

# ODLUM BROWN REPORT

## 02 2020



**ODLUM BROWN**  
Investing for Generations®

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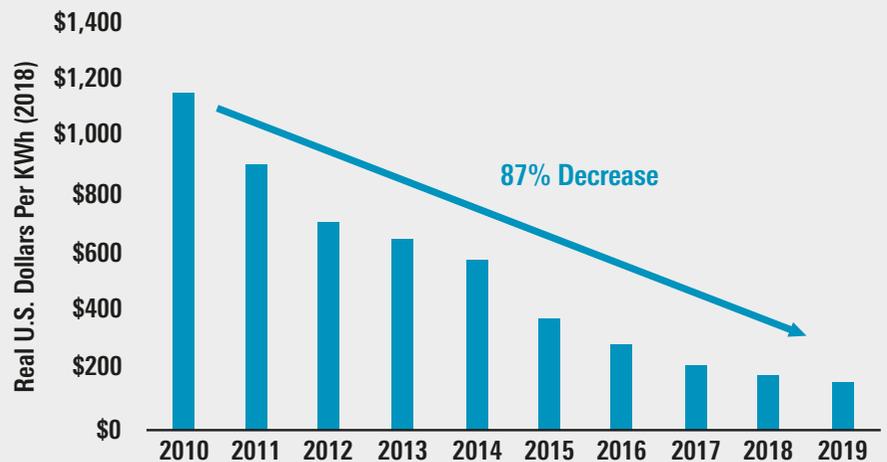


## The Golden Age of Electric Vehicles

As electric vehicles (EVs) become more and more prevalent, we wonder about the future of the automotive industry. Electric vehicles still represent only a tiny portion of the 1.3 billion automobiles in the world, but the total number of EVs is getting larger every day. Over the next five years, electric vehicles could transform from a niche market to a material segment of the global automobile market. In 2019, over two million EVs were sold globally, representing only 2.5% of total worldwide car sales. By 2025, this number is projected to increase six-fold. In other words, one out of every eight cars sold five years from now could be an electric vehicle compared to one out of 40 today.

There are still impediments to the wider adoption of electric vehicles, but these are gradually being mitigated. One such concern is cost. Electric vehicles require battery packs, which are more expensive than internal combustion engines. As a result, the upfront cost of an electric vehicle is a lot higher than a comparable non-electric vehicle. This could change within the next few years, though, as battery costs are steadily declining. As shown in Exhibit 1, battery prices are 87% lower now than in 2010 according to BloombergNEF. The downward price trend for batteries is expected to continue due to economies of scale in manufacturing and ongoing improvements in technology. Within the next few years, electric vehicle battery packs are expected to reach cost parity with their internal combustion engine equivalents. Reaching this crossover point will be a historic achievement for the electric vehicle industry and will likely lead to increased adoption of electric vehicles.

### EXHIBIT 1: AVERAGE LITHIUM-ION BATTERY PACK PRICE



Source: BloombergNEF

Another impediment to electric vehicle sales is range anxiety – the fear that vehicles will run out of power before reaching their destination. As battery costs decline and technology improves, we could see manufacturers develop new batteries to provide increased driving range. More charging stations would also help alleviate

*Continued on next page*



In our view, many of the impediments to electric vehicle adoption are being mitigated, setting the stage for expansion of the EV sector. We believe Albemarle is well positioned to capitalize on the associated growth in lithium demand.



range anxiety. According to BloombergNEF, the number of public charging outlets in the world has increased at a compound annual growth rate of more than 40% over the last seven years. Total outlets are projected to reach 1.2 million units in 2020 compared to less than 0.1 million in 2012. The number of charging stations will likely continue to grow as the global electric vehicle market expands.

Lack of choice is another commonly cited concern for consumers when considering an electric vehicle. Tesla Inc. is currently the most recognizable electric vehicle manufacturer. At present, Tesla's Model 3 accounts for approximately one out of every eight EVs sold in the world. However, the market landscape could dramatically change in the next few years. According to AlixPartners, an American consulting firm, global car manufacturers will collectively spend US\$225 billion on electric vehicle development over the next three years. Already, nearly 40 new models have been announced by various manufacturers, and more are likely on the way. Many of these new models are sport utility vehicles, which are gaining market share.

While we continue to see a long runway for non-electric vehicles and associated oil demand, the next five years will be a fascinating period for the electric vehicle industry as EV adoption continues to gain momentum. Given the significant growth potential, we are very interested in attractive investment opportunities related to the electric vehicle sector. One particular area that has caught our attention is the lithium industry.

### Lithium Could Drive the Way to Attractive Investment Returns

Electric vehicle batteries use lithium-ion technology. Originally invented in the 1970s, lithium-ion batteries did not become commercially available until 1991. Many industry experts expect these batteries to be the standard for the foreseeable future due to heavy investment in their manufacturing, falling costs and widespread customer acceptance. Billions of dollars have already been spent on lithium-ion factories, and more are on the way. Global manufacturing capacity for lithium-ion batteries has increased by almost three-fold over the last five years and is expected to triple again within the next five years. As the cost steadily decreases and performance improves, the market for these batteries should continue to grow. Under these circumstances, competitors offering alternative battery technologies will likely face significant difficulties convincing potential customers to take a chance on an unfamiliar technology.

With the rapid growth in the electric vehicle market and no foreseeable alternatives to the lithium-ion battery, we are relatively bullish on lithium's future prospects. Driven by rising EV sales, demand for lithium is expected to grow at a rapid pace over the next five years and beyond. Reflecting our positive long-term outlook for lithium, we recently added Albemarle Corporation, a specialty chemicals company, to the Odium Brown Model Portfolio\*.

Albemarle is the largest producer of lithium in the world. In addition, the company is one of the lowest cost producers of lithium carbonate and lithium hydroxide, which form the basis for rechargeable batteries. To keep up with growing demand, Albemarle expects to increase its lithium production capacity by almost 300% within the next couple of years. Even if lithium prices remain relatively stable, Albemarle's lithium business should continue to grow over time due to rising sales volumes. Notwithstanding its strong fundamentals, we believe Albemarle's current valuation does not fully reflect its long-term growth potential.

In our view, many of the impediments to electric vehicle adoption are being mitigated, setting the stage for expansion of the EV sector. We believe Albemarle is well positioned to capitalize on the associated growth in lithium demand.



**FAI LEE, CFA, CPA, CGA, MBA**

Equity Analyst

[@OBDifference](#)

\*The Odium Brown Model Portfolio is an all-equity portfolio that was established by the Odium Brown Equity Research Department on December 15, 1994, with a hypothetical investment of \$250,000. It showcases how we believe individual security recommendations may be used within the context of a client portfolio. The Model also provides a basis with which to measure the quality of our advice and the effectiveness of our disciplined investment strategy. Trades are made using the closing price on the day a change is announced. Performance figures do not include any allowance for fees. Past performance is not indicative of future performance.

# Aging in Place

Being able to stay comfortably and safely in our own homes while adapting to changes brought about by aging can become a concern as we grow older.

Too often, seniors or people who support them may hesitate to ask for help. Reasons for this can include a fear of losing independence, distrust of strangers who could access the home or simply a lack of information about potential options.

It can be particularly challenging to know where to turn when warning signs, such as the following, emerge:

- decreased nutrition and erratic meals
- difficulty with mobility, sight or hearing
- isolation, mood issues
- short-term memory issues
- difficulty bathing, dressing, toileting, taking medications, walking or eating

## Resources to Help with Aging

The resources below are some examples of services in BC that may potentially help make aging in place easier.

Example Resource	Services Offered
Public Resources	<b>BC Regional Health Authorities</b> e.g., Vancouver Coastal Health Home and Community Care Services and Fraser Health Home and Community Care Services <ul style="list-style-type: none"> <li>• Assessment to determine level of care needed (e.g., in-home care, long-term care, assisted living and respite services for caregivers), time horizon and costs, if any.</li> <li>• Facility choice and decision-making time generally reduced, for subsidized care.</li> </ul>
	<b>bc211 (non-profit organization)</b> <ul style="list-style-type: none"> <li>• Help line services and directory of agencies that provide non-medical services which may promote independent living, searchable by service type and location.</li> </ul>
	<b>SeniorsBC.ca</b> <ul style="list-style-type: none"> <li>• A helpful site for seniors' topics, featuring the <i>BC Seniors' Guide</i>.</li> </ul>

Types of Services Available	
Private Businesses	<ul style="list-style-type: none"> <li>• Downsizing and moving assistance (e.g., sort, pack, sell items; move logistics; floor plan mapping).</li> <li>• Care management (oversee and manage a senior's health and wellness needs, assist out-of-town children or POA).</li> <li>• Elder care planning (help families map options as health changes; navigate public or private system).</li> <li>• Support for executors (e.g., identifying, appraising and distributing assets).</li> <li>• Sales, rental and service of medical equipment and supplies (e.g., stair lifts).</li> <li>• In-home care for seniors.</li> </ul>

## Financial Assistance for Home Renovations

Making physical adaptations to a residence can help reduce hazards and barriers as our abilities change. In addition to making our home more comfortable, investing in adaptations may also reduce the risk of experiences such as a fall that could ultimately result in us being removed from our home. Programs such as the ones at right can help offset costs to modify a home for a senior or person with a disability and, depending on the program, homeowners or landlords may be eligible.



Program	Basic Description and Eligibility	Maximum Expenses	Maximum Savings
<b>BC Home Renovation Tax Credit for Seniors and Persons with Disabilities</b>	<ul style="list-style-type: none"> <li>• A refundable BC tax credit worth up to 10% of eligible expenses on your principal residence.</li> <li>• For BC resident seniors (age 65 or older) or persons with a disability.</li> </ul>	\$10,000 per tax year	\$1,000 per tax year
<b>Home Accessibility Tax Credit</b>	<ul style="list-style-type: none"> <li>• A non-refundable federal tax credit worth up to 15% of eligible renovations or alterations.</li> <li>• For seniors (age 65 or older), persons with a disability, their spouse or common-law partner, or someone claiming the Canada caregiver or eligible dependant tax credit for one of the first two persons.</li> </ul>	\$10,000 per year, per dwelling	\$1,500 per year
<b>Home Adaptations for Independence (HAFI) Program</b>	<ul style="list-style-type: none"> <li>• A grant available to eligible BC homeowners or landlords on eligible adaptations if the homeowner/tenant or a household member has a permanent disability or loss of ability.</li> <li>• Funding is limited and on a first-come, first-served basis, and the maximum lifetime grant is:                             <ul style="list-style-type: none"> <li>• 100% for up to \$15,000 of adaptations;</li> <li>• 50% on up to an additional \$5,000 of adaptations.</li> </ul> </li> </ul>	\$20,000	\$17,500 maximum lifetime grant per household/unit

For more information about financial planning for aging, contact us through your Odium Brown Investment Advisor or Portfolio Manager.



**HEATHER RIVERS, BA, CFP®, FMA**  
 Communications and Education Specialist  
 Odium Brown Financial Services Limited

Odium Brown Financial Services Limited is a wholly owned subsidiary of Odium Brown Limited, offering life insurance products, retirement, estate and financial planning exclusively to Odium Brown clients.

# Odlum Brown's 26<sup>th</sup> Annual Address



Thank you to our clients and friends who will be joining us this month for our 26<sup>th</sup> Annual Address. If you have not yet registered for a session, please visit [odlumbrown.com/rsvp](http://odlumbrown.com/rsvp) for more information. Video presentations and speech transcripts will be available online toward the end of this month.

## COURTENAY

**Monday, February 3, 2 PM**

Crown Isle Resort, Ballroom  
399 Clubhouse Drive

## WEST VANCOUVER

**Tuesday, February 4, 7 PM**

Kay Meek Centre, Main Stage Theatre  
1700 Mathers Avenue

## CHILLIWACK

**Wednesday, February 5, 2 PM**

Coast Chilliwack Hotel, Rosedale Room  
45920 First Avenue

## KELOWNA

**Thursday, February 6, 2 PM**

Coast Capri Hotel, Ballroom  
1171 Harvey Avenue

## VICTORIA

**Monday, February 10, 2 PM**

Delta Victoria Ocean Pointe, Ballroom  
100 Harbour Road

## SOUTH SURREY / FULL

**Tuesday, February 11, 7 PM**

Morgan Creek Golf Course  
3500 Morgan Creek Way

## VANCOUVER

**Wednesday, February 12, 2 PM**

The Fairmont Waterfront, Waterfront Ballroom  
900 Canada Place Way

## LANGLEY

**Thursday, February 13, 2 PM**

Langley Events Centre, Banquet Hall  
7888 200 Street

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## Odlum Brown in the Community

We are committed to supporting initiatives that benefit the communities where we live and work. This month, we are proud to sponsor the following event:

Odlum Brown FWE Gala: Pitch for the Purse Finale  
Thursday, February 20 at 5:30 PM  
Fairmont Hotel Vancouver



We are pleased to return as the Title Sponsor of the Odlum Brown FWE Gala: Pitch for the Purse Finale. Forum for Women Entrepreneurs (FWE) designed Pitch for the Purse to help women entrepreneurs access capital to grow their businesses.

This annual fundraiser brings together over 700 leaders and entrepreneurs in our diverse community for one spectacular evening. At this year's event, four finalists from three female-led businesses will pitch live on-stage for the chance to win \$25,000 to help grow their business.

To learn more about the gala and this year's finalists, visit [fwe.ca/odlum-brown-gala](http://fwe.ca/odlum-brown-gala).