

Equities

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Eastern Japan earthquake/consumer electronics, components, chip sectors

FY3/12 sector profit scenario analysis

■ Industry Overview

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- **Why do we need a scenario analysis?** — While there are still many uncertainties, we set a number of assumptions and conduct a scenario analysis for the consumer electronics/components/semiconductors for FY3/12 earnings. Refer to our 1 April report, [Eastern Japan earthquake/power supply scenario analysis - Is power shortage the biggest problem facing corporate Japan?](#), for critical power supply and other assumptions.
- **How was the sector impacted?** — All but a few firms escaped major direct damage. However, the impact from shortages of materials and electric power is substantial, and we think this will present impediments to production in April-June. The impact on the supply chain will likely to linger, with a possible bottom in July-September. In April-June, we think electronic component/consumer electronics makers that suffered direct damage will cut production by 30%-60%, and those suffering indirect effects from damage to the supply chain will cut output by 10%-30%. In July-September, we put production cuts at 10%-40% and 0%-20%, respectively. Our outlook here factors in the mitigation of impacts through the shifting of production to other locations and the use of substitute parts.
- **Which companies will see profits most impacted?** — Consumer electronics: Sony. Electronic components: Mabuchi Motor, Nidec, TDK, Mitsumi, Alps Electric, Hosiden, Rohm, and Taiyo Yuden. Semiconductors: Renesas Electronics.
- **Which companies will see profits least impacted?** — Consumer electronics: Casio Computer. Components: Shinko Electric and Murata. Semiconductors: Elpida, which has prospects for some wafer procurement.
- **Where do we think the market is not recognizing the impact?** — That the impact of the earthquake will last past April-June may not be understood by investors outside of those exposed to Japanese equities. Also, over the next week or two, supply chain disruptions/deceleration due to supply problems could worsen. Consequently, we think the market has yet to discount the concrete earnings impact. Furthermore, results announcements by European, US, and Asian firms starting in the latter part of April may include negative guidance. As there has been little disclosure from these firms, we are concerned that the stock market does not fully appreciate the risks.

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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Figure 1.Scenario analysis (OP estimates in ¥mn)

Code	Company name	Rating	Share price (¥) 11/4/6	Share price performance		Result date	FY10 OP			FY11 OP				BPS (¥)	PBR (x)	Comment
				YTD	Since Mar 11		CE	CIRAE	Factoring in earthquake impact	CIRAE	Pessimistic case	Base case	Optimistic case			
4062	Ibiden	1H	2,518	-5.8%	-5.7%	4/26	31,000	32,200	31,000	36,200	28,300	34,500	37,700	1,818	1.4	PC, smart phone supply chain damaged, risk of indirect impact, but should be minimal. Capex burden merits scrutiny
5334	NGK Spark Plug	2H	1,080	-15.1%	-6.2%	5/6	31,000	31,400	31,400	31,100	25,000	28,100	29,600	935	1.2	Shortfall risk for sensors, ceramic/organic packages, but for spark plugs, high aftermarket weighting means limited impact is likely
6592	Mabuchi Motor	1H	3,955	-6.6%	-0.3%	4/28	7,000	5,500	3,800	5,500	3,300	3,800	4,400	4,982	0.8	Shortfall risk for various motors, including automotive motors
6594	Nidec	1H	7,070	-16.4%	-3.2%	4/25	100,000	103,600	94,900	121,400	85,100	91,400	103,500	2,443	2.9	Shortfall risk for HDDs, ODDs, fans, and consumer electronics motors, as well as Nidec Copal's digital camera components and Nidec Tosok's auto parts, etc.
6665	Elpida Memory	1H	1,063	9.6%	-5.1%	5/12	NA	100,700	28,300	51,400	39,100	33,800	38,500	1,190	0.9	Competitive in mobile DRAM. Higher spot prices a positive. There is wafer procurement risk, but impact should be minimal
6723	Renesas Electronics	2H	622	-24.9%	-26.0%	NA	7,000	18,000	7,000	60,000	-60,500	-44,800	-35,800	1,071	0.6	Impact depends on restoration of closed plants and contributions from outsourced production. Extraordinary losses are a risk
6752	Panasonic	1H	1,012	-13.7%	-4.7%	4/28	310,000	319,000	300,000	363,100	250,700	265,000	280,000	1,349	0.8	Shortfall risk for TVs, cameras, white goods, electronic components, and semiconductors. Increasing restructuring costs also a risk
6753	Sharp	2H	794	-6.9%	-1.2%	4/27	90,000	86,100	80,000	91,000	64,500	78,000	90,000	949	0.8	Shortfall risk for LCD panels and mobile phones. Expect overshoot for solar cells
6758	Sony	1H	2,591	-12.9%	-7.7%	NA	200,000	210,800	190,000	310,900	162,700	220,000	270,000	2,956	0.9	Shortfall in batteries, image sensors, and lasers. Impact on mobile phones, PCs, game consoles, and DVD players also a risk
6762	TDK	1H	4,760	-17.2%	-11.0%	4/27	62,000	62,400	63,500	72,000	40,600	48,100	62,300	4,215	1.1	Shortfall risk for MLCCs, inductors, HDD heads, magnets, power sources, and lithium-ion polymer batteries, etc.
6767	Mitsumi Electronics	2H	1,077	-29.2%	-13.1%	5/12	-4,500	-2,600	-5,500	8,400	3,200	3,900	4,600	1,699	0.6	Concern of undershoot for semiconductors. Damage to supply chain for game consoles, etc. poses risk of indirect impact
6770	Alps Electric	3H	755	-20.4%	-22.0%	5/13	28,500	29,400	27,400	30,300	16,000	23,600	27,000	629	1.2	Concern of undershoots for mechanical components, peripheral products, auto components, car navigation, and distribution. If evacuation zone is expanded, Onahama and Taira plants could close
6773	Pioneer	2S	342	0.3%	-19.0%	5/11	17,000	14,100	16,000	18,800	13,800	15,800	17,800	331	1.0	Shortage of car navigation and Blu-ray components is a risk
6804	Hosiden	2H	774	-18.6%	-8.3%	5/13	4,200	5,100	4,000	6,100	2,800	4,000	4,600	1,494	0.5	Damage to supply chain for various electronic devices, including game consoles, presents risk of indirect damage
6806	Hirose Electric	2H	8,740	-6.3%	-2.3%	5/9	23,000	23,000	22,300	26,000	18,500	21,000	23,500	6,463	1.4	Damage to supply chain presents risk of indirect damage. Restoration of the plants of business partners also requires attention
6839	Funai Electric	2H	2,492	-16.5%	-0.3%	5/9	1,000	5,600	1,000	10,700	4,200	6,700	8,200	4,167	0.6	Panel inventory may remain high. Blu-ray component sourcing a risk
6952	Casio Computer	1M	661	-1.6%	-5.6%	NA	15,000	15,300	14,000	25,500	20,000	23,000	25,000	577	1.1	Disaster impact minor. Electronic dictionaries look to be undershooting but we see this as temporary
6963	Rohm	2H	5,040	-8.0%	-5.6%	5/10	35,000	36,200	33,500	44,500	16,000	29,000	35,000	6,423	0.8	Lower demand due to production cuts by domestic end-product makers a risk
6967	Shinko Electric Industries	1H	883	-3.8%	0.0%	4/28	5,600	5,600	5,400	6,800	3,300	4,700	6,800	1,002	0.9	Damage to PC supply chain presents risk of indirect impact, but should be relatively light
6971	Kyocera	2H	8,480	-0.4%	3.8%	4/27	147,000	150,600	151,400	151,400	112,200	140,900	145,000	7,032	1.2	Downside risk for ceramic components, chips, electronic components, mobile phones, and copiers. Solar cells may beat
6976	Taiyo Yuden	1H	1,105	-13.5%	-9.4%	5/12	10,000	10,400	9,400	14,300	5,300	9,800	12,000	1,177	0.9	Downside risk for MLCCs and recording products. In particular, we are focusing on planned power outages for MLCC material plants
6981	Murata	1H	5,740	-0.5%	2.5%	4/28	82,000	80,000	78,000	96,500	70,700	83,500	96,500	3,555	1.6	Damage to electronic equipment supply chain presents risk of indirect impact, but any problems should be relatively minor. If power shortages impede production at rivals, Murata may gain share

Note: Results dates for Panasonic and Sharp are not confirmed. Mabuchi Motor has an end-December fiscal year, so we use FY12/11 estimates for both fiscal 2010 and fiscal 2011.

Source: Company data, Citi Investment Research and Analysis.

Impact on consumer electronics, components, chip sectors

Products: PCs less impacted than TVs, which in turn are less impacted than digicams/smartphones/tablet PCs

The supply chain for PCs is the most stable among the products, and risks are higher for digicams, smartphones, and tablet PCs.

The risks in the PC supply chain are HDDs (Texas Instruments motor drivers and preamplifiers) and ODDs (deflection plates for use in Asahi Glass optical pickups; Texas Instruments semiconductors). However, Texas Instruments has been producing the same products at other facilities. This and other factors should make it relatively easy to compensate for supply gaps by tapping other sources, so we anticipate a relatively mild impact.

In smartphones and tablet PCs, small displays (Toshiba Mobile Display, Hitachi Display), camera sensors (Sony Kumamoto), core semiconductors and semiconductor package substrates (Mitsubishi Gas Chemical), and connectors are still risks, albeit small. Certain models of certain handset makers could be affected. We anticipate a small to virtually zero impact on Apple's iPhone and iPad.

In digicams, many domestic manufacturers have slowed production of cameras both in Japan and overseas. We attribute this to shortages of cleaning solution (ultrapure hydrogen peroxide) used in the image sensor production process, wafers, lens materials, and batteries.

There are concerns in TVs, including anisotropic conductive film (Sony Chemicals) and ITO target materials (JX Holdings), but they are easing.

In addition to the parts/materials linked to the products above, lithium-ion batteries, electrolytic solutions for lithium polymer batteries, electrodes, separators, and binders pose risks. The production of electrolytic solutions used in electrolytic capacitors has also been disrupted, and in the worst-case scenario the impact could spread to non-mobile products. The entire electronics industry is vulnerable to silicon wafer supply risk.

Firms to keep close eye on downstream supply chain (i.e., consumer electronics)

When classifying the impact of the earthquake by subsector, it is necessary to pay close attention to the consumer electronics industry, which corresponds to the downstream supply chain. The next week or two could see the emergence of firms and products with newly downgraded production volume forecasts.

We believe the consumer electronics firm at the greatest risk is Sony. The company's rechargeable battery and blue-violet laser facilities were damaged by the quake, and while management has announced an outlook for gradual restoration, there is a risk of an impact in consumer electronics, which use these components across the board, including digital cameras, mobile phones, game consoles and PCs, etc.

We think Murata is positioned to benefit. Not only did the company suffer light damage from the quake, rivals' MLCC operations were severely impacted, so Murata is likely to gain market share. Other points of note are Renesas, which suffered severe earthquake damage, and Panasonic, Sharp, and Kyocera, where we expect a spike in demand for solar cells. We see white goods produced by Panasonic and Sharp at the spearhead of reconstruction demand and also spotlight housing-related products made by Panasonic Electric Works and PanaHome. Firms

poised to benefit from current yen weakness are NGK Spark Plug, Elpida Memory, Renesas, Sharp, Sony, Mitsumi, and Rohm.

10 of 22 firms likely to see quake-related profit declines of 30%+

Factoring in a base-case impact from the earthquake, we estimate that OP at 10 of 22 firms is likely to fall 30%+ compared with our previous forecasts: Mabuchi: 31%, Elpida: 34%, Renesas: 175%, into the red, TDK: 33%, Mitsumi: 54%, Hosiden: 34%, Funai: 37%, Rohm: 35%, Shinko Electric: 31%, and Taiyo Yuden: 31%. These are followed by Nidec (25%), Panasonic (27%), Sony (29%), and Alps Electric (22%).

We factor in earthquake-related impact in four main regards: 1) impact from reduced operating rates at plants suffering direct quake damage; 2) impact on the procurement of materials for the company's own products; 3) impact on demand due to production cuts at customers unable to procure parts from other companies; and 4) changes in end-demand.

Appendix A-1

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