

BUSINESS NEWS

Chip Shortages Hurt Toyota

By RIVER DAVIS

TOKYO—Overall demand for semiconductors may be softening, but the world's biggest auto maker says it still can't get its hands on enough chips.

Toyota Motor Corp. on Tuesday lowered its Toyota and Lexus production target for the current fiscal year through March to 9.2 million units from a previous goal of 9.7 million, citing the risk of chip-supply issues.

The situation reflects prolonged underinvestment in certain older types of chips that are particularly needed by car makers. While slowing demand for smartphones and personal computers has eased shortages of memory and other chips and sparked fears of a glut, pockets of constrained supply remain.

Analysts and chip executives say the supply-demand mismatch could drag on for years.

"If we look at each type of semiconductor, the supplies haven't recovered to a satisfactory level," said Kazunari Kumakura, Toyota's head of purchasing.

Auto makers globally have been grappling with a shortage of semiconductors since late 2020, when a rebound in auto sales took companies by surprise after they had previously moved to reduce chip orders. Auto makers competed for limited supply against electronics companies that saw demand bolstered by stay-at-home consumers.

That demand has now eased, and smartphone sales are falling. The car market, meanwhile, has remained relatively strong.

Toyota's Mr. Kumakura said supply conditions have relaxed for certain types of chips that are used by both the automotive and consumer-electronics industries. "Overall, we have emerged from the worst of the situation," he said. The forecast of 9.2 million vehicles would represent an annual record if achieved.

U.S. auto makers also ex-



The auto maker says that semiconductor demand is down, but its supply problem is far from over.

pressed optimism about the chip situation in recent quarterly reports. "Overall, I would say chips are getting better than certainly where they were a year ago," **General Motors Co.** Chief Financial Officer Paul Jacobson said last week.

Still, analysts say the auto industry isn't yet near the end of its problems, and some might even worsen.

The problems particularly involve analog chips, which use older technology processing information with gradations, unlike digital chips that differentiate only between on and off signals. Executives at other Japanese auto makers also have said they are grappling with a tight supply of legacy chips.

Cars use hundreds of analog semiconductors for purposes such as moderating how much power is drawn from a battery, yet new investment has largely been funneled into

developing more advanced chips.

A McKinsey & Co. report in October said that while manufacturers are trying to squeeze out more production of the legacy semiconductors, they are unlikely to keep up with demand through 2026. That is partly because of the rise of electric and hybrid vehicles that rely more on the chips, McKinsey said.

One of the biggest analog chip makers, **STMicroelectronics NV**, said late last month that its backlog of automotive orders remains well above current and planned capacity through 2023.

Another analog chip giant, **Texas Instruments Inc.**, is working to add capacity, yet inventory has been increasing slowly and still stands below desired levels, Chief Financial Officer Rafael Lizardi said in an earnings call last week.

Some Japanese auto-industry executives have highlighted the Dallas-based company as a source of current supply bottlenecks. A Texas Instruments representative said the company was working closely with customers to get them the parts they need and had a road map to build semiconductor capacity for decades to come.

Toyota's current shortages are caused by chip makers having failed to increase capital investment in certain products, Mr. Kumakura said, without naming specific suppliers or types of chips. Due to the nature of vehicles today, "even if it's just one type of semiconductor that's in short supply, a car can't be built," Mr. Kumakura said.

Toyota said last month it would temporarily give buyers of some models in Japan one smart key instead of two to help ration supplies.

Disney+ App to Sell Merchandise In Test Program

By ROBBIE WHELAN

Walt Disney Co. is launching a pilot program to test how streaming subscribers respond to deals to buy exclusive toys and apparel related to some of its most popular shows, movies and characters—all offered through the Disney+ app.

Starting Tuesday, subscribers were able to visit the ShopDisney.com website or scan a QR code found on the menu screen of Disney+ streaming titles and purchase limited-edition merchandise. Items featured in the test include replicas of Marvel superhero Dr. Strange's cloak, a Black Panther mask, and a Darksaber toy weapon from "The Mandalorian."

The test is part of a broader effort at Disney to integrate the company's two main business lines via Disney+, which so far has functioned only as a platform for streaming video. Disney's operations are divided into two segments: media, entertainment and distribution and parks, experiences and products.

By connecting merchandise sales to the streaming experience, Disney is taking the first step toward developing Disney+ into what Chief Executive Bob Chapek has described as a lifestyle brand app.

"It's the physical and the digital aspects of your Disney lifestyle coming together," Mr. Chapek said last week at The Wall Street Journal's Tech Live conference, describing the effort to integrate consumer data across the two divisions and use information about consumer habits to create more customized products.

Separately, Disney is also

exploring developing a membership program that would offer exclusive benefits for members, but the merchandise feature being tested this week isn't part of that effort, according to a person familiar with the matter.

Disney is under pressure from investors to both add subscribers and increase revenue, especially from its streaming businesses, which include Disney+, Hulu and ESPN+.

Mr. Chapek has said that one of the company's goals is to increase cross-selling opportunities and better understand consumer preferences by tracking what shows and movies they watch as well as what theme-park attractions are their favorites.

The company recently raised prices on some of its streaming offerings.

Competitors such as Amazon.com Inc. and Apple Inc. have bundled together services including retail discounts, streaming video and access to extensive streaming music libraries in an effort to grow market share.

Disney recently raised prices on some of its streaming subscriptions and on certain theme-park perks in an effort to boost revenues. In December, the company plans to launch a lower-priced, ad-supported tier of Disney+.

The retail pilot program is being led by Alisa Bowen, the new president of Disney+, and Naveen Seshadri, Disney's executive vice president for retail.



Naomi Mathis

I AM A VETERAN AND THIS IS MY VICTORY.

"My victory is facing my PTSD so I can be here for my children."

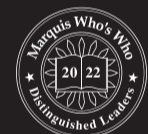
After returning from service in Iraq, Naomi could still hear the booms and see the tracer fire. With the right support from DAV, she began to heal. DAV helps veterans of every generation get the benefits they've earned—helping more than one million veterans each year. Support more victories for veterans. **Go to DAV.org.**



Who's Who of Distinguished Leaders: 2022 Honorees

Since 1898, Marquis Who's Who has remained the standard for reliable and comprehensive biographical reference material. We are proud to highlight hand-selected listees who have been recognized as *Distinguished Leaders* in their fields of endeavor.

Of 1.5 million listees, only a small percentage is recognized with the *Distinguished Leaders* honor. We laud these individuals for their ambition, professional fortitude, industry contributions, and career accomplishments.



www.marquiswhoswho.com

MARQUIS Who's Who



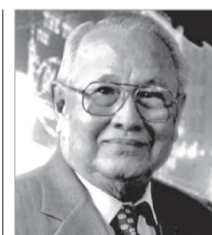
Joel W. Baruch, Attorney
Law Off. of Joel W. Baruch
Orange County, CA



Prof. Kenneth Blum, PhD
Western Univ. Health Sci.
Electronic Wave Form Lab



Amy Gershkoff Bolles, PhD
Head Digital & Tech Strategy
Levi Strauss & Co.



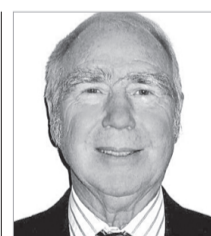
Walter R. Butler
Project Director (Ret.)
U.S. Nuclear Reg. Comm.



Howard Cohen, HMDC, CMD
Board Cert. H&P Care



Dr. Timothy Francis
Chiropractor
Chiropractic Kinesiology



Max B. Frederick
Scientist, Theologian
www.anoldscientist.com



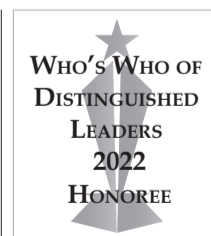
Daniel Jerome Hall
Adult/Juvenile Det. Clin.
Shoshone-Bannock Tr. Corr.



Carla L. Hartley
Attorney in TX, CA
Carla Hartley Law, Inc.



Robert Ong Hing, JD
Owner, Partner, Attorney
Stockton & Hing, P.A.



Michael P. Johnson, MD
Physician
Red Rocks Ob/Gyn



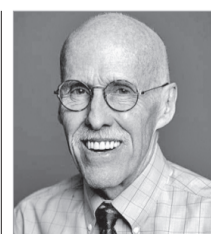
Wayne Liu
President & CGO
Perfect Corp.



Michael L. O'Bleness, MSN
Registered Nurse (Ret.)
Turner O'Bleness Found.



Dr. Leroy L. Ounanian
Physician
Beaver Medical Group



Ronald Peters, MD, MPH
Medical Doctor
MindBody Medicine Center



Crystal Grace Rutherford
Lawyer
Excelsior Law, PLLC