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By Jesse Riseborough

June 20 (Bloomberg) -- Investors from JPMorgan Chase & Co. to BlackRock Inc. are trying to make money from the exploding popularity of iPads and increasing sales of hybrid cars by investing in producers of lithium for batteries.

Prices for the conductive metal, the lightest in the periodic table, have tripled since 2000 in a market now worth \$1 billion a year as uses expand in vehicles, ceramics, electronics and lubricants. Apple Inc. and Toyota Motor Corp., maker of the Prius electric-gasoline car, have few alternatives as they pursue higher performance and mobility, leading Dahlman Rose & Co. analysts to forecast lithium demand will double by 2020.

Talison Lithium Ltd., whose shares have gained 22 percent in the last month, together with Soc. Quimica & Minera de Chile SA, Rockwood Holdings Inc. and FMC Corp., account for almost 95 percent of world supply. Rio Tinto Group, the third-biggest mining company, may join the largest suppliers if it goes ahead with a mine in Serbia it says is capable of producing 20 percent of global output of the metal.

"There are some companies now that we think are attractive to get a hold of lithium exposure," Evy Hambro, who manages about \$13 billion in mining stocks for BlackRock in London, said in an interview. "We've got a small exposure today and we're looking for some more," he said without naming any companies.

Demand for lithium-ion rechargeable batteries out of Asia has helped prices climb threefold in the last 12 years, London-based Roskill Information Services Ltd. analyst Robert Baylis said. Global use doubled from 2000 to 2011 according to Roskill, which has recently consulted on six lithium projects.

Lithium Oligopoly

The advantage of lithium-ion over other battery types is that a typical cell can generate more electricity than competing cells like such as lead-acid. There is about 1.7 grams (0.6 ounces) of lithium carbonate equivalent in a mobile phone, 2.1 grams in a smart phone and 20 grams in a tablet, according to Dahlman Rose.

There will be a "step change," in the global lithium industry in 2016 or 2017 when electric cars became more commonplace, Rockwood Chief Executive Officer Seifollah Ghasemi said. Hybrid electric vehicles that are fitted with a lithium-ion battery contain about 1.3 kilograms (2.9 pounds) of the material, plug-in hybrid electric vehicles have about 12.8 kilograms, while an electric vehicle uses about 19.2 kilograms.

The four-strong lithium "oligopoly has the capacity to significantly ramp supply higher, but it will take time and significant capital to accomplish," Dahlman Rose analysts Anthony Young and Anthony Rizzuto said in a May 16th report.

"There are a limited number of known high-grade resources that can be economically extracted and there has not been a new lithium mine constructed in the last 25 years."

Biggest Producer

Global consumption may jump to 300,000 metric tons a year by 2020 from about 150,000 tons now, Dahlman Rose said in a June

7 report. Demand for lithium batteries has been growing at about 25 percent a year, outpacing the 4 percent to 5 percent overall gain in lithium, the firm said.

"Anywhere between a doubling and a tripling of demand in the next 10 years is absolutely our view," Peter Oliver, CEO of Talison, the biggest producer, said in an interview. "Maybe a doubling is with minimal impact from electric vehicles and if electric vehicles take off in a big way in the next 10 years it could be as much as tripling."

Neil Gregson, manager of about \$6.9 billion in natural resource assets at JPMorgan Asset Management, said in an interview in London he's studying investing in the industry. "You can't see any reason why that won't be a high growth market for many, many years. It's a very interesting area."

Ponce, Kravis

Rio is researching the development of its Jadar lithium- boron operation at a time when other suppliers are expanding output to meet rising demand. Talison, the Perth-based company with a market share of about 32 percent, completed an expansion at its Greenbushes mine in Western Australia this month that has allowed it to double production capacity.

SQM, controlled by billionaire Julio Ponce, is the second- largest followed by Rockwood, which is backed by Henry Kravis's KKR & Co., and Philadelphia-based FMC. SQM stock has risen 2.1 percent this year, Rockwood 17 percent and FMC 20 percent.

Chile, the second-biggest producing country behind Australia, last week said it will award 20-year concessions to exploit lithium brine in salt lakes. The plan allows developers to mine as much as 100,000 metric tons of the mineral over 20 years, Pablo Wagner, a government undersecretary, said June 12.

Rio's Jadar project is in pre-feasibility, which involves conducting studies to better understand the parameters of the deposit and any social and environmental impacts, the company said in an e-mailed response to questions.

Rio 'Excited'

Lithium is "going to be so critical to that future world of electric vehicles and hybrids," Tom Albanese, CEO of Rio Tinto, said April 19 in London. "We've got a lot of interest from Japanese companies, from Korean companies that actually want to be in the forefront of hybrid and lithium technologies so I'm actually pretty excited about the project."

Toyota's Prius, a niche vehicle when it went on sale 15 years ago, jumped to the world's third best-selling car line in the first quarter as U.S. demand and incentives in Japan turned the hybrid into a mainstream hit. In the quarter, sales soared to 247,230 cars. While most Priuses sold so far feature a nickel-metal hydride battery pack, the latest model plug-in hybrid contains a lithium-ion battery supplied by Panasonic Corp.

"It's less than 1 percent of the market now," Talison's Oliver said of lithium's use in batteries for electric vehicles.

"We do tend to try and portray a fairly conservative view, but if some of these new technologies take off its going to be a very exciting time for us."

Tablet Computers

Since the start of Prius sales in Japan in 1997, Toyota has sold 4 million hybrid-electric vehicles worldwide, including 1.5 million in the U.S., the company said May 22.

The global market for tablet computers is growing faster than expected, with Apple's iPad widening its lead as consumers'

top choice, market researcher International Data Corp. said June 14. Worldwide shipments of tablets this year will be 107.4 million units, up from an earlier projection of 106.1 million, Framingham, Massachusetts-based IDC said.

Worldwide shipments of tablets should reach 142.8 million next year and 222.1 million by 2016, IDC said.

“One can claim that without lithium, the whole mobile technology would not have been possible,” Rockwood’s Ghasemi told a Deutsche Bank AG conference June 13. “You use the product every single day.”

Golden Goose

Battery-maker A123 Systems Inc. rose 52 percent in New York trading on June 12 after saying it had developed an improved lithium-ion cell that can cut costs of rechargeable and hybrid vehicles. The new cells will be produced next year and can perform better in extreme heat and cold than competing packs, it said.

Expanding battery sales to automakers is seen as the “golden goose” for the lithium industry, according to Roskill, and has spurred new entrants such as Galaxy Resources Ltd. and underpinned expansions by existing producers. Lithium-ion batteries are the biggest application for the material, accounting for about 22 percent of use.

“This is an industry which is consumer led,” Iggy Tan, managing director of Australia’s Galaxy, which made the first sale of a lithium product last month, said in an interview from Perth. “Once it takes off it’s a bit like mobile phones, it’s exponential.”

A123 supplies batteries for General Motors Co.’s Spark electric car, Bayerische Motoren Werke AG’s BMW 5 Series hybrid sedan, rechargeable and hybrid cars from China’s SAIC Motor Corp., buses made by Daimler AG and Volvo AB, and delivery trucks built by Smith Electric Vehicles Corp.

Plug-in Sedans

General Motors’ Chevrolet Volt was the best-selling rechargeable auto in the U.S. in May, topping Toyota’s Prius and Nissan Motor Co.’s all-electric Leaf hatchback.

Deliveries of the GM plug-in sedan more than tripled in the month. Suppliers of lithium have benefited as some car-makers switch from older model nickel-cadmium batteries to lithium-ion.

“It’s really a new technology and it’s taken some time to take hold,” Jonathan Lee, a battery materials and technologies analyst at Byron Capital Markets in Toronto, said in an interview. “Everything is going to lithium-ion whether or not it was nickel-cadmium in the beginning or not.”

Rockwood on May 14 proposed a price increase of \$1,000 a ton, or about 22 percent, for lithium salt sold to customers in the year starting July 1. It said the higher price would allow it to fund expansion of its mines. Talison’s Oliver said he raised prices 15 percent in the first-half and is expects to increase prices again in the second-half.

Hockey Stick

SQM, based in Santiago, said May 30 that sales from its lithium unit rose 12 percent in the first quarter to \$47.5 million after prices gained 16 percent. Prices for lithium peaked in 2007 before declining through to 2010, according to Roskill.

Galaxy, which sells to customers including Japan’s Mitsubishi Corp., is positioning itself for what Tan describes as potential “hockey stick-shaped” growth in demand for lithium batteries. It has built a A\$100 million (\$102 million) lithium carbonate plant in China to better serve Asian customers and made the first sale from the operation last month.

“The outlook for lithium is very strong in light of some of the uncertainty of other metals such as copper and many of the industrial metals,” Byron Capital’s Lee said. “Lithium has grown roughly at

10 to 15 percent over the past two years on a per-annum basis. We're having another strong year this year."

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