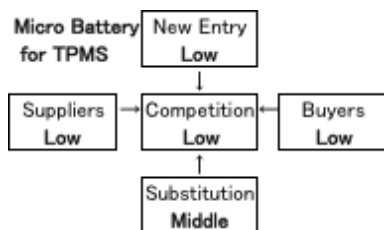
### Competitive Positioning

Competitive Positioning is analyzed each growth and legacy products in 5 Forces.

### Growth Products

#### Micro Battery for TPMS

**Buyers (Low risk):** Maxell as a top manufacturer has close relationship with global 5 major TPMS makers through joint development, having normally long-term contract for its product shipment. Going forward increasing number of countries are likely to require TPMS in automobiles by law. China will schedule to legislate it in 2019.



**Suppliers** (Low risk): Maxell as a top manufacturer has close relationship with suppliers globally for its plant in Ono, Japan. Commodity prices are currently relatively stable.

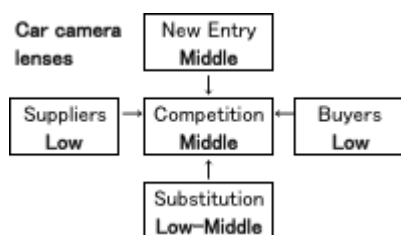
**Competition** (Low risk): Due to limited number of heat-resistant coin-type lithium micro battery and market expansion, competition is moderate. Competitors are Panasonic and Sony.

**New Entry** (Low risk): Mainly due to technology barrier that requires stable quality under -40 degrees Celsius to +125 degrees C, new entrance is limited.

**Substitution** (Middle risk): Maxell keeps developing technology, providing battery for direct attached on tire type TPMS module that enables it to linkage with ABS system. TPMS is likely to advance in line with safe driving technology, although 'indirect' type TPMS would be a threat for 'direct' type makers such as Maxell. But direct type TPMS will be applied to sensing of road surface in future.

### Car camera lenses

**Buyers** (Low risk): Maxell as one of WW 3 manufacturer has close relationship with car camera makers on reliable high quality of products. Sensing camera requires far higher quality in wide range, resolution, heat resistance and water repellency.



**Suppliers** (Low risk): Maxell as a top manufacturer has close relationship with suppliers globally for its plant in Japan and Malaysia. Relatively stable commodity prices are benefit to the company.

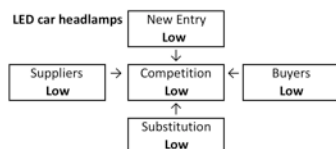
**Competition** (Middle risk): Due to its high technology, competition would be limited. Plastic lenses are lower cost, but while sensing camera lenses are expanding, they require increasingly higher specification of aspheric hybrid lenses made of glass and plastic. However, the number of manufacturers is relatively large.

**New Entry** (Middle risk): Due to its high technology mentioned above, threat of new entry would be limited in particularly high-end camera lenses.

**Substitution** (Low-Middle risk): Due to cost of production, substitution risk by plastic lenses is likely in future. However, demand of high-specified lenses for sensing camera, glass/plastic hybrid lenses would be advantageous for the time being.

### LED car headlamp lenses

**Buyers** (Low risk): Maxell as a top manufacturer has close relationship with car LED light makers such as Koito on reliable high quality of products.



**Suppliers** (Low risk): Maxell as a top manufacturer has close relationship with suppliers globally for its plants in Japan, China and Malaysia. Relatively stable commodity prices are benefit to the company.

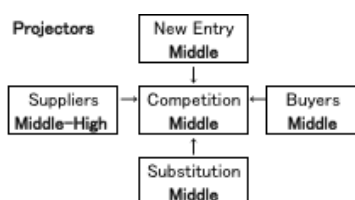
**Competition** (Low risk): Due to limited number of LED makers, competition would be limited. Maxell has high advantages of establishing production line from metal mold to fine processing to finished products.

**New Entry** (Low risk): Due to its high technology and established production system, threat of new entry would be marginal.

**Substitution** (Low risk): As the leading company of LED headlamp lenses, its technology is highly advanced, as LED headlamp lenses are leading in Japan to any other region in the world. LED headlamp lenses equipped in Japanese cars are approximately 40% compared with 10% in worldwide as of 2016. Due to its technology and cost of production, substitution risk is low.

### Projectors

**Buyers** (Middle risk): Maxell uses niche market strategy, focusing on high-end projectors for schools and large size theater or convention centers, and selling globally, in particular China and Asia of increasing demand market. However, due to soft economy in China the sale has hit the peak in FY03/2016.



**Suppliers** (Middle-High risk): Maxell has close relationship with suppliers globally. However, Kumamoto quake in April 2016 suspended shipment of image sensor to projectors makers, as only supplier Sony provides sensor. Projectors have been slower shipment for 1H of FY03/2017.

**Competition** (Middle risk): Seiko Epson is a strong competitor, covering all categories of projectors, whereas Maxell focuses on high-end market. High-end market is expanding but volume market is decreasing. This is a tailwind for the company. But the competition is likely to be intense, as overall market is less likely to grow (+2% per annum from 2014 to 2017).

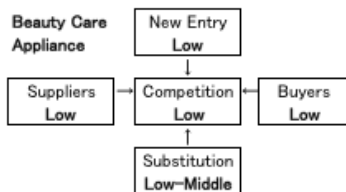
**New Entry** (Middle risk): Due to its high specification, such as high brightness, threat of new entry into high-end market would be relatively lower than volume market. However high technology of Maxell, competitors are likely to enter into high-end market from soft growth of volume market.

**Substitution** (Middle risk): Currently there would be some risk of substitution of projector, as newly advanced technology improves its function such as projection mapping. Maxell continues developing next generation projector and applies to its technology to other area such as Head up display.

### Beauty Care Appliance

**Buyers** (Low risk): Maxell as one of the largest makers in Japan providing the consumer products to develop customer need backed by higher consciousness of beauty and health care.

**Suppliers** (Low risk): Maxell as a top manufacturer has close relationship with suppliers in Japan. Relatively stable commodity prices are benefit to the company.



**Competition** (Low-Middle risk): Reliable brand of 'Hitachi' is advantage for the company. Another top brand of 'Panasonic' is also strong. But due to developing value added on high specification, the company's products are supported by consumers.

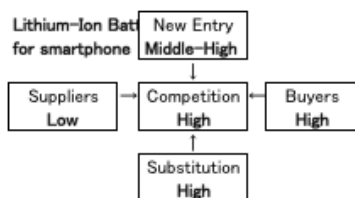
**New Entry** (Low risk): Due to nature of luxury goods that are used by touching his/her own body directly, reliable brand is highly advantageous in Japan.

**Substitution** (Low-Middle risk): Due to nature of consumer goods, substitution risk by innovation is less likely slower than industrial goods. It would take some time to spread reputation of a technology for beauty care among consumers.

### Legacy Products

#### Lithium-Ion Battery for smartphone

**Buyers** (High risk): Its major customer is one of the largest smartphone makers and the order comes average 2 month in advance of shipment based on weekly forecast. The large change in quantity of order in particularly for new-models is a big risk for the company. Maxell has implemented its fixed cost reduction for 3Q of FY03/2015 and tries to reduce its dependence on shipping to smartphone that is approximately 50%. Maxell heavily relied on smartphone use but the degree of dependence has been decreasing year by year and the Lithium-Ion battery is increasing to video game-use that requires safety as many users are children from 4Q of FY03/2017.



**Suppliers** (Low risk): Maxell as a large manufacturer has close relationship with suppliers globally for its plant in Kyoto and China. Relatively stable commodity prices are benefit to the company.

**Competition** (High risk): Maxell mainly ship the Korean company mainly square-type battery that is used for volume-zone. Hence, the company's products are more likely to come under downward pressure on prices than smartphones rather than laminated type battery for high-end devices. In case of appreciation of JPY rates, its profitability is deteriorating.

**New Entry** (Mid-High risk): Due to its commodity type of products mentioned above, threat of new entry is likely.

**Substitution** (High risk): In line with technology development and shifting to high-specified devices, laminated battery is replaced from square-type battery.

## Magnetic Tape

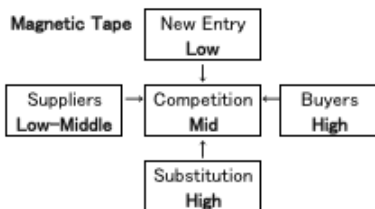
**Buyers** (High risk): In line with decrease of demand as well as market size, bargaining power of buyers is increasing, as consumer market has already decreased.

**Suppliers** (Low-Middle risk): Magnetic tape was Maxell's core business in 70s and 80s, but due to declining production volume, it would be more difficult to maintain procurement at lower cost.

**Competition** (Middle risk): Despite limited number of magnetic makers, competition has not been eased and Maxell finally decided to leave the market. Fuji Film would have survivorship benefit.

**New Entry** (Low risk): Due to declined market, no one enters into the market.

**Substitution** (High risk): Information storage point of view, magnetic tape has some advantages but has been already replaced to newer technology.



## Consumer Goods

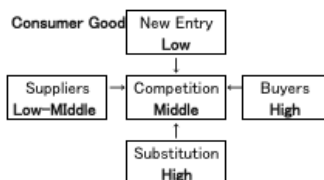
**Buyers** (High risk): Due to commodity nature of products, the prices come under downward pressure.

**Suppliers** (Mid-High risk): Maxell is selling the consumer goods as EMS. Current depreciation of JPY would deteriorate its profitability of imports into Japan.

**Competition** (High risk): Maxell finally decided to focus more on high-end products, and plans to improve close to break-even in 2H of FY03/2017. Optical disk benefits from decline market as a survivor.

**New Entry** (High risk): Due to its commodity type of products mentioned above, threat of new entry is very likely.

**Substitution** (High risk): The products are matured and declining volume. In line with technology development, production cost of newer products is getting lower on the increase of volume.



## Investment Summary

### Business Outlook

METRICAL expects OP margin to increase to hit over 6% for FY03/2018 (E) led by continuous improvement of its business portfolio after almost completion of restructuring of legacy products. In mid-term view, the earnings are expected to accelerate on solid growth of automotive 3 products such as TPM battery, Car camera lenses and LED car headlamp lenses, while Projectors comes under pressure on price competition and Beauty care appliances softens after rapid growth for past a few years (see more detail below 'Business Outlook' and tables in Appendix).

## **Competitive Positioning and Risks**

Hitachi Maxell's competitive positioning should be examined each product basis as its business portfolio is mixed by growth and legacy products. Growth products are mostly expected low-to-mid risk based on its high technology and reliable quality of products. For instance, TPMS battery, Car camera lenses and LED car headlamp lenses require stable quality on safety driving technology. Consumers buying Beauty care appliances also want to buy reliable brand and quality as they use them touching their body directly. Conversely, legacy products are in high risk. They are reliable on declining market and many of them have been mostly replaced by newer technology. Maxell undertaken cost reduction of Lithium-ion battery for smartphone in 2015 and Consumer goods like audio accessory and dry battery in 2016, and finally will implement restructure of Magnetic tape in 2016. Overall business portfolio is getting stronger and will be seen different picture in near future.

## **Valuation**

METRICAL tries to assess valuation, analyzing each business value in 3 business segment and net cash. The Sum-of-the-Parts value (SOTP NAV) is estimated JPY2,984 a share for FY03/2018 (E) and JPY3,262 a share for FY03/2020 (E). Even though excluding long-term investment and land, SOTP NAV for FY03/18 (E) is JPY2,413 and JPY2,691 for FY03/2020 (E), both of which also support comparing with closing price of JPY2,213 as of June 6<sup>th</sup> 2017.

## **Financial Stability**

Maxell has strong balance sheet and positive net cash and net working capital backed by stable free cash flow. As strengthening business portfolio through restructure, profitability and ROE will move higher soon. In fact, OP margin increased higher than 5% in 3Q for the first time since relisting in 2014, and operating cash flow has already expanded for 03/2016. Continuous increasing profit margin and cash flows will strengthen its balance sheet. (see cash flow statement on Appendix).

## **Business Outlook**

### **FY03/2017 Result**

Total sale was down 13.5% YoY to JPY135,116 million, but OP was up 3.6% YoY to JPY7,567 million, RP up 10.3% YoY to JPY7,387 million and NP rose on extraordinary gain from land sale 45.6% YoY to JPY5,724 million. Negative effect by stronger JP rates from USD/JPY=108 from USD/JPY=120 a year ago as well as Kumamoto quake put downward pressure on the earnings for the previous year, but growth of automotive use camera lenses, LED headlamp lenses and TPMS battery pushed the profits higher.

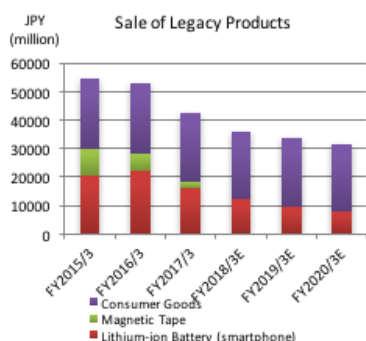
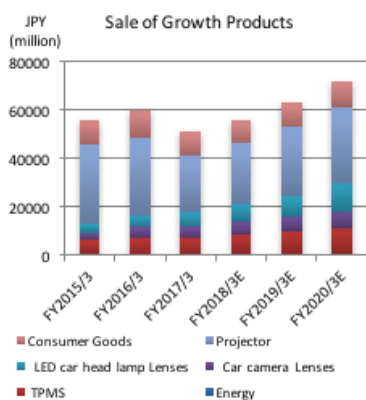
### **Full Year FY03/2018 Outlook by Company**

Maxell posted outlook for full year FY03/2018. Sale is expected to increase 3.6% YoY to JPY140,000 million, OP up 5.7% YoY to JPY8,000 million and NP down 12.6% YoY to JPY5,000 respectively.

Dividend will remain flat at JPY18 a share for semiannually (annually JPY36 a share).

### Full Year FY03/2018 by METRICAL

METRICAL expects sale to slightly miss but profits are in line with the company guidance led by continuously solid growth of automotive 3 growth products. Sale is expected to be flat -0.4% YoY to JPY134,521 million, OP increase 6.3% YoY to JPY8,047 million and RP up 8.9% YoY to JPY8,048 million and NP up 27.7% YoY to JPY5,020 respectively (see tables below of By Products Analysis and financial statements in Appendix).



### Mid-term Projection FY03/2020 by METRICAL

METRICAL expects growth products to maintain solid expansion for FY03/2020, as TPMS, Car sensing camera and LED car headlamp lenses are very likely to keep strong demand (see bar chart on the left). These products are also expected to maintain profit margins due to the strong competitive position. On the other hand, legacy products are expected to decrease sale (see bar chart on the left). Assuming currency rate such as USD/JPY staying at current rate, weaker JPY is expected to help Lithium-Ion battery for smartphones positively, but import of consumer goods such as AV accessory are affected negatively. Lithium-Ion battery for smartphone continues decreasing but another demand to video-game are increasing right now and this raises profits temporarily. Also, dry battery that is Maxell's core products since its foundation would need further solution to pick up the profit margin, although the earnings are projected to recover to break-even for FY03/2017.

### Valuation

Maxell share price has been staying at discount all the time since I issued Buy recommendation in September 2015. The background of undervalued price would be due to some difficulty to find a true picture of the company by only a glance at the income statement, as total sale has stayed around JPY140 billion since relisted in 2014 and OP margin has pulled lower by losing money of legacy business. However, the game has been changed and the future growth looks much clearer. OPM recovered incrementally and drastic solution would be finally implemented on Magnetic Tape for FY03/2017. Somehow issue on all 3-legacy products have been implemented and the losses would no longer affect its overall earnings significantly and going forward growth products will accelerate the earnings going forward. In this point, the share price should positively appreciate and move higher to its real value.

### Sum-of-the Parts Value

Sum-of-the-Parts (SOTP) value is business value of each business segment that is normalized EBIT, EBITDA and FCF from FY03/2014 to FY03/2018(E) by multiples, added to net cash and long-term investment securities and land. SOTP value for FY03/2018(E) is estimated to be JPY2,984 a share (25% discount of closing price of June 6<sup>th</sup> 2017). SOTP value for FY03/2020(E) is



estimated to be JPY3,262 a share (32% discount of closing price of June 6<sup>th</sup> 2017), as shown table below. Even though subtracting LT investment and land, the NAV is JPY2,413 for FY03/2018 (E) and JPY2,691 a share for FY03/2020 (E). The share price as of June 6<sup>th</sup> 2017 is lower than both values above. Additionally, net cash is expected to be JPY996 a share for FY03/2017 (E) and JPY1,101 a share for FY03/2020 (E). If Maxell uses cash on hand for future growth successfully, the earnings and value will move further higher. Coincidentally, Maxell posted acquisition of imaging business from Renesas Semiconductor Package & Test Solutions Co., Ltd. This is included in Maxell's Industrial Material business segment and is hoped to boost the business.

NAVs:			NAVs:		
<b>Sum of the parts NAV FY03/2018 (E):</b>			<b>Future NAV FY03/2020 (E):</b>		
Energy	395	5x EBITDA	Energy	440	5x EBITDA
Industrial Material	540	15x FCF	Industrial Material	623	15x FCF
Electronic Appliance/	645	15x FCF	Electronic Appliance/ Cc	691	15x FCF
Cash	996	1x Book	Cash	1,101	1x Book
Investment Securities	99	0.75x Book	Investment Securities	99	0.75x Book
Land	472	0.75x Book	Land	472	0.75x Book
Debt	(131)	1x Book	Debt	(131)	1x Book
Minority Interest	(32)	1x Book	Minority Interest	(32)	1x Book
<b>Total SOTP NAV</b>	<b>JPY 2,984</b>	<b>74.2%</b>	<b>Total Future NAV</b>	<b>JPY 3,262</b>	<b>67.8%</b>

## EV/EBITDA

EV/EBITDA for FY03/2018(E) is estimated to be 6.2x and will decline to 4.4x for FY03/2020 (E). Adjusted EV/EBITDA that includes long-term investment and land will go down to 2.8x for FY03/2017(E) and 1.7x for FY03/2020 (E).

	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18(E)	Mar-19(E)	Mar-20(E)
Avg. Mkt. Cap	JPY 114,811	JPY 99,818	JPY 96,779	JPY 116,938	JPY 116,938	JPY 116,938	JPY 116,938
EV	JPY 107,094	JPY 69,202	JPY 63,330	JPY 73,727	JPY 72,523	JPY 70,057	JPY 66,941
EV/EBITDA	8.91	6.74	5.28	6.20	6.07	5.17	4.40
*EV (+LT Investn	JPY 61,885	JPY 32,770	JPY 25,102	JPY 33,103	JPY 31,899	JPY 29,433	JPY 26,317
*EV/EBITDA	5.15	3.19	2.09	2.78	2.67	2.17	1.73
EV/EBIT	14.56	13.33	8.67	9.74	9.01	7.25	5.91
EV/FCF	124.38	197.16	6.00	5.26	23.35	16.04	13.34

## Financial Analysis

As shown key financial ratios in table below and financial statements summary in Appendix, Maxell has strong balance sheet, as net cash and net working capital are positive backed by relatively stable free cash flow over years. On the other hand, profitability is not high enough. Lower ROE is caused by lower financial leverage and in particular lower profit margin. Moreover, OP margin has not increased sufficiently, but Operating Cash flow generated JPY12 billion for 03/2017 and is expected to maintain solid going forward (see cash flow statement on Appendix).

**Investment Risks**

**Global economic downturn (Likely, Middle Risk)**

In case of global recession, the business will be soft as the earnings slowed for 2H of FY03/2016 due to decline in business confidence led by China's economy. Projectors suffered from the slowdown temporarily at that time, but in mid-term view 3 growth products are expected to continue expanding in automotive area, as ADAS and safety driving technology will be accelerating.

**Softened market of smartphone (Likely, Low-Middle Risk)**

Lithium-ion battery for smartphone is decelerating. Currently the earnings are under break-even and further drastic solution is required, as the product is used for low-to-middle zone devices. However, the company has tried to decrease dependence on smartphone and diversify to other usage such as video-games.

**Strong JPY rate (Likely, Low-Middle Risk)**

Currency risk is mostly on export to Lithium-ion battery for smartphone. But the sale is getting smaller by 10%-20% per annum and the impact will be smaller year-by-year. Additional cost-reduction in this product would be inevitable soon in any case.

**Ownership of Hitachi (likely, Low-Middle Risk)**

Hitachi Ltd. reduced its ownership from 20.52% to 14.76% but will maintain co-working of basic research on future technologies with Maxell and will hold contract of producing appliances for Hitachi brand. Maxell share price has once tumbled just after the news released that Hitachi sold its ownership in March 2017. Maxell is likely to remove Hitachi from its company name in October but will keep alliance with Hitachi in each case of business partnership going forward. This would help the company more focus on its shareholders other than former parent company.

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# METRICAL INC.

corporate governance, investment research & solutions

## Appendix

FY2014, JPY million	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (act)	29,403	-23,074	-78.5%	6,329	-5,901	-20.1%	428	1.5%	789	1,112	-182	-7	923		
2Q (act)	39,946	-31,397	-78.6%	8,549	-6,919	-17.3%	1,630	4.1%	1,611	1,477	-379	-47	1,051		
3Q (act)	40,788	-31,274	-76.7%	9,514	-6,254	-15.3%	3,260	8.0%	3,807	4,460	-948	-88	3,424		
4Q (act)	38,344	-29,926	-78.0%	8,418	-6,380	-16.6%	2,038	5.3%	1,859	1,648	394	-8	2,034		
Full Year	148,481	-115,671	-77.9%	32,810	-25,454	-17.1%	7,356	5.0%	8,066	8,697	-1,115	-150	7,432	118.20	
FY2015, JPY million	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (act)	35,870	-28,652	-79.9%	7,218	-6,459	-18.0%	759	2.1%	573	577	-102	-24	451		
2Q (act)	39,652	-31,714	-80.0%	7,938	-6,632	-16.7%	1,306	3.3%	1,813	1,817	-443	-67	1,307		
3Q (act)	42,072	-32,672	-77.7%	9,400	-6,864	-16.3%	2,536	6.0%	2,887	-1,609	-609	-100	-2,318		
4Q (act)	38,439	-31,272	-81.4%	7,167	-6,578	-17.1%	589	1.5%	197	8,038	-630	-28	7,380		
Full Year	156,033	-124,310	-79.7%	31,723	-26,533	-17.0%	5,190	3.3%	5,470	8,823	-1,784	-219	6,820	129.07	
FY2016/3	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (act)	37,335	-29,486	-79.0%	7,849	-6,573	-17.6%	1,276	3.4%	1,450	1,486	-292	-61	1,133		
2Q (act)	41,231	-32,237	-78.2%	8,994	-6,613	-16.0%	2,381	5.8%	2,346	2,310	-452	-130	1,728		
3Q (act)	40,598	-32,017	-78.9%	8,581	-6,396	-15.8%	2,185	5.4%	1,903	1,903	-1,158	145	890		
4Q (act)	37,052	-29,283	-79.0%	7,769	-6,305	-17.0%	1,464	4.0%	-476	-476	673	-17	180		
Full Year (act)	156,216	-123,023	-78.8%	33,193	-25,887	-16.6%	7,306	4.7%	5,223	5,223	-1,229	-63	3,931	74.4	29.7
Full Year (CE)	157,000						6,500	4.1%	6,100				4,000	122.1	
FY2017/3 (E)	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (act)	32,698	-25,866	-79.1%	6,832	-5,719	-17.5%	1,113	3.4%	689	496	-104	-14	378		
2Q (act)	33,297	-25,983	-78.0%	7,314	-5,512	-16.6%	1,802	5.4%	1,667	1,659	-324	-18	1,317		
3Q (act)	35,059	-27,031	-77.1%	8,028	-5,664	-16.2%	2,364	6.7%	2,811	2,132	-547	-71	1,514		
4Q (act)	34,062	-25,991	-76.3%	8,071	-5,783	-17.0%	2,288	6.7%	2,220	2,416	108	-9	2,515		
Full Year	135,116	-104,871	-77.6%	30,245	-22,678	-16.8%	7,567	5.6%	7,387	6,703	-867	-112	5,724	108.3	20.4
Full Year (CE)	140,000						6,000	4.3%	5,600				3,900	73.8	30.0
FY2018/3 (E)	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (E)	31,784	-24,440	-76.9%	7,345	-5,559	-17.5%	1,785	5.6%	1,786	1,786	-469	-73	1,244		
2Q (E)	33,074	-25,587	-77.4%	7,487	-5,475	-16.6%	2,012	6.1%	2,013	2,013	-528	-83	1,402		
3Q (E)	35,200	-27,298	-77.6%	7,901	-5,687	-16.2%	2,215	6.3%	2,215	2,215	-582	-91	1,543		
4Q (E)	34,463	-26,578	-77.1%	7,885	-5,851	-17.0%	2,034	5.9%	2,034	2,035	-534	-84	1,417		
Full Year (E)	134,521	-103,902	-77.2%	30,619	-22,572	-16.8%	8,047	6.0%	8,048	8,048	-2,113	-330	5,605	106.1	20.9
Full Year (CE)	140,000						8,000	5.7%					5,000		
FY2019/3 (E)	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (E)	33,481	-25,306	-75.6%	8,175	-5,856	-17.5%	2,319	6.9%	2,320	2,320	-609	-95	1,616		
2Q (E)	34,815	-26,717	-76.7%	8,098	-5,763	-16.6%	2,334	6.7%	2,335	2,335	-613	-96	1,626		
3Q (E)	37,162	-28,620	-77.0%	8,542	-6,004	-16.2%	2,539	6.8%	2,539	2,539	-667	-104	1,768		
4Q (E)	36,471	-27,811	-76.3%	8,660	-6,192	-17.0%	2,468	6.8%	2,468	2,468	-648	-101	1,719		
Full Year (E)	141,928	-108,453	-76.4%	33,475	-23,815	-16.8%	9,660	6.8%	9,661	9,662	-2,537	-397	6,729	127.3	927.0
Full Year (CE)															
FY2020/3 (E)	Sales	COGS	COGS/S	Gross Profit	SGA	SGA/S	OP	OPM	RP	EBT	Tax	Minority	Net Profit	EPS	P/E
1Q (E)	35,850	-26,875	-75.0%	8,976	-6,270	-17.5%	2,705	7.5%	2,706	2,706	-710	-111	1,884		
2Q (E)	37,317	-28,463	-76.3%	8,854	-6,177	-16.6%	2,676	7.2%	2,677	2,677	-703	-110	1,864		
3Q (E)	39,907	-30,484	-76.4%	9,423	-6,447	-16.2%	2,976	7.5%	2,976	2,977	-781	-122	2,073		
4Q (E)	39,269	-29,632	-75.5%	9,637	-6,667	-17.0%	2,970	7.6%	2,971	2,971	-780	-122	2,069		
Full Year (E)	152,343	-115,453	-75.8%	36,890	-25,562	-16.8%	11,328	7.4%	11,329	11,330	-2,974	-465	7,891	149.3	0.0
Full Year (CE)															

(Source) Hitachi Maxell, METRICAL

Cash Flow Analysis:	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18(E)	Mar-19(E)	Mar-20(E)
Net Income	490	7,432	6,820	3,931	5,724	5,605	6,729	7,891
Dep.	2,374	4,661	5,073	4,679	4,323	3,900	3,900	3,900
Amortization	0	0	0	0	0	0	0	0
Other non-cash charge	-2,328	-7,788	-7,592	-2,524	-1,475	0	0	0
Changes in WC	-45	2,523	1,625	8,267	3,399	101	-1,261	-1,773
Op. Cash Flow	491	6,828	5,926	14,353	11,971	9,606	9,368	10,018
Per share	JPY 11.18	JPY 108.59	JPY 112.15	JPY 271.62	JPY 226.55	JPY 181.80	JPY 177.29	JPY 189.58
Capex	-5,575	-5,967	-5,575	-3,796	2,058	-6,500	-5,000	-5,000
Free Cash Flow	-5,084	861	351	10,557	14,029	3,106	4,368	5,018
Per share	(JPY 115.72)	JPY 13.69	JPY 6.64	JPY 199.79	JPY 265.49	JPY 58.79	JPY 82.67	JPY 94.96
Beginning Cash	21,304	26,683	28,808	38,187	42,017	48,901	53,134	55,600
Net cash used	5,379	2,125	9,379	3,830	6,884	4,233	2,466	3,116
Ending cash	26,683	28,808	38,187	42,017	48,901	53,134	55,600	58,716

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	2013/3	2014/3	2015/3	2016/3	2017/3	2018/3 (E)	2019/3 (E)	2020/3 (E)
<b>Assets</b>								
<b>Current Assets</b>								
Cash and Cash Equivalents	5,163	15,297	38,770	42,017	51,930	53,134	55,600	58,716
Short-Term Investments	1,375	1,004	-	-	-	-	-	-
Notes and Accounts	23,644	30,804	32,587	29,543	25,554	25,441	26,842	28,812
Allowance for Doubtful	(377)	(408)	(339)	(458)	(619)	(616)	(650)	(698)
Inventories	19,112	21,285	18,657	13,900	13,163	13,105	13,827	14,841
Deferred Income Taxes	869	1,057	1,714	1,702	1,995	1,986	2,096	2,249
Other Current Assets	35,201	10,415	5,310	5,617	5,212	5,189	5,475	5,877
<b>Total Current Assets</b>	<b>84,987</b>	<b>79,454</b>	<b>96,699</b>	<b>92,321</b>	<b>97,235</b>	<b>98,240</b>	<b>103,189</b>	<b>109,797</b>
<b>Property, Plant and</b>								
Land	40,616	40,908	34,146	33,678	33,561	33,561	33,561	33,561
Buildings	10,132	11,485	8,127	7,665	6,505	9,046	11,001	12,956
Machinery and Equipment	9,161	14,429	13,221	12,302	7,754	10,783	13,113	15,443
Construction in Progress	1,506	1,697	1,977	1,513	2,380	3,310	4,025	4,740
<b>Total</b>	<b>61,415</b>	<b>68,519</b>	<b>57,471</b>	<b>55,158</b>	<b>50,200</b>	<b>56,700</b>	<b>61,700</b>	<b>66,700</b>
Accumulated Depreciation	-	-	-	-	-	-	1	2
<b>Net Property, Plant and</b>	<b>61,415</b>	<b>68,519</b>	<b>57,471</b>	<b>55,158</b>	<b>50,200</b>	<b>56,700</b>	<b>61,701</b>	<b>66,702</b>
Software & Other	570	1,288	1,025	1,047	1,023	1,023	1,023	1,023
Goodwill	-	-	-	-	-	-	-	-
	570	1,288	1,025	1,047	1,023	1,023	1,023	1,023
<b>Other Assets</b>								
Investments in and	-	-	-	-	-	-	-	-
Investment Securities	7,458	4,301	2,286	4,550	7,063	7,063	7,063	7,063
Software & Others	(10)	(209)	(241)	(225)	(212)	(212)	(212)	(212)
Deferred Income Taxes	443	534	535	477	929	929	929	929
Other	2,336	1,328	2,677	1,028	3,226	3,226	3,226	3,226
<b>Total Other Assets</b>	<b>10,227</b>	<b>5,954</b>	<b>5,257</b>	<b>5,830</b>	<b>11,006</b>	<b>11,006</b>	<b>11,006</b>	<b>11,006</b>
<b>Total</b>	<b>157,199</b>	<b>155,215</b>	<b>160,452</b>	<b>154,356</b>	<b>159,464</b>	<b>166,969</b>	<b>176,919</b>	<b>188,528</b>
<b>Liabilities and</b>								
<b>Current Liabilities</b>								
Bank Loans	1,633	1,694	-	-	-	-	-	-
Notes and Accounts	14,498	20,386	20,822	20,288	15,100	15,034	15,861	17,025
Accrued Expenses	6,750	6,701	6,234	6,946	6,039	6,012	6,343	6,809
Income Taxes	173	408	865	201	1,240	1,235	1,303	1,398
Other Current Liabilities	1,752	3,574	3,195	2,252	7,690	7,656	8,078	8,670
Current Portion of Long-	-	-	-	35	35	35	35	35
<b>Total Current Liabilities</b>	<b>24,806</b>	<b>32,763</b>	<b>31,116</b>	<b>29,722</b>	<b>30,104</b>	<b>29,972</b>	<b>31,620</b>	<b>33,938</b>
Long-Term Debt	-	6	325	457	422	422	422	422
Deferred Income Taxes	3,642	3,693	4,299	3,735	3,926	3,926	3,926	3,926
Termination and	3,733	5,429	5,934	6,350	6,542	6,542	6,542	6,542
Other Long-Term Liabilities	1,226	1,050	35	266	330	330	330	330
	1,633	1,700	325	492	457	457	457	457
<b>Total Liabilities</b>	<b>33,407</b>	<b>42,941</b>	<b>41,709</b>	<b>40,530</b>	<b>41,324</b>	<b>41,192</b>	<b>42,840</b>	<b>45,158</b>
<b>Stockholders' Equity</b>								
Common Stock	12,203	12,203	12,203	12,203	12,203	12,203	12,203	12,203
Additional Paid-in Capital	55,679	33,578	33,578	33,527	33,527	33,527	33,527	33,527
Legal Reserve	62,484	74,172	75,998	77,313	81,135	3,703	4,827	5,988
Retained Earnings	-	-	-	-	-	-	-	-
Treasury Stock	-	(996)	(996)	(996)	(996)	(996)	(996)	(996)
<b>Total Stockholders' Equity</b>	<b>130,366</b>	<b>118,957</b>	<b>120,783</b>	<b>122,047</b>	<b>125,869</b>	<b>48,437</b>	<b>49,561</b>	<b>50,722</b>
<b>Accumulated other</b>								
Comprehensive Income	1,512	954	529	303	(9,449)	75,620	82,799	90,928
Warrant	0	0	0	0	0	0	0	0
Minority Interests in	281	1,455	1,895	1,726	1,720	1,720	1,720	1,720
<b>Total Stockholders' Equity</b>	<b>123,792</b>	<b>112,274</b>	<b>118,743</b>	<b>113,826</b>	<b>118,140</b>	<b>125,777</b>	<b>134,079</b>	<b>143,370</b>
<b>Total</b>	<b>157,199</b>	<b>155,215</b>	<b>160,452</b>	<b>154,356</b>	<b>159,464</b>	<b>166,969</b>	<b>176,919</b>	<b>188,528</b>

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By Segment (JPY million)	Energy		Industrial Material		Electronic Appliance/		Total	
	Sales	OP	Sales	OP	Sales	OP	Sales	OP
<b>FY2014/3</b>								
1Q (act)	9,579	604	10,066	168	9,758	-344	29,403	428
2Q (act)	10,597	641	11,883	325	17,466	664	39,946	1,630
3Q (act)	9,969	840	12,378	731	18,441	1,689	40,788	3,260
4Q (act)	8,843	383	12,849	774	16,652	881	38,344	2,038
Full Year (act)	38,988	2,468	47,176	1,998	62,317	2,890	148,481	7,356
<b>FY2015/3</b>								
1Q (act)	8,055	16	11,583	417	16,232	326	35,870	759
2Q (act)	9,365	152	12,162	487	18,125	667	39,652	1,306
3Q (act)	10,383	788	12,457	383	19,232	1,365	42,072	2,536
4Q (act)	9,918	75	12,638	538	15,883	-24	38,439	589
Full Year (act)	37,721	1,031	48,840	1,825	69,472	2,334	156,033	5,190
<b>By Segment</b>								
(JPY million)	Energy		Industrial Material		Electronic Appliance/		Total	
	Sales	OP	Sales	OP	Sales	OP	Sales	OP
<b>FY2016/3</b>								
1Q (act)	10,070	364	11,521	404	15,744	508	37,335	1,276
2Q (act)	11,203	631	11,609	534	18,419	1,216	41,231	2,381
3Q (act)	10,132	485	11,612	498	18,854	1,202	40,598	2,185
4Q (act)	9,377	480	11,577	92	16,098	892	37,052	1,464
Full Year (act)	40,782	1,960	46,319	1,528	69,115	3,818	156,216	7,306
Full Year (CE)	38,000	1,700	50,000	2,200	69,000	2,600	157,000	6,500
<b>FY2017/3</b>								
1Q (act)	8,381	193	10,649	635	13,668	285	32,698	1,113
2Q (act)	8,997	441	10,409	787	13,891	574	33,297	1,802
3Q (act)	8,781	468	10,746	953	15,532	943	35,059	2,364
4Q (act)	8,833	929	10,988	590	14,241	769	34,062	2,288
Full Year	34,992	2,031	42,792	2,965	57,332	2,571	135,116	7,567
Full Year (CE)	34,500	1,300	41,000	1,900	64,500	2,800	140,000	6,000
<b>FY2018/3 (E)</b>								
1Q (E)	7,847	636	9,929	638	14,009	511	31,784	1,785
2Q (E)	8,209	645	10,556	696	14,309	671	33,074	2,012
3Q (E)	8,122	637	11,133	791	15,944	787	35,200	2,215
4Q (E)	8,244	630	11,464	793	14,755	610	34,463	2,034
Full Year (E)	32,422	2,549	43,082	2,918	59,017	2,580	134,521	8,047
Full Year (CE)	31,400	2,200	47,800	3,100	60,800	2,700	140,000	8,000
<b>FY2019/3 (E)</b>								
1Q (E)	7,890	661	10,749	770	14,842	888	33,481	2,319
2Q (E)	8,091	647	11,533	841	15,190	847	34,815	2,334
3Q (E)	8,086	675	12,280	956	16,795	908	37,162	2,539
4Q (E)	8,227	691	12,607	941	15,636	836	36,471	2,468
Full Year (E)	32,295	2,674	47,169	3,508	62,464	3,478	141,928	9,660
Full Year (CE)								
<b>FY2020/3 (E)</b>								
1Q (E)	8,168	735	11,983	923	15,699	1,048	35,850	2,705
2Q (E)	8,242	707	12,951	949	16,124	1,021	37,317	2,676
3Q (E)	8,306	737	13,908	1,086	17,693	1,152	39,907	2,976
4Q (E)	8,464	750	14,230	1,153	16,576	1,068	39,269	2,970
Full Year (E)	33,179	2,929	53,072	4,111	66,092	4,288	152,343	11,328
Full Year (CE)								

(Source) Hitachi Maxell, METRICAL

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Growth Products	FY2015/3 (act)		FY2016/3		FY2017/3		1Q		2Q		3Q		4Q		Full Year	
	Sales	OP	Sales	OP	Sales	OP	Sales	OP	Sales	OP	Sales	OP	Sales	OP	Sales	OP
<b>Energy</b>																
Lithium ion battery (LB)																
Lithium-ion Rechargeable Battery (smartphone)	20,270	-237	21,850	-33	15,999	65	2,657	133	3,320	166	3,041	122	2,975	89	11,999	510
Laminated LB Rechargeable (automobile)	200	4	159	3	138	3	45	1	50	1	30	1	13	0	138	3
Coin Type LB Rechargeable (multiple use)	1,640	25	1,900	38	1,441	45	344	10	339	10	304	9	166	5	1,153	35
HEMS (newly developed)	680	20	165	-107	138	-131	62	-31	55	-28	33	-17	2	-1	151	-76
<i>sub total</i>	22,790	-187	24,074	-98	17,716	-18	3,107	113	3,770	150	3,408	115	3,156	94	13,441	472
Micro battery																
TPMS	6,465	1,104	7,440	1,453	7,501	1,118	2,248	315	1,856	260	2,132	299	2,389	334	8,626	1,208
Cylindrical Type LB (smart meter)	4,380	364	5,230	565	5,799	822	1,528	199	1,742	227	1,650	215	1,459	190	6,379	829
Silver Oxide Battery (watch)	3,940	39	3,812	38	3,710	105	762	8	840	8	932	9	1,176	12	3,710	37
<i>sub total</i>	14,785	1,217	16,482	2,056	17,010	2,045	4,538	521	4,439	495	4,714	522	5,024	536	18,715	2,074
Others	146	1	225	2	266	3	201	2	0	0	0	0	65	1	266	3
<b>Total</b>	37,721	1,031	40,781	1,960	34,991	2,030	7,847	636	8,209	645	8,122	637	8,244	630	32,422	2,549
<b>Industrial Material</b>																
Adhesive Tape																
Medical & Construction	6,080	447	6,510	391	6,455	647	1,617	81	1,565	78	1,807	90	1,659	83	6,648	332
Automobile	1,360	15	1,410	16	1,408	66	390	6	349	5	396	8	302	6	1,436	25
Electronics	3,730	32	4,020	44	4,162	245	877	18	1,123	22	1,131	23	1,157	23	4,287	86
Other tapes	5,850	29	4,447	22	4,848	58	1,339	7	1,167	6	1,251	6	1,236	6	4,993	25
<i>sub total</i>	17,020	523	16,387	473	16,873	1,016	4,222	111	4,204	112	4,584	127	4,354	118	17,365	468
Optical																
Camera Lenses	8,130	123	7,350	74	4,687	26	980	10	816	8	760	8	725	7	3,281	33
Car camera Lenses	2,740	548	4,450	890	4,423	724	998	160	1,209	193	1,316	211	1,430	229	4,953	793
LED car head lamp Lenses	3,960	642	4,720	944	5,850	1,016	1,625	301	1,691	313	2,046	379	1,950	361	7,312	1,353
Others	4,090	20	2,595	26	3,360	32	620	6	946	9	607	6	1,187	12	3,360	34
<i>sub total</i>	9,910	1,333	19,115	1,933	18,319	1,798	4,223	476	4,662	524	4,729	603	5,293	609	18,906	2,212
Magnetic Tape	9,280	-66	6,550	-937	2,361	-46	0	0	0	0	0	0	0	0	0	0
Others (EF2)	1,595	36	3,667	80	5,239	165	1,484	45	1,690	51	1,820	55	1,817	55	6,811	204
<b>Total</b>	48,840	1,826	45,719	1,549	42,792	2,965	9,929	638	10,556	696	11,133	791	11,464	793	43,082	2,918
<b>Electronic Appliance/ Consumer Product</b>																
Consumer																
Optical Disk	8,270	83	8,560	482	8,848	921	2,673	267	1,960	196	2,503	250	1,978	198	9,113	911
Dry cell battery	7,190	96	5,800	45	4,990	39	893	9	918	9	1,360	14	1,071	11	4,242	42
Other Consumer products	9,440	-430	10,032	-472	10,240	238	2,244	45	2,549	102	3,074	123	2,681	80	10,548	350
<i>sub total</i>	24,900	-251	24,392	54	24,078	1,198	5,809	321	5,427	307	6,937	387	5,729	289	23,903	1,304
Projector	32,660	1,939	32,120	2,514	23,441	255	5,483	0	6,367	191	6,671	200	7,263	145	25,785	536
Beauty care	9,680	606	11,240	1,209	9,633	1,115	2,714	190	2,470	173	2,206	199	1,762	176	9,151	738
Others	2,232	39	1,363	14	179	2	3	0	45	0	131	1	0	0	179	2
<b>Total</b>	69,472	2,334	69,115	3,790	57,331	2,570	14,009	511	14,309	671	15,944	787	14,755	610	59,017	2,580
<b>Grand Total</b>	156,033	5,191	155,615	7,300	135,114	7,566	31,784	1,785	33,074	2,012	35,200	2,215	34,463	2,034	134,521	8,047

(Note) \*actual growth rate is based on sales growth of FY03/2016 1-4Q Vs. FY03/2017 1Q-4Q. Estimated OPM, growth rate and OP for each product are estimated by METRICAL

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