

## China's Great Wall agrees to buy General Motors' India plant

Reuters | New Delhi

Great Wall Motor has agreed to buy General Motors' (GM) car plant in India, the companies said yesterday.

The deal, which is expected to be completed by the second half of 2020, will jumpstart Great Wall's plans to build and sell cars in India and bring to an end GM's manufacturing operations in the country.

People aware of the deal told Reuters earlier on Friday that the two companies had agreed on the sale, with one of the sources adding that Great Wall



Employees work on the assembly line at the General Motors plant in Talegaon, about 118 km (73 miles) from Mumbai

is likely to pay around \$250 million to \$300 million to acquire the plant.

## 'PigeonBot' brings aircraft closer to feathered-flight



A radio-controlled robot with wings made with 40 real feathers

Washington

Since the dawn of the aviation era, inventors have strived to build aircraft that fly as nimbly as birds, whose morphable wings allow for faster, tighter turns and more efficient gliding.

That dream was a step closer to reality Thursday after researchers at Stanford University announced they had studied the wings of common pigeon cadavers, then used their findings to build a radio-controlled "PigeonBot" with wings made with 40 real feathers.

"Aerospace and materials engineers can (now) start rethinking how they can design, manufacture and control materials and wings that morph as deftly as birds do," said David Lentink, an assistant professor of mechanical engineering at Stanford and the senior author of two papers describing the results in the journals *Science* and *Science Robotics*.

All four-limbed animals, including dinosaurs, evolved from an ancestor that had five digits at the end of its limbs, which became hands, paws, flippers, or wings over time.

Modern birds retained three digits, or fingers. By studying

the pigeon wings in a wind tunnel, the researchers found that wrist and finger action provided fine control over feather placement, wing span, and area.

In flight tests, manipulation of the wrist and fingers initiated stable turn maneuvers at tight angles, which the researchers said provided some of the first evidence that birds primarily use these digits to steer in flight.

The teams also drilled into the mechanics of how birds morph their wings, finding that adjacent flight feathers stick together to form a continuous wing using a hook-like microstructure that acts like Velcro.

It locked together as the wing expanded, then slipped loose again as the wing contracted, strengthening the extended wing and making it resistant to turbulence.

And they found the structures were present in most other bird species except owls, which allowed them to fly more silently.

Lentink added that the Velcro-like structures, known by their technical name as "lobate cilia," could have a wide range of fashion, medical and aerospace applications which he and colleagues were looking at as an area of future research.

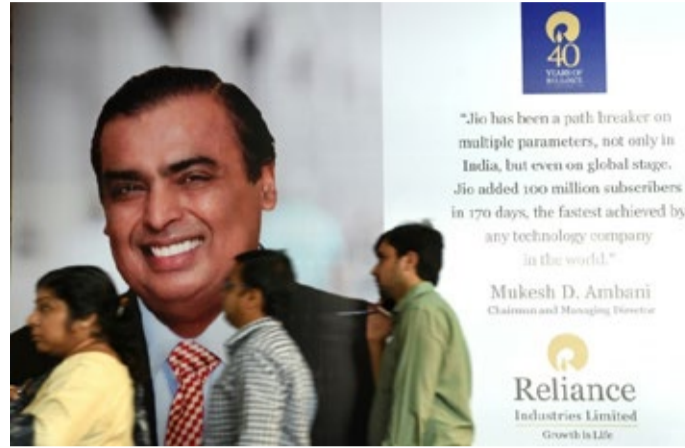
# India's Reliance claims record quarterly profits

● Profits for its telecom arm Jio jumped 62pc

● Jio became India's top operator in terms of subscribers and revenue

● Reliance is expected to roll out its e-commerce initiative later this year

AFP | Mumbai



Reliance is India's most valuable company with a market capitalisation of over 10 trillion rupees

Indian oil-to-telecoms giant Reliance Industries reported record quarterly net profits yesterday, boosted by strong growth in its retail businesses despite falling refining margins.

The Mumbai-based company owned by Asia's richest man Mukesh Ambani said its consolidated net profit for the quarter-ended December rose 13.5 per cent to 116 billion rupees (\$1.63bn) from 102 billion rupees reported for the same quarter a year earlier.

"The third quarter results for our energy business reflects the weak global economic environment and volatility in energy markets," Reliance chairman Ambani said in a statement.

The company said its gross refining margin, the profit it earned from each barrel of crude, was down to \$9.2 in the

December quarter from \$9.4 in the previous quarter.

Refining margins are a key profitability gauge for Reliance, which operates the world's biggest refining complex in India's Gujarat state.

The company said profits for its telecom arm Jio jumped 62pc to 13.5 billion rupees for the quarter, with a total 370 million subscribers.

On Thursday Jio became India's top operator in terms of subscribers and revenue, three years after its launch, official data showed.

The announcement came as Jio's chief competitors, Bharti Airtel and Vodafone Idea, lost an appeal against paying a combined \$7bn in past spectrum and licence fees as ordered by the Supreme Court last year.

Jio, which escaped with a rel-

atively light \$1.8bn bill, is seen as the only beneficiary of the November decision.

Ambani had launched Jio with much fanfare in September 2016, offering free services up to March 2017 and sparking intense price wars that saw consolidation in the Indian telecom sector.

Reliance is expected to roll out its e-commerce initiative later this year and has been conducting trials with mom-and-pop stores to test its payment devices, with the aim of connecting small shops with consumers.

Reliance is India's most valuable company with a market capitalisation of over 10 trillion rupees.

Shares of Reliance Industries were up almost 3pc in Mumbai as the markets closed Friday ahead of the announcement.

## Trump announces will nominate two allies for Fed board

Washington

Donald Trump said Thursday he will nominate two allies for the board of the Federal Reserve, which the US president has repeatedly accused of not doing enough for the economy.

Trump had originally tweeted in July he would nominate Christopher Waller, a director of the Fed's satellite office in St. Louis, Missouri, and conservative economist Judy Shelton.

The White House officially announced the nomination in a statement on Thursday, but the two candidates must first be confirmed by the Senate.

The last two candidates



Economists Judy Shelton and Christopher Waller

Trump tapped for the Fed board -- conservative economic commentator Stephen Moore and former pizza executive Herman Cain -- were so unusual that even several Senate Republicans said confirming them

would be out of the question.

Both Waller and Shelton -- who Trump noted both possess doctorates -- are economists who share the president's cutting opinion of the Fed.

Christopher Waller is a former economics professor at the University of Notre Dame and the director of research at the Federal Reserve Bank of St. Louis, who specializes in financial theory and macroeconomics.

Judy Shelton, a strident critic of the central bank, was the US executive director at the European Bank of Reconstruction and Development and has served on the board of Hilton Hotels.

## Michelin strips star from French culinary beacon Bocuse



Even before Bocuse's death, some critics had commented that the restaurant was no longer quite up to scratch

The Michelin Guide told AFP on Friday that the establishment "remained excellent but no longer at the level of three stars" and will have only two in the 2020 edition of the famous red book -- known as the "Bible" of French cuisine.

The Bocuse d'Or organisation, which holds the annual international cooking competition he created, greeted the announcement with "sadness" and expressed its "unwavering support" for the restaurant.

Bocuse's family and his kitchen team said they were "upset" by the decision, and celebrity chef Marc Veyrat, who recently sued the Michelin Guide over a lost third star, described the move as "pathetic".

"Monsieur Paul", as Bocuse was known, died aged 91 on January 20, 2018, after a long battle with Parkinson's disease.

Dubbed the "pope" of French cuisine, he was one of the country's most celebrated of all time, helping shake up the food world in the 1970s with the lighter fare of the Nouvelle Cuisine revolution, and helping to introduce the notion of a celebrity chef.

Michelin boss Gwendal Poullennec visited Bocuse's restaurant on Thursday to deliver the news, guide spokeswoman Elisabeth Boucher-Anselin said.

## Netflix opens new Paris office, plans 20 French-language series

Reuters | Paris

US television streaming company Netflix has opened a new Paris office and plans to develop more than 20 original French-language productions in 2020, it said yesterday.

Launched in 2014 in France - where it employs 40 people, and has existing operations in Paris - Netflix has developed 24 French titles, including six films, nine series and three documentaries.

It plans to produce several new shows over the coming years as well as a range of series and films.

# Google parent Alphabet valuation hit \$1 trillion

● Apple first reached \$1 trillion in 2018

New York

Google's parent company Alphabet saw its value reach \$1 trillion for the first time Thursday, becoming the fourth US tech company to hit the milestone.

Shares in the online giant rose 0.76 percent for the day to reach the trillion-dollar mark at the close of trade.



The Googleplex is the corporate headquarters complex of Google and its parent company Alphabet Inc. It is located at 1600 Amphitheatre Parkway in Mountain View, California, United States.

The Silicon valley group joins Apple, which first reached \$1 trillion in 2018 and on Thursday showed a valuation of some \$1.38 trillion; and Microsoft, now valued at some \$1.26 trillion.

Another tech titan, Amazon, rose above the trillion-dollar mark in September 2018 but has since declined to a value of around \$930 billion.

Google is the leading online search engine and produced the popular Android mobile operating system.

Alphabet, formed as a holding

company in 2015, has a number of other units working on "moonshot" projects including Waymo on autonomous cars and Verily for life sciences.

The company announced last year that Google chief executive Sundar Pichai would also assume the CEO functions at Alphabet, raising speculation on whether a fresh reorganization is planned.

Pichai's promotion enabled Google co-founders Larry Page and Sergey Brin to step away from daily operations at the company.