

## KYB Corporation

7242 Tokyo Stock Exchange First Section

1-Jul.-16

Important disclosures and disclaimers appear at the end of this document.

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\* These are not official YoY changes as IFRS was applied from FY3/17. The presented data are based on comparison with figures from the previous fiscal year under the Japanese GAAP.

## ■ Global Top-Class Manufacturer of Shock Absorbers and Hydraulic Equipment

KYB (7242) is the domestic top manufacturer and a global top-class manufacturer of shock absorbers and hydraulic equipment used in automobiles, motorcycles, construction machinery, and other systems. It currently has six supervisory sites, 37 manufacturing sites, six R&D sites, and 33 sales and other services sites in 23 countries, including Japan. KYB is unique in its ability to conduct transactions with automobile, motorcycle, and construction machinery manufacturers in countries worldwide due to having robust technologies cultivated over many years and being an independent firm not affiliated with a certain group. This feature is an important strength too.

KYB posted FY3/16 results with ¥355,384mn in net sales (-4.1% YoY), ¥15,610mn in operating income (+14.9%), ¥14,267mn in ordinary income (-10.0%), and a ¥2,237mn net loss attributable to owners of the parent (down ¥9,289mn YoY). While overall sales fell, KYB raised operating income owing to higher sales and profit in the mainstay business and curtailment of SG&A expenses. Yet ordinary income slipped due to an impact from the stronger yen. KYB booked extraordinary losses covering a loss related to anti-trust law in the US and an impairment loss at the Chinese subsidiary.

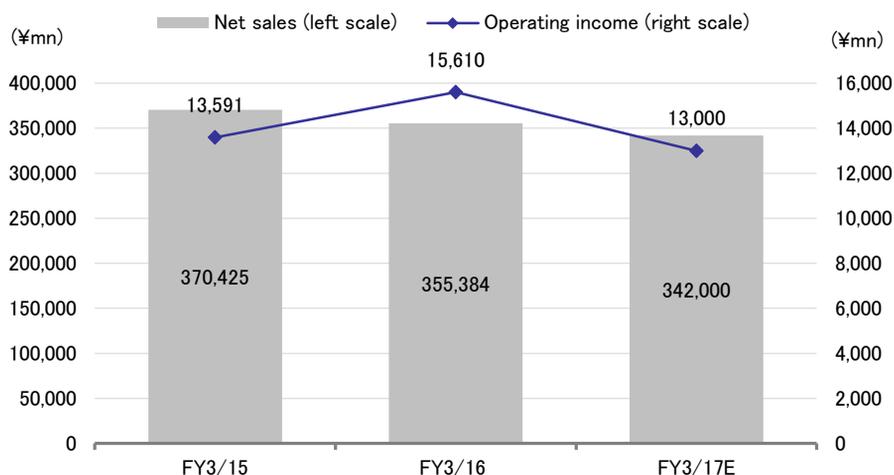
KYB forecasts ¥342,000mn in net sales (-3.8% YoY\*), ¥13,000mn in operating income (-16.7%), and ¥7,900mn in net profit attributable to owners of the parent (vs. a ¥2,237mn loss in FY3/16) in FY3/17. It expects steady growth in the various businesses in real terms, but forecasts a decline in operating income due to factoring in yen appreciation for forex rates.

While KYB presented a medium-term business plan with FY3/17 as the final year, plan goals are moderately divorced from reality at this point since the plan was formulated prior to the slowdown in the Chinese economy. We expect KYB to disclose a new medium-term plan and will be paying close attention to the content. For shareholder returns, KYB is aiming for a 2% dividend on shareholders' equity ratio (DOE) and we see room for a dividend hike if profit expands and this provides a boost to shareholders' shareholdings' equity.

## ■ Check Point

- Independent firm not affiliated with any specific corporate group
- Increased Operating Income on Benefits from Stronger Sales in Mainstay AC Operations and Curtailment of SG&A Expenses
- Forecast for ¥342bn in net sales and ¥13bn in operating income in FY3/17

### Business Performance



## Company Overview

### Independent Firm Not Affiliated with any Specific Corporate Group

#### (1) History

Founder Shiro Kayaba established the company in 1919 as Kayaba Research Center to research hydraulic equipment. The company was renamed Kayaba Seisakusho and manufactured hydraulic dampers for Zero fighter planes and catapults for aircraft carriers before the war. It changed its name to Kayaba Industry Co., Ltd. after the war and expanded output of mainly shock absorbers for automobiles and motorcycles. It also broadened product scope to construction machinery and special-purpose vehicles. It currently operates globally with sites in 23 countries worldwide. While Toyota Motors (7203) is the largest shareholder, KYB is an independent firm not affiliated with any specific corporate group. The company listed its shares on the Tokyo Stock Exchange in 1959.

#### Main Events

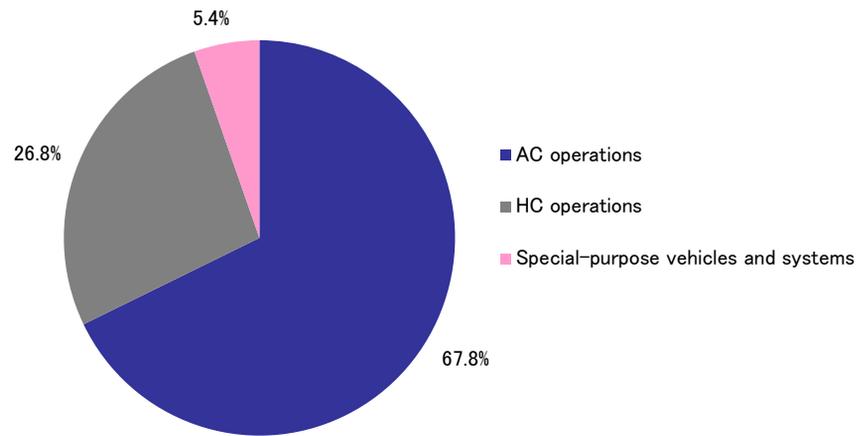
1919	Kayaba Research Center was founded by Shiro Kayaba
1927	Kayaba Seisakusho was established for manufacturing of hydraulic dampers, catapults, etc. for aircraft
1948	Kayaba Industry Co., Ltd., was established
1959	Company's shares were listed on the Tokyo Stock Exchange
1968	Gifu North Branch Plant (presently Gifu North Plant) was established
1974	Sales subsidiary was established in the United States
1977	Nippon Power Steering Co., Ltd., was established
1985	Company name in Japanese changed from kanji (Chinese characters) to katakana (Japanese Characters)
2001	Shock absorber manufacturing subsidiary in the United States became a wholly owned subsidiary
2004	Industrial-use hydraulic equipment manufacturing subsidiary was established in China
2011	Operations started at KYB Developmental Experiment Center, an its own test tracks for automobile and motorcycle components
2014	Established Chennai branch in India
2015	KYB Advanced Manufacturing Spain, S.A.U., an automobile shock absorber manufacturing and sales company in Spain, became a wholly owned subsidiary
2016	Established Aircraft Components Division

Source: FISCO Ltd. from company materials

#### (2) Business activities

KYB's core products are shock absorbers, suspensions, cylinders, and power steering systems that fundamentally utilize hydraulic technology. Business segments are AC (automotive components) operations, HC (hydraulic components) operations, and special-purpose vehicles and system products and electronics components (hereinafter, "special-purpose vehicles and systems"). Segment sales results in FY3/16 were AC operations at ¥240,949mn (67.8% of total sales), HC operations at ¥95,142mn (26.8%), and special-purpose vehicles and systems at ¥19,293mn (5.4%).

**Net Sales Ratios by Business Segment**  
(FY3/16: ¥355,384mn)



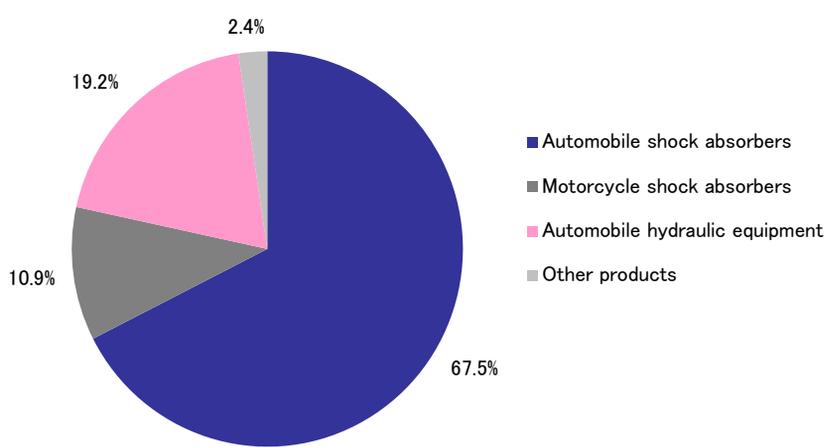
Source: FISCO Ltd. from earnings materials

The three segments consist of the following sub-segments.

**a) AC operations**

- Automobile shock absorbers (45.8%): This business covers shock absorbers used in automobiles with a breakdown of just over 50% in new-vehicle OEM, just under 40% in aftermarket products, and about 10% in genuine replacement parts (OEM). KYB supplies these products to Japanese auto firms as well as major overseas automakers.
- Motorcycle shock absorbers (7.4%): This business has a sales breakdown of about 70% in front forks and the remaining 30% in rear cushion units. KYB has extensive transactions with Yamaha Motor (7272) because of its joint ventures in Japan and other countries.
- Automobile hydraulic equipment (13.0%): This business has a sales breakdown of just over 30% in hydraulic power steering, just over 30% in electric power steering (EPS), and just over 30% in continuously variable transmission (CVT) pumps.
- Other products (1.6%): Stay dampers and other products

**Breakdown of the AC Operations Business**  
(FY3/16: ¥240,949mn)



Source: FISCO Ltd. from earnings materials

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\* This sub-segment will be classified as "special-purpose vehicles and systems and others" from FY3/17.

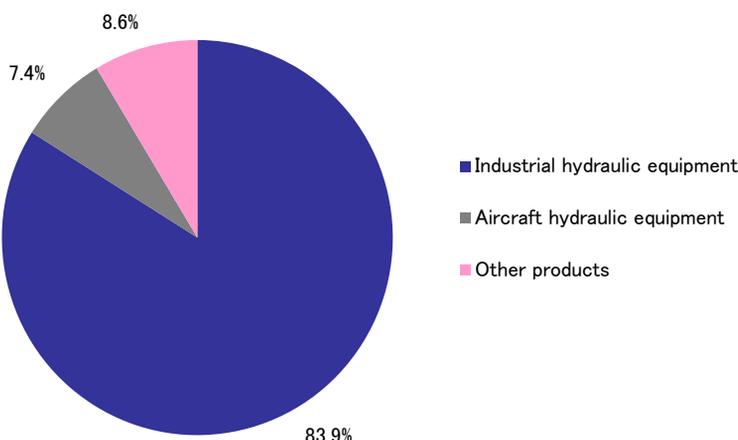
**Major Customers for the AC Operations Business (FY3/16)**

Major customer	Sales ratio	Products
Toyota	15.7%	Automobile shock absorbers
Nissan	7.3%	Automobile shock absorbers, steering products
Fuji Heavy Industries	6.4%	Automobile shock absorbers, steering products
JATCO	6.3%	CVT pumps
Yamaha Motor	5.2%	Motorcycle shock absorbers
Honda	3.6%	Automobile and motorcycle shock absorbers
Suzuki	3.1%	Automobile and motorcycle shock absorber, steering products
Peugeot Citroen	2.8%	Automobile shock absorbers
Renault	2.8%	Automobile shock absorbers
Mitsubishi Motors	2.4%	Automobile shock absorbers, steering products
Others	44.4%	

**b) HC operations**

- Industrial hydraulic equipment (22.5%): The sales breakdown is hydraulic cylinders at about 31%, drive motors at about 19%, turning motors at about 6%, control valves at about 21%, and pumps and gear pumps at about 7%. These products are mainly used in construction machinery, forklifts, and agricultural machinery.
- Aircraft hydraulic equipment\* (2.0%): Various actuators used in aircraft.
- Other products (2.3%): Brakes and dampers used in railway vehicles (primarily bullet trains)

**Breakdown of the HC Operations Business (FY3/16: ¥95,142mn)**



Source: FISCO Ltd. from earnings materials

**Major Customers for the HC Operations Business (FY3/16)**

Major customer	Sales ratio	Products
Hitachi Construction Machinery	16.0%	Cylinders, control valves
Kubota	7.2%	Cylinders, motors
Sumitomo Construction Machinery	6.5%	Cylinders, motors, control valves, pumps
Caterpillar	6.4%	Cylinders, motors
Kobelco Construction Machinery	5.1%	Cylinders, motors
Takeuchi	3.9%	Cylinders, control valves
Ministry of Defense	3.8%	Actuators
Yanmar	2.4%	Motors, pumps
Komatsu Forklift	2.0%	Cylinders, pumps
Bonfiglioli Trasmital	2.0%	Motors
Others	44.7%	

**c) Special-purpose vehicles and systems**

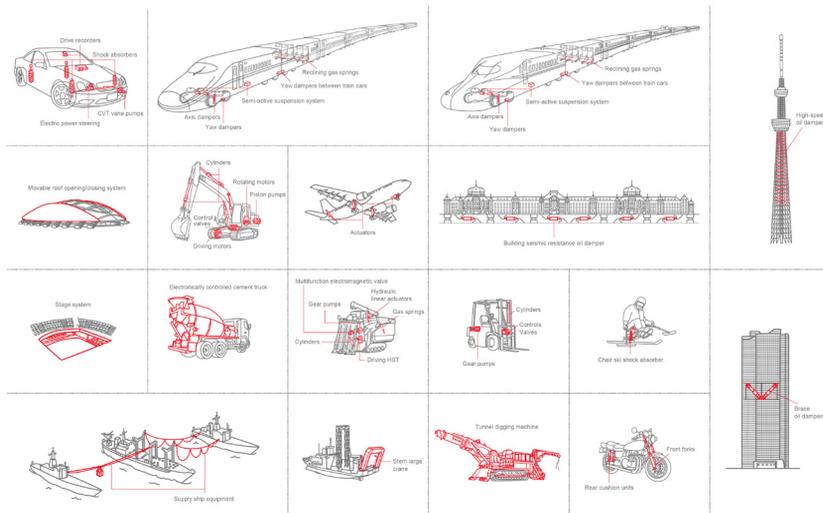
- Special-purpose vehicles (2.5%): Specialized products used in concrete mixer trucks and other special-purpose vehicles.
- Others (2.9%): System products, electronic equipment, seismic isolation systems, vibration control dampers and building and stage equipment



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(Red portion shows areas that use the company's products)

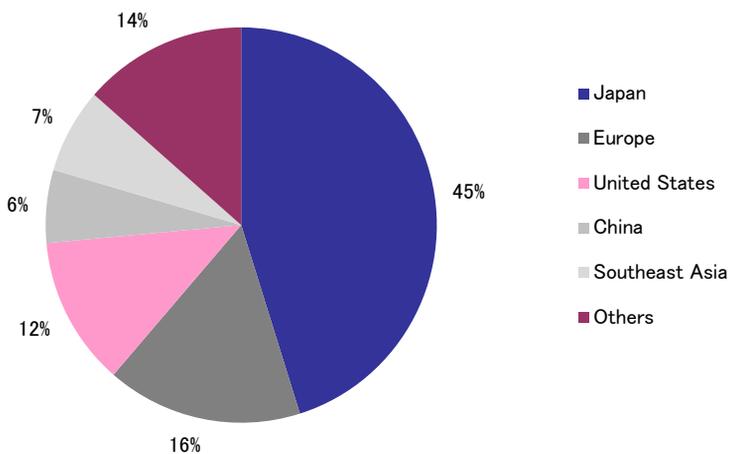


Source: FISCO Ltd. from earnings materials

**(3) Regional sales**

KYB operates sites in 23 countries worldwide. Regional sales results in FY3/16 were Japan at ¥160.4bn (45%), Europe at ¥57.5bn (16%), the US at ¥43.4bn (12%), China at ¥21.2bn (6%), Southeast Asia at ¥24.7bn (7%), and others at ¥48.1bn (14%). The overseas sales ratio hence works out to 55%. While forex rate trends inevitably affect results, KYB is not overly exposed to transactions in a particular currency.

**Sales Ratios by Regions (FY3/16)**



Source: FISCO Ltd. from earnings materials

**(4) Market shares and competition**

**a) AC operations**

KYB estimates that it holds a top share in the mainstay new-vehicle shock absorber market in Japan at about 43% and also has a roughly 15% share in the global market. KYB's share of about 17% in the global aftermarket puts it in the top three. It holds a global share of around 10% in motorcycle shock absorbers too.

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Key rivals for new-vehicle shock absorbers are Showa (7274) and Hitachi Automotive Systems in Japan and Sachs (Germany), Tenneco (United States), and Mando (South Korea) in the global market. Primary rivals for aftermarket shock absorbers are Hitachi Automotive Systems in Japan and Monroe (Tenneco brand) in the global market. KYB competes for motorcycle shock absorbers with Showa in Japan and Ohlins (Sweden) in the global market. It also competes for steering products with JTEKT (6473), NSK (6471), and Showa in Japan and TRW (ZF subsidiary), Mando, and Nexteer (United States) in the global market.

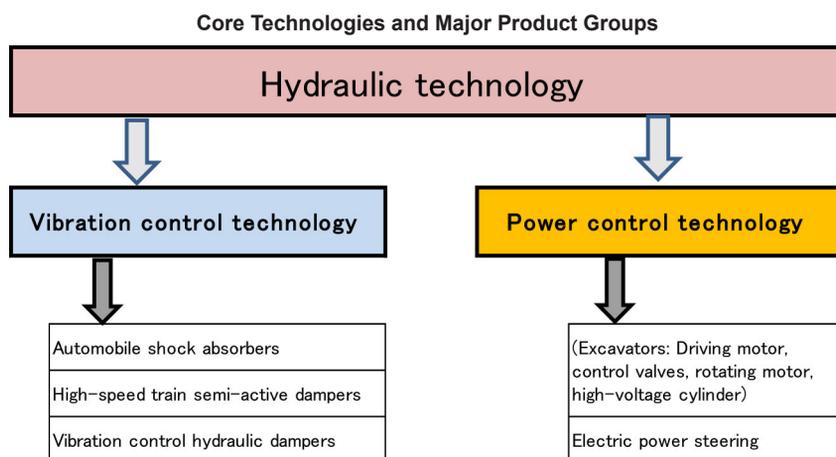
### b) HC operations

KYB's global market shares are 32% for hydraulic cylinders, 29% for driving motors, 30% for turning motors, 43% for control valves, and 23% for gear pumps used in mini-shovels. Its shares are 25% for hydraulic cylinders, 10% for driving motors, 7% for turning motors, and 19% for control valves used in mid-sized shovels, and 41% for hydraulic cylinders, 7% for control valves, and 36% for gear pumps used in forklifts. It holds larger shares for smaller construction equipment.

Main rivals are Korea-based Dongyang Mechatronics and China-based Jiangsu Hengli Hydraulics for hydraulic cylinders, Nabtesco (6268), Fujikoshi (6474), and Doosan-Mottrol (South Korea) for driving motors, Fujikoshi for turning motors, and Nabtesco and Husco (United States) for control valves. In-house production by major construction equipment firms presents competition too (in the broad sense) for hydraulic cylinders, control valves, and other items.

### (5) Unique features and strengths

We think technology capabilities cultivated over many years are KYB's most distinguishing feature and strength. The company was originally established to research hydraulics (as seen in the corporate history) and possesses global top-class technologies for hydraulics. It built the current product line-up by applying hydraulic technologies to vibration control and power control technologies.



Source: FISCO Ltd. from company materials

Another aspect of KYB's technology portfolio is its wide range of component technologies, including hydraulic cylinders, suspensions, motors, valves, pumps, and actuators. While it faces many rivals in each of these areas, few companies worldwide have all of these technologies. We think the ability to provide system products that integrate these technologies is a unique feature and strength.

KYB also stands out in its independence and absence of affiliation with a particular corporate group and has a broad scope of customers that includes major automakers, motorcycle firms, construction equipment firms, and others. This business model reduces the earnings impact from a specific corporate group. Despite being an autonomous player, KYB operates a global production and sales network and is capable of handling transactions with many companies worldwide. KYB reports that it has reached a 93% coverage rate for US, European, and Japanese vehicles in the global shock absorber aftermarket.

## ■ Business Performance Trends

### Increased Operating Income on Benefits From Stronger Sales in Mainstay AC Operations and Curtailment of SG&A Expenses

#### (1) FY3/16 results

##### ●Income situation

KYB booked ¥355,384mn in net sales (-4.1% YoY), ¥15,610mn in operating income (+14.9%), ¥14,267mn in ordinary income (-10.0%), and a ¥2,237mn net loss attributable to owners of the parent (a change of ¥9,289mn YoY).

While overall sales fell, KYB raised operating income owing to higher sales in the mainstay AC operations business and curtailment of SG&A expenses. Yet ordinary income slipped sharply due to an impact from forex loss related to the stronger yen (posting a ¥2,218mn loss in FY3/16 versus a ¥1,214mn profit in the previous year) and an investment loss at an equity-method affiliate (¥1,297mn setback related to weaker BRL depreciation at a Brazilian affiliate). KYB reported a ¥2,237mn net loss attributable to owners of the parent, despite an extraordinary profit from selling securities (¥1,935mn), because it incurred extraordinary losses covering a loss related to anti-trust law in the US (¥8,152mn) and impairment losses totaling ¥4,044mn (including about ¥3,500mn for the Chinese subsidiary under the HC operations business due to a decline in profitability).

(unit: ¥mn, %)

	FY3/15		FY3/16			
	Amount	% of total	Amount	% of total	Change value	Change rate
Net sales	370,425	100.0	355,384	100.0	-15,040	-4.1
Gross income	70,822	19.1	70,355	19.8	-467	-0.7
SG&A expenses	57,230	15.4	54,744	15.4	-2,486	-4.3
Operating income	13,591	3.7	15,610	4.4	2,019	14.9
Ordinary income	15,852	4.3	14,267	4.0	-1,585	-10.0
Net profit (loss) attributable to owners of the parent	7,052	1.9	-2,237	-	-9,289	-
(Average forex rates)						
US dollar	109.93		120.15			
Euro	138.77		132.57			

Source: FISCO Ltd. from earnings materials

#### Net Sales and Profits by Business Segments

(unit: ¥mn, %)

	FY3/15		FY3/16			
	Amount	% of total	Amount	% of total	Change value	Change rate
Net sales	370,425	100.0	355,384	100.0	-15,040	-4.1
Automobile shock absorbers	159,133	43.0	162,633	45.8	3,500	2.2
Motorcycle shock absorbers	26,662	7.2	26,330	7.4	-332	-1.2
Automobile hydraulic equipment	45,850	12.4	46,282	13.0	432	0.9
Other products	5,440	1.5	5,703	1.6	263	4.8
AC operations (total)	237,086	64.0	240,949	67.8	3,863	1.6
Industrial hydraulic equipment	97,560	26.3	79,854	22.5	-17,706	-18.1
Aircraft hydraulic equipment	7,277	2.0	7,068	2.0	-208	-2.9
Other products	8,385	2.3	8,218	2.3	-167	-2.0
HC operations (total)	113,222	30.6	95,142	26.8	-18,081	-16.0
Special-purpose vehicles	8,387	2.3	9,004	2.5	617	7.4
Equipment, electronics, and others	11,727	3.2	10,288	2.9	-1,439	-12.3
Special-purpose vehicles and systems (total)	20,115	5.4	19,293	5.4	-822	-4.1
Operating income	13,591	3.7	15,610	4.4	2,019	14.9
AC operations	6,943	1.9	14,330	4.0	7,387	106.4
HC operations	4,992	1.3	-41	-0.0	-5,033	-
Special-purpose vehicles and systems	1,655	0.4	1,321	0.4	-334	-20.2

Source: FISCO Ltd. from earnings materials

##### a) AC operations

Sales rose 2.2% YoY to ¥162,633mn in the core automobile shock absorber business thanks to upbeat North American OEM (new vehicle) and Middle East aftermarket businesses. Motorcycle shock absorber sales at ¥26,330mn (-1.2%), automobile hydraulic equipment at ¥46,282mn (+0.9%), and other products (¥5,703mn (+4.8%)) were roughly on par with the previous year. Segment sales totaled ¥240,949mn (+1.6%).



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Segment operating income climbed substantially to ¥14,330mn (+106.4% YoY), despite setbacks from higher personnel costs (about ¥1,300mn) and larger depreciation costs (about ¥1,100mn), due to an even larger combined addition from the sales-increase effect (about ¥3,700mn), a decline in quality-related reserve provisioning (about ¥3,300mn), cutbacks in various spending (about ¥2,000mn), and contributions from new sites in India and Mexico (about ¥1,300mn).

### b) HC operations

While aircraft hydraulic equipment and other hydraulic equipment sales were roughly flat YoY, mainstay industrial hydraulic equipment sales dropped sharply to ¥79,854mn (-18.1% YoY) due to a steep sales decline for hydraulic equipment used in mid-sized shovels related to a slump in China's construction equipment market. Segment sales were down 16.0% to ¥95,142mn as a result.

Segment operating income slipped to a ¥41mn loss (vs. a ¥4,992mn profit in the previous year), even with benefits from reductions in personnel expenses and other spending (about ¥3,500mn), because of the roughly ¥9,000mn profit setback from lower sales.

### c) Special-purpose vehicles and systems

Segment sales declined 4.1% to ¥19,293mn, despite relatively upbeat sales of special-purpose vehicles at ¥9,004mn (+7.1%), owing to the dip in systems and others sales to ¥10,288mn (-12.3%). Segment profit eased to ¥1,321mn (-20.2%) due to weaker sales. This segment does not have much impact on overall income because of its relatively low sales and profit values.

### ●Fiscal situation

Next, we review KYB's fiscal position at the end of FY3/16. It reported ¥170,363mn in current assets (-¥14,496mn from end-FY3/15), including a ¥5,621mn decline in cash and equivalents, a ¥10,321mn decline in notes and accounts receivables, and a ¥1,191mn rise in inventory assets. Fixed assets were at ¥183,123mn (-¥16,946mn) with a breakdown of ¥155,598mn in tangible fixed assets (-¥8,312mn), ¥1,744mn in intangible fixed assets (-¥232mn), and ¥25,781mn in investments and other assets (-¥8,402mn). These levels put total asset value at ¥353,487mn (-¥31,442mn).

It booked ¥141,536mn in current liabilities (-¥7,939mn YoY), including a decline of ¥4,758mn in accounts payables and an increase of ¥3,441mn in short-term borrowings. Fixed liabilities totaled ¥60,663mn (-¥532mn) with declines of ¥4,444mn in long-term loans and ¥4,185mn in deferred tax liabilities and a rise of ¥7,882mn in retirement benefit liabilities. Net assets totaled ¥151,288mn (-¥22,970mn) with declines of ¥5,268mn in retained earnings due to booking a net loss attributable to owners of the parent, ¥5,810mn in the currency conversion adjustment account, and ¥7,158mn in cumulative adjustments related to retirement benefits.

	End-FY3/15	End-FY3/16	Change value
Cash and equivalents	31,752	26,131	-5,621
Accounts receivable	87,755	77,434	-10,321
Inventory assets	47,125	48,316	+1,191
Current assets (total)	184,859	170,363	-14,496
Tangible fixed assets	163,910	155,598	-8,312
Intangible fixed assets	1,976	1,744	-232
Investments and other assets	34,183	25,781	-8,402
Fixed assets (total)	200,069	183,123	-16,946
Assets (total)	384,929	353,487	-31,442
Accounts payable	63,545	58,787	-4,758
Short-term borrowings	46,785	50,226	+3,441
Unpaid amounts	13,439	9,657	-3,782
Current liabilities (total)	149,475	141,536	-7,939
Long-term loans	42,623	38,179	-4,444
Deferred tax liabilities	5,157	972	-4,185
Retirement benefit liabilities	6,011	13,893	+7,882
Fixed liabilities (total)	61,195	60,663	-532
Liabilities (total)	210,671	202,199	-8,472
Net assets (total)	174,258	151,288	-22,970

Source: FISCO Ltd. from earnings materials

**●Cash flow situation**

We review cash flow trends from FY3/16. Cash flow from operating activities was a ¥19,197mn surplus (vs. a ¥21,123mn surplus in the previous year), including inflows of ¥3,697mn in profit before income taxes and other adjustments, ¥18,203mn in depreciation costs, and ¥5,716mn in decrease in accounts receivable and outflows of ¥3,385mn from higher inventory assets and ¥2,335mn from a decline in procurement liabilities. Cash flow from investing activities was a ¥19,456mn deficit (vs. a ¥29,425mn deficit), and the main item was ¥21,436mn in net acquisition of tangible fixed assets. Cash flow from financing activities was a ¥3,498mn deficit (vs. a ¥580mn deficit), mainly consisting of ¥2,736mn in income from a net rise in short-term borrowings, ¥1,617mn in outflow from a net decline in long-term loans, and ¥3,065mn in outflow from dividend payments. Period-end cash and equivalents outstanding value hence dropped ¥5,215mn from the end of FY3/15 to ¥25,295mn.

	(unit: ¥mn)	
	FY3/15	FY3/16
Cash flow from operating activities	21,123	19,197
Profit before income taxes and other adjustments	13,171	3,697
Depreciation costs	16,490	18,203
Decrease (increase) in accounts receivable	-3,677	5,716
Decrease (increase) in inventory assets	-481	-3,385
Increase (decrease) in accounts payable	1,563	-2,335
Cash flow from investing activities	-29,425	-19,456
Acquisition of tangible fixed assets (net)	-29,149	-21,436
Cash flow from financing activities	-580	-3,498
Increase (decrease) in cash and cash equivalents	-7,648	-5,214
Year-end balance of cash and cash equivalents	30,510	25,295

Source: FISCO Ltd. from earnings materials

## Forecast for ¥342bn in Net Sales and ¥13bn in Operating Income in FY3/17

### (2) FY3/17 forecasts

We expect ¥342,000mn in net sales (-3.8% YoY), ¥13,000mn in operating income (-16.7%), and ¥7,900mn in net profit attributable to owners of the parent (vs. a ¥2,237mn loss in FY3/16) for FY3/17\*. Our forex assumptions factor in a stronger yen at ¥105.00/\$ (vs. ¥120.15) and ¥120.00/EUR (vs. ¥132.57). We project a ¥13,384mn decline in sales (YoY), but an increase of about ¥11,000mn in local-currency terms and a roughly ¥24,000mn setback from the forex impact.

\* The Company decided to adopt international financial reporting standards (IFRS) from FY3/17. As a result, year-on-year comparisons against the figures under Japanese accounting standards (JGAAP) are not officially announced. Moreover, ordinary income is not presented under IFRS, but for reference we have presented year-on-year changes against the JGAAP figures from the previous fiscal year. Furthermore, the aircraft hydraulic equipment sub-segment was reorganized from HC operations to special-purpose vehicles and systems in FY3/17.

	FY3/16		FY3/17 (E)			
	Amount	% of total	Amount	% of total	Change value	Change rate
Net sales	355,384	100.0	342,000	100.0	-13,384	-3.8
Automobile shock absorbers	162,633	45.8	146,800	42.9	-15,833	-9.7
Motorcycle shock absorbers	26,330	7.4	24,100	7.0	-2,230	-8.5
Automobile hydraulic equipment	46,282	13.0	46,000	13.5	-282	-0.6
Other products	5,703	1.6	6,300	1.8	597	10.5
AC operations (total)	240,949	67.8	223,200	65.3	-17,749	-7.4
Industrial hydraulic equipment	79,854	22.5	81,600	23.9	1,746	2.2
Other products	8,218	2.3	8,000	2.3	-218	-2.7
HC operations (total)	88,042	24.8	89,600	26.2	1,558	1.8
Special-purpose vehicles	9,004	2.5	9,100	2.7	96	1.1
Aircraft hydraulic equipment	7,068	2.0	8,000	2.3	932	13.2
Equipment, electronics, and others	10,288	2.9	12,200	3.6	1,912	18.6
Special-purpose vehicles and systems (total)	26,393	7.4	29,200	8.5	2,807	10.6
Operating income	15,610	4.4	13,000	3.8	-2,610	-16.7
AC operations	14,330	4.0	8,500	2.5	-5,812	-40.6
HC operations	-41	-0.0	2,600	0.8	2,649	-
Special-purpose vehicles and systems	1,321	0.4	1,900	0.6	580	43.9
Net income	-2,237	-0.6	7,900	2.3	10,137	-
(Average forex rates)						
US dollar		120.15		105.00		
Euro		132.57		120.00		

Source: FISCO Ltd. from company materials

Aircraft hydraulic equipment sales come under special-purpose systems and vehicles in FY3/16 and the FY3/17 forecast, but related profits show up in HC operations in FY3/16 and special-purpose systems and vehicles in FY3/17.

Below we review forecasts and major policies by business segment.

#### a) AC operations

##### ●Results forecasts

We do not expect a large increase in sales volume for mainstay automobile shock absorbers because of the prospect of global auto output at about 92mn vehicles (+3.4% YoY) and domestic output at 9mn vehicles (0.0%) in 2016. We also project a 9.7% decline in automobile shock absorber sales to ¥146,800mn using our forex assumptions of yen appreciation. We forecast an 8.5% drop in motorcycle shock absorber sales to ¥24,100mn due to a likely fall in sales volumes in China and ASEAN countries and concerns about surplus supply capacity. We thus anticipate a 7.4% YoY decline in sales for the AC operations business to ¥223,200mn. We think operating income will move sharply lower with a 40.6% drop to ¥8,500mn because of pressure from weaker sales mainly driven by the forex (yen appreciation) factor.

##### ●Key policies

KYB aims to promote value-added product development, innovative monozukuri (manufacturing expertise), and profit expansion driven by increased sales of aftermarket products as core policies in FY3/17. It also intends to implement measures that address issues for motorcycle products and EPS.

##### • Value-added product development

The main issues it is addressing are electronically controlled suspension and weight reduction.

European firms have the lead in developing electronically controlled suspensions worldwide, and non-Japanese firms dominate in the premium market segment. KYB hence plans to leverage its sturdy ties with Japanese customers to promote leading joint development with Japanese automakers. It also aims to expand sales in Europe by utilizing its relationships with major existing European customers. It will be moving forward with support for compact vehicles too. Specific goals are beginning volume output during FY3/17 and ¥6.0bn in sales in FY3/21.

Europe has the lead in weight reduction initiatives too, though Japanese customers are also ramping up requests for lighter features, mainly in environment-friendly vehicles. We thus anticipate pursuit of leading joint developments utilizing the base of Japanese customers in this area too. In Europe, KYB is developing and rolling out advanced technologies at local development sites. Toyota selected hollow rods for use in the Prius in 2015, and KYB intends to use this example to make proposals to customers, including for other products.

##### • Innovative monozukuri

Production up to now had been characterized by large lot output, manual output, and line deployment at individual sites, but KYB plans to make the following changes.

- 1) Small lot output: Flexible response to rapid volume shifts and low-volume, high-variety output
- 2) Automation: Improve quality by removing human error and enhance cost competitiveness
- 3) Global production lines: Increase the speed of lines and product development by adopting unified specifications

KYB plans to ramp up a new shock absorber line in Japan during FY3/17 that adheres to these goals with automated welding, assembly, and inspections and compact coating equipment. It is targeting a 25% rise in productivity and a 75% automation rate and will steadily deploy this new line format at all sites.



## KYB Corporation

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### • Earnings expansion by increasing sales of aftermarket products

KYB envisions strong growth in the global shock absorber aftermarket from 125mn units in 2015 to 164mn units in 2025 (+31% from the 2015 level). It hopes to boost sales of high-margin aftermarket products and expand profits by utilizing strengths, such as a 93% coverage rate in the global market and a global production and sales network. KYB intends to implement the following measures as part of strategic efforts to “shift emphasis from volume to profits” and “bolster global optimal supply operations.”

- 1) Net business increase by entering new genre markets in North America
- 2) Sales promotions for high value-added products
- 3) Expansion of sales network in Mexico and Brazil
- 4) Cutbacks in spending by streamlining warehouses in Europe
- 5) Increased sales in the African market
- 6) Entry into the ASEAN truck market
- 7) Reinforcement of applications and sales expansion for Japanese, US, and European vehicles in Chinese, Australian, and Mekong markets
- 8) Optimal procurement utilizing 12 production sites located globally
- 9) Flexible procurement operations that factor in forex movements

### • Motorcycle products and EPS

Excess supply capacity has emerged for motorcycle shock absorbers because of declines in sales volumes in China and ASEAN countries. Additionally, profit margin is slipping in the domestic market amid advances in output transfers to overseas sites. KYB plans to address these conditions by consolidating output in Vietnam and India and shrinking and reorganizing other sites. It expects these reforms to lower production capacity from 11mn units to 7mn units. It also intends to develop a cost-reduced model for the ASEAN market. KYB is picking up the development pace for electronically controlled suspensions in Japan.

For EPS business, technology development is becoming more sophisticated due to progress in automated driving, and wider EPS adoption is contributing to lower market prices and weaker profitability. KYB intends to address these conditions by enhancing electronic technology development operations, making effective use of external resources, designing cost-reduced EPS models, and expanding EPS sales for ATVs (all-terrain vehicles), UTVs (utility task vehicles), and construction machinery and agricultural machinery.

### b) HC operations

#### • Results forecasts

We expect a prolonged slump in the Chinese market for core industrial hydraulic equipment, but there are signs of bottoming out and our forecast factors in a slight rebound in FY3/17. In the ASEAN region, however, we project a sales increase of as much as ¥800mn in Indonesia. We forecast a ¥1,746mn YoY rise in industrial hydraulic equipment sales to ¥81,600mn. We also expect roughly flat sales for other products. We think HC operations sales as a segment should improve to ¥89,600mn (+1.8% YoY).

We anticipate a recovery in operating income to ¥2,600mn (vs. a ¥49mn loss in FY3/16) based on the lift from higher sales and structural-reform benefits (site consolidation and impairment loss processing).

#### • Key policies

In the excavator market, a major demand segment, while demand for large vehicles (six tons or more) is steadily weakening after the peak in 2010, we expect a lengthy downturn in China and sluggish demand from the resources development segment in the US market. However, mini excavators (less than six tons) offer a growth market as urban-type construction machinery amid advances in urbanization, and we forecast a moderate upward trend in demand. KYB is putting focus on “completion of structural reforms” and “expansion of the non-excavator ratio” as important initiatives in this environment.

#### • Completion of structural reforms

KYB already implemented reorganization and integration that goes beyond the existing framework since FY3/16 and intends to finish these activities. It completed integrations of two production sites in China, two sales sites in China, and two production sites in Japan in April 2016. These reforms aim to lower personnel costs, business outsourcing costs, and other expenses, including an anticipated roughly ¥700mn in spending cutbacks in China.

KYB had been scaling back cylinder production sites (from 15,000 units to 12,000 units per month in Japan and from 12,000 units to 6,000 units in China) as part of streamlining production facilities related to demand outlook revisions, but these efforts finished too. It is currently revamping and reassigning personnel in China (totaling about 200 people over the next two years).

**• Expansion of non-excavator business**

For other construction equipment, KYB is developing suspension hoist cylinders using excavator cylinder production equipment. This is possible due to integration of suspension and cylinder technologies and is something that KYB can handle because it involves multiple component technologies. For farming equipment, it aims to expand sales of high-efficiency electronically controlled products in developed countries and increase sales of wide-use products with a track record in emerging countries. For railway equipment, it intends to pursue a larger market share in Japan with the release of new products and expand sales to overseas customers.

**c) Special-purpose vehicles and systems****• Results forecasts**

We expect firm sales of special-purpose vehicles, equipment and electronic devices, and aircraft hydraulic equipment moved to the segment from FY3/17, driving a 10.6% YoY rise in sales to ¥29,200mn. We also project a 43.9% increase in operating income to ¥1,900mn. The profit growth rate is higher because FY3/16's result did not include profit from aircraft hydraulic equipment in a segment reshuffling.

**• Key policies**

KYB plans to expand sales to existing customers and recruit new customers in private-sector business for aircraft equipment. Specifically, it intends to reopen a representative office in Seattle (where Boeing has its headquarters) and thereby strengthen North American business. It also aims to continue efforts to participate in new programs and expand repair business in the public-sector market.

KYB will establish production, sales, and technology operations that can quickly respond to domestic market trends in the special-purpose vehicles and systems business. It aims to ramp up a project for bolstering production capabilities in India, a growth market, and thereby raise local market share from 4.5% in FY3/16 to 15.0% in FY3/17. The seismic absorption equipment market is steadily consolidating at four domestic companies (KYB holds a roughly 50% share). Major general contractors are focusing on measures to deal with long-period earthquake ground motion, and KYB hopes to achieve differentiation versus rivals by developing related measures as a pressing issue. It also intends to promote a switch from waiting for sales to proposal-type sales.

**■ Medium-Term Business Plan****Plans to Announce a New Medium-Term Business Plan in May 2017**

The KYB Group is currently implementing a medium-term business plan with FY3/17 goals of ¥430bn in net sales and ¥30bn in operating income (vs. ¥352.7bn and ¥18.2bn respectively in FY3/14). KYB prepared the plan in the midst of robust momentum in the Chinese market (particularly for construction machinery), and plan goals are slightly out of touch with reality at this point because of the subsequent sharp slowdown by the Chinese economy and market. Management plans to announce the next medium-term business policies in May 2017. We intend to carefully review and assess the content once KYB unveils the new medium-term plan.

**■ Shareholder Returns Policy****Aiming for 2% DOE as the Shareholder Returns Policy**

KYB aims for a 2% dividend on shareholders' equity ratio (DOE), rather than a dividend payout ratio, as its shareholder returns policy. It announced an ¥11 annual dividend target for FY3/17, and this level works out to roughly 2.1% DOE, based on shareholders' equity (rather than net assets) from the end of FY3/16, in line with the company's target standard. The dividend payout ratio comes to 35.6%. We see a possibility of KYB raising the dividend if profit expands and thereby lifts shareholders' equity.

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