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TECH

Huawei Pours Money Into China’s Chipmaking Ambitions

Tech giant operates an investment fund that is trying to build up China’s semiconductor industry as U.S. bans weigh on company

A Huawei employee presenting the company’s self-developed chip technology in Ningbo, China, in 2020.

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By Dan Strumpf Follow

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HONG KONG—Blocked by the U.S. from buying many of the chips it needs, Huawei Technologies Co. is stepping up investments in companies that are racing to build China’s semiconductor supply chain.

The Chinese technology giant is investing in the companies through a fund that it launched in 2019, around the time Washington began putting export bans on Huawei. The fund, Hubble Technology Investment Co., has backed 56 companies since its founding, according to data compiled by PitchBook, a capital markets research firm.

Almost half of those investments have been made in the past six months, according to PitchBook, as the pain from restrictions on the company's ability to obtain critical chips made using U.S. technology grows. Last month, Huawei said U.S. restrictions pushed its 2021 revenue down by nearly a third.

The overwhelming majority of the companies invested in by Hubble are involved in the semiconductor supply chain, according to PitchBook and corporate records. They include emerging players in the manufacturing and design of chips, as well as companies that make semiconductor materials, design software and chip manufacturing equipment.

Privately held Huawei doesn't disclose the size of its fund and Huawei declined to answer questions about it, but it has invested tens of millions of dollars in some companies, according to Tianyancha, a database that tracks corporate registrations in China. Analysts say the fund allows Huawei to nurture potential current and future suppliers, while also providing potential financial returns at a time of booming growth in China's chip sector.

Other big Chinese electronics firms run similar investment funds that come with similar benefits, including smartphone makers Xiaomi Corp. , Oppo Mobile Telecommunications Corp. and PC giant Lenovo Group Ltd.

"The supply chain in semiconductors is a long, long supply chain," said Hui He, head of China semiconductor research for Omdia, a technology research firm. "When Huawei invests in a chip company, they can get priority supply from this chip supplier, especially in a shortage situation."

The accelerated pace of Huawei's chip investments comes as the Shenzhen-based company faces increasing strain from the effects of U.S. restrictions. Reduced access to all chips has pummeled Huawei's smartphone sales, curbed its market share in 5G telecom gear and crippled its chip design subsidiary, HiSilicon Technologies Co.

Huawei Chief Executive Ren Zhengfei has acknowledged the setbacks resulting from American actions, telling employees in August that to press ahead, the company needs more "theoretical breakthroughs, especially in domains like compound semiconductors and materials science."

"Currently, Japan and the U.S. are the leaders in these domains. We must leverage our global platforms to enable our success," he said.

China has made self-sufficiency in chip technology a national priority, an initiative that has grown in importance due to a trade war with Washington that has cut off many Chinese companies from U.S. technologies. But many of its efforts have faltered, with at least six major Chinese chip-building projects failing over the past three years, The Wall Street Journal has reported, underscoring the difficulty and sky-high costs associated with developing high-end chips.

In 2021, through early December, Chinese chip firms raised $26.5 billion through public offerings, private placements and asset sales, according to S&P Global Market Intelligence, up 9% from a year earlier. Those sums follow billions previously earmarked by the government for fertilizing China's homegrown chip sector.

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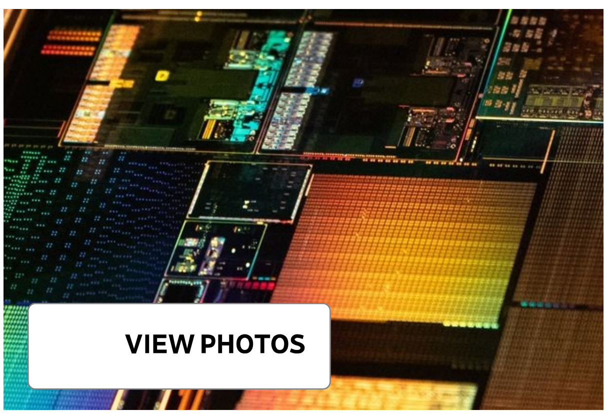

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The sums invested by Huawei are relatively small by the standards of the capital-intensive chip industry and analysts say the company is a long way away from self-sufficiency in semiconductors. Still, China's chip boom has created a target-rich environment for the Hubble fund, which is headed by longtime Huawei executive Bai Yi. Mr. Bai was one of the company's first staffers sent to the U.S. in the early 2000s during a rocky early effort to sell equipment to American telecom carriers.

In 2012, Mr. Bai was among a small group of senior Huawei executives who accompanied some U.S. Congressional staffers on a tour of Huawei's Shenzhen headquarters as part of a House Intelligence Committee's investigation into Huawei and a rival. The investigation concluded that Huawei's telecom gear posed a national security threat—a finding that the company has repeatedly denied. In 2020, Mr. Bai was named to a panel of influential Huawei executives, known as the "representatives' commission," charged with approving the work of the company's board of directors.

Mr. Bai didn't respond to requests for comment.

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Among Hubble's most recent investments, in early December, was Jingtuo Semiconductor Technology Co., a Suzhou-based maker of specialized equipment used to keep chip components clean during production. The company "contributes to the localization of China's semiconductor equipment," according to Jingtuo's website.

In August, Hubble took a stake of about $46 million in Xuzhou B&C Chemical Co., a company that describes itself as China's largest maker of photoresists, a key semiconductor material. In June, Hubble invested $1.5 million in Beijing's RSLaser Opto-Electronics Technology Co., a maker of high-powered lasers used in chip manufacturing.

Jingtuo Semiconductor declined to comment. B&C Chemical and RSLaser didn't respond to requests for comment.

Huawei spent years and billions of dollars investing in its own chip design capabilities, gradually displacing foreign-designed chips in its smartphones, servers and telecom equipment. In recent years, Huawei's smartphone and server chips were viewed by analysts and industry executives as among the most advanced in the world.

Its chips, however, were built by outside manufacturers like Taiwan Semiconductor Manufacturing Co. , and U.S. restrictions imposed on Huawei in 2020 blocked TSMC and many other companies from manufacturing chips for Huawei because those suppliers use American technology.

Huawei executives say the company hasn't laid off any chip engineers and that its workers are designing next-generation products, even though major semiconductor manufacturers remain blocked from building them.

“They continue their work,” Catherine Chen, Huawei’s head of public affairs, said in June. “We’re confident that the difficulties can be overcome within two to three years.”

—Raffaele Huang and Rachel Liang contributed to this article.

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