TECH

How Sony Makes Money Off Apple’s iPhone

Image sensors for Apple, Samsung fuel Japanese consumer-electronics giant’s turnaround strategy

Sony Chief Executive Kazuo Hirai in the company’s ‘Creative Lounge’ in Tokyo. It has the look and feel of a Silicon Valley startup and is aimed at inspiring new business ideas. PHOTO: JEREMIE SOUTEYRAT FOR THE WALL STREET JOURNAL

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April 28, 2015 10:30 p.m. ET

TOKYO—Sony Corp. lost the smartphone war but rings up a sale on every shipment of Apple Inc. ’s new iPhone 6 or Samsung Electronics Co. ’s Galaxy S6.

The Japanese company is the world’s largest supplier of image sensors in digital cameras. To meet surging demand, Sony plans to invest $375 million in its image-sensor factories on top of nearly $900 million announced earlier this year.

“Whether it’s a device that goes into other manufacturers’ products or sometimes our own, if there’s innovation there...that’s something I get excited about,” says Kazuo Hirai,
Sony’s president and chief executive.

This isn’t the same Sony that popularized transistor radios, the compact disc and Walkman. Pushed by the 54-year-old Mr. Hirai and his powerful second-in-command, finance chief Kenichiro Yoshida, the company has stopped trying to replicate its glorious past as a creator of era-defining consumer-electronics gadgets.

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Instead, Sony is trying harder than ever to profit from other companies’ innovations, such as the iPhone 6. Each one contains two Sony-made image sensors and related parts, which generate revenue of as much as $20 per phone for Sony, analysts say. Earlier-generation iPhones had one Sony sensor apiece. The “selfie” craze has strengthened Sony’s grip on the market.

Signs that the strategic shift is gaining more momentum have doubled Sony’s long-suffering share price in the past year. Results due Thursday are expected to include operating income of ¥68 billion ($571.9 million) for the fiscal year ended March 31. Sony upgraded its forecast last week from the previous ¥20 billion.

But because of write-downs in its smartphone business, Sony has said it expects to report its sixth net loss in the past seven years. The company won’t pay a dividend for the first time since going public in 1958, and its long-term corporate debt rating was cut last year by Standard & Poor’s Ratings Services to one step above “junk” territory.

The costly shadow of Sony’s struggles in consumer electronics keeps Mr. Hirai from using the word “turnaround” yet. Still, Sony has set a target for operating income of at least ¥500 billion in fiscal 2017. Nearly half the total is expected to come from image sensors and Sony’s videogame division.

“If we’re talking about the organization and our strategies and where we want the company to be next year, two years from now, three years from now,” says Mr. Hirai, “yes, we’re starting to turn the corner.”

In February, Sony reorganized its businesses into three tiers determined by growth prospects and investment priority. At the top are image sensors, videogames, movies and music. Cameras, video and audio equipment are in the middle. At the bottom: smartphones and televisions.

That move puts tiny smartphone parts in the same category as Sony’s popular PlayStation 4 game consoles. Their sales topped 20 million in March, far ahead of Microsoft Corp.’s Xbox One.
Sony already got rid of its personal-computer business, and Mr. Hirai has said it would consider selling the TV or smartphone units. Mr. Yoshida is leading a cost-cutting drive to reduce yearly headquarters costs by 30% compared with fiscal 2013.

‘Worn-out image’
“We should move on from the worn-out image of Sony as just a consumer electronics maker,” says Atsushi Osanai, an associate professor at Waseda Business School in Tokyo who used to work at Sony as a product strategist.

Breaking away from the past has caused angst among longtime Sony engineers, who are used to seeing themselves as the elites of Japan’s high-tech industry. “A lot of the mad scientists have left the company,” says Junichi Hasegawa, a former PlayStation engineer who quit Sony five years ago.

Sony still has a long way to go. Despite the recent jump, its shares are down more than 70% from their split-adjusted peak in 2000. Sony’s projected sales for the latest fiscal year are less than half the size of Apple’s in 2014.

Meanwhile, the company’s Sony Pictures Entertainment unit suffered through turmoil late last year caused by a hacking attack, which exposed internal emails.

Threats from hackers led Sony to cancel the release of “The Interview,” a spoof of North Korea, though the film was later shown in some theaters and online. Amy Pascal, who ran Sony’s movie business for more than a decade, is stepping down in May as Sony Pictures co-chairman.

Panasonic Corp. and NEC Corp. also have shifted their focus to supplying businesses rather than consumers, partly reflecting the growing emphasis throughout corporate Japan on profits over market share.

Sony has no plans to walk away from consumer-electronics niches where it remains strong, says Mr. Hirai. His eyes glimmer when he talks about high-end audio or ultra-high-definition wall projectors, and he is especially interested in the creations of Sony engineers, like cameras.

Yet even Sony’s successful videogame division is changing. Analysts say PlayStation’s most exciting future growth could come from its digital network, a seller of online

games, movies, music, TV and other content. Much of that comes from outside suppliers.

The image-sensor business is a major part of Sony’s shake-up. The company makes them at four Japanese factories, including one in Kumamoto on the southern island of Kyushu. While carrots grow and cows graze in a field outside the city, robots whiz around the Sony factory, delivering silicon wafers to chip-making machines.

Few iPhone or Galaxy users know their smartphones are made partly by Sony. The latest-model image sensor, called the Exmor RS IMX230, can capture images with a resolution of as much as 21 megapixels. Sony says the sensor is the first for a smartphone to include autofocus technology borrowed from fancier cameras to capture fast-moving subjects.

Sony has been making image sensors for many years, and its strength grew out of Sony’s roots in the camcorder business. “We’ve been stocking up know-how for a long time,” says manager Tetsuo Nomoto.

In 2012, Sony made a technological leap with a system that essentially layers two chips on top of each other, each the size of a small fingernail. One chip captures the image pixels, while the other contains the sensor’s circuitry. Stacking the two chips helps smartphone makers produce thinner devices compared with previous versions, which have both chips on one layer.

Analysts say a Sony rival in image sensors, OmniVision Technologies Inc., of Santa Clara, Calif., hasn’t yet been able to mass-produce stacked image sensors. OmniVision declines to comment.

Ryosuke Katsura, an analyst at UBS AG, says the method for aligning the two layers so
that the image sensor produces such high-quality photos is a closely guarded secret at Sony.

At least for now, analysts say, Sony is the only company that can meet the demand of high-end smartphone makers, even Samsung, which also manufactures image sensors. Samsung declines to comment.

“Unlike memory chips, making image sensors requires craftsmanship, and that’s not something competitors can copy in the short term,” says Hideaki Miwa, analyst at Techno Systems Research Co.

According to the Tokyo research firm, Sony sold 40% of all image sensors last year, up from 35% in 2013. OmniVision’s market share was 16%, followed by 15% for Samsung. Total sales of image sensors grew to an estimated $8.65 billion last year, up more than 80% since 2009.

Some analysts say keeping up with demand might be Sony’s biggest immediate challenge. In the long run, Sony could be vulnerable because of its dependence on Apple, which sometimes has shifted suppliers with little warning.

Satoru Oyama, a semiconductor analyst at research firmIHS Inc., says Apple likely would consider buying image sensors for iPhones elsewhere if another company could match Sony’s quality and price.

“Sony can keep its position for at least a few years, but five years from now? There are no guarantees,” Mr. Oyama says. Apple declines to comment.

To help shield itself from relying too much on Apple, Sony has begun marketing image sensors to low-cost Chinese smartphone makers such as Xiaomi Inc. The sensors also can be used in autonomous driving technology, another possible source of growth for Sony.

At the same time, Sony is trying to generate new types of sales for one of its oldest and most reliable cash cows: the videogame business. PlayStation consoles are highly cyclical, with sales spiking when new models are introduced. Some analysts say the console business is doomed in the long run because of the rise of games played on smartphones.

Sony disagrees. In November, the company predicted its videogame unit would have sales of ¥1.4 trillion to ¥1.6 trillion in fiscal 2017, up from a target of ¥1.38 trillion in the fiscal year that ended in March. Sony increased that projection in February.
Much of the forecast growth will come from Sony’s entertainment network, which offers a growing range of services paid for with monthly subscription fees, says Andrew House, chief executive of Sony Computer Entertainment. “You smooth out some of the peaks,” he says, adding that he is aiming for “a complete redefinition of what the PlayStation platform is all about.”

The business led by Mr. House recently added music from Spotify AB and movies from Netflix Inc. U.S. customers in selected areas can watch television shows using a new service called PlayStation Vue. In March, Sony released its first made-for-PlayStation TV series, a crime drama called “Powers.” The streaming-video show was produced by Sony Pictures TV.

More like Netflix

“Powers” was panned by some television critics, though Mr. House calls it a “great engagement of two halves of the company.” Overall, the free version of PlayStation Network has more than 64 million active users, who visit at least once a month. The $50-a-year PlayStation Plus premium service has more than 10 million subscribers, according to Sony.

“Sony in a year or two will be compared with Netflix, not Panasonic,” says Amir Anvarzadeh, head of Japan equity sales at brokerage firm BGC Partners Inc.

Mr. Hirai still has to convince some skeptics that he can dream big. While he gave his strategy the name “One Sony” when he became chief executive in 2012, Mr. Hirai hasn’t outlined a vision for how the different pieces of Sony fit together or benefit each other.

William Saito, a venture capitalist and technology consultant who has done work for Sony in the past, says he noticed about two years ago an increase in the number of Sony engineers that came to him with “projects in shoeboxes,” or experiments developed on the side.

Many engineers were frustrated by what they saw as a lack of internal interest in their work. “They were saying: ‘Do you know where I can go to keep these projects alive?’ ” he recalls. “Before, the engineers were gods, and they were backed up by engineers. I think they lost something there.”

Mr. Hirai, Sony Mobile Communications chief Hiroki Totoki and other executives are trying to reinvigorate Sony’s employees by encouraging them to come up with new business ideas.

At Sony headquarters in Tokyo, casually dressed workers now meet in a “Creative Lounge” with the look and feel of a Silicon Valley startup. The loft-style space has exposed ductwork, Eames chairs and three-dimensional printers—and is a center for Sony's internal entrepreneurship program.

Early results include a watch based entirely on electronic paper—but no big
breakthroughs.

While Mr. Hirai hasn’t announced an overall plan for Sony’s consumer-electronics business, restructuring efforts have gained traction. Except for the mobile unit, all of the electronics-related businesses are expected to post a profit for the fiscal year ended March 31, the first such achievement in a decade.

Sony’s CEO has shown enthusiasm for some consumer electronics, calling himself a “camera nut.” He likes to personally test prototypes of Sony products such as stand-alone cameras and headphones. And he takes a personal interest in experiments spotted in tours of research sites.

Mr. Hirai approved the development of a projector that can display a 147-inch ultra-high-definition image on walls and sells for more than $40,000 in Japan. There’s even a new Walkman that delivers “high-definition audio,” a snappier sound than the usual smartphone can provide. It costs ¥120,000 (or $1,200 in the U.S.), compared with ¥33,000 for the original Walkman in 1979.

Mr. Hirai says some members of Sony’s board of directors were skeptical when he said last year that he wanted to separate businesses such as TVs and audio products into autonomous companies under Sony’s parent-company umbrella.

Sony’s music, motion picture and mobile arms have long been run under that structure, which is supposed to improve financial accountability. Some directors asked how the change would fit with Mr. Hirai’s “One Sony” plan, which called for more cooperation between Sony’s divisions.

The CEO got his way after a retreat last year with directors in Hakone, a hot spring resort near Tokyo. He says he told the board he would personally take charge of “balancing the centrifugal and centripetal forces” at Sony.

He says now: “As we say in Japanese, we don’t want all these kites with no strings flying all over the place. But at the same time, I want to make sure they have enough leeway to really manage their own business and be accountable for it.”

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