

Charging Ahead

Fai Lee, CFA, CPA, CGA, MBA
Equity Analyst



Electric vehicles are quite topical these days.

You see them everywhere and I mean *everywhere*. This is a Tesla Roadster that was recently launched into space.

Back on earth, you see electric vehicles on magazine covers, websites and television.

Here's a snazzy electric vehicle plastered on the front cover of a magazine from January...

ELECTRIC VEHICLES

Vol. 6

CHICAGO, JANUARY, 1915

No. 1

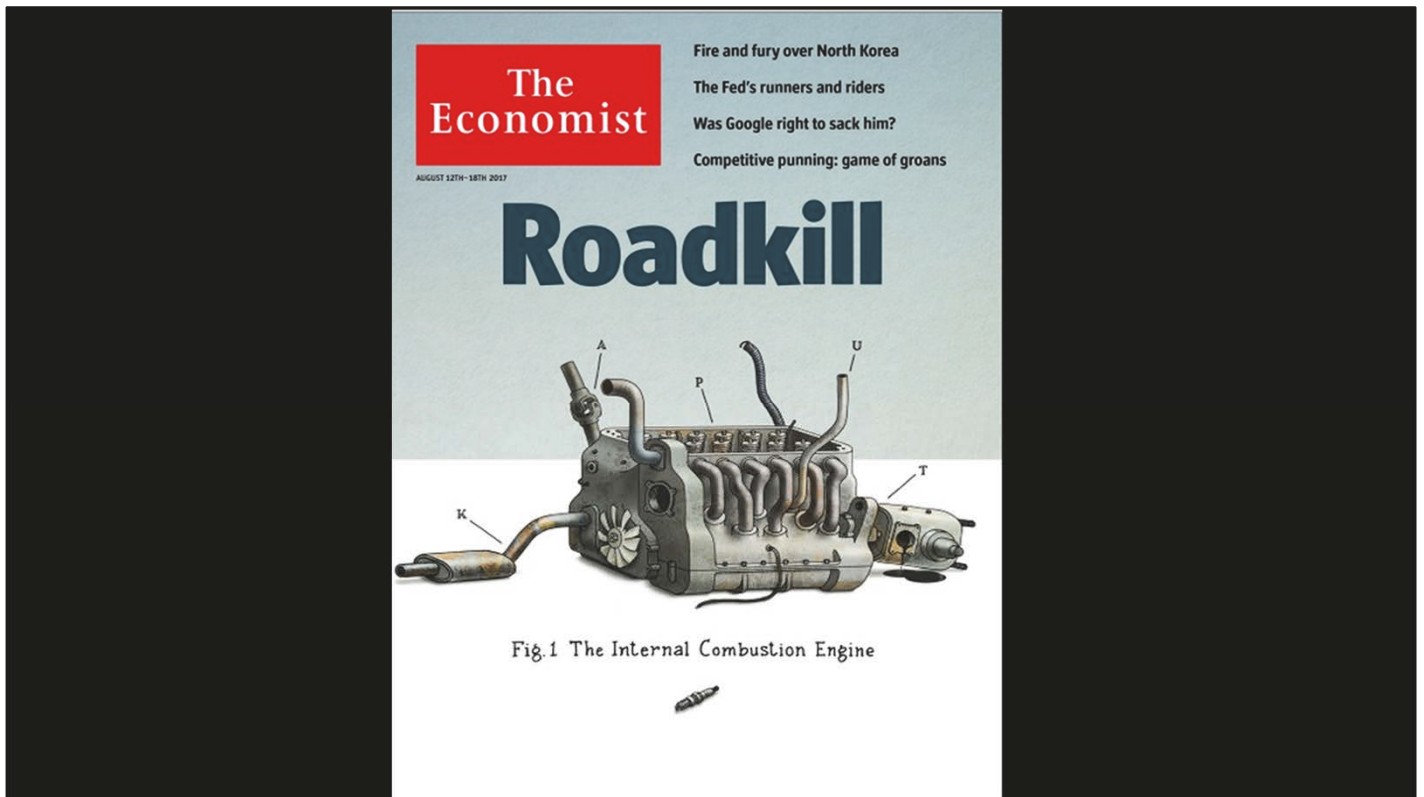


PEARL SINGELAR IN HER 1910 WAVERLEY

... 1915.

While we grew up with cars that have internal combustion engines, some of the earliest automobiles were actually electric.

This brings new meaning to “what’s old is new again.”

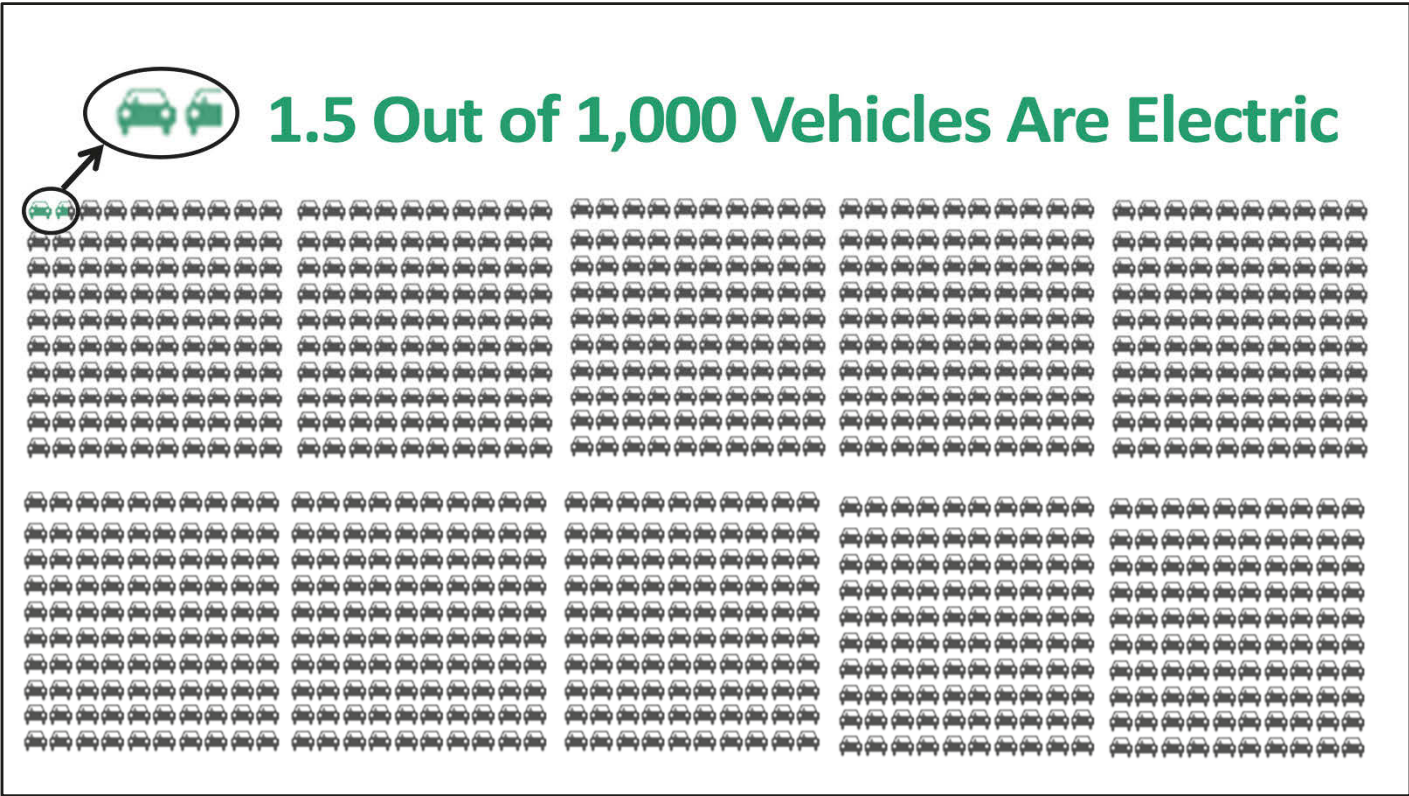


More seriously, you may have seen headlines like this one on the front cover of *The Economist* magazine or read articles that suggest electric cars will transform the auto industry.

You also may have heard statistics about the strong interest in electric vehicles, or EV for short. For example, management consultants, McKinsey & Company, published a study last year that indicated about 30% of vehicle buyers in the U.S. would consider buying an EV.

Some of you may have also noticed all these Tesla electric cars on the roads everywhere.

Electric vehicles are not going away anytime soon so you may be wondering, or even worried, about the impact of EVs on the oil market and oil company stocks.



In reality, electric vehicles still represent only a small percentage of the global vehicle market.

For every 1,000 vehicles in the world, only 1.5 are electric.

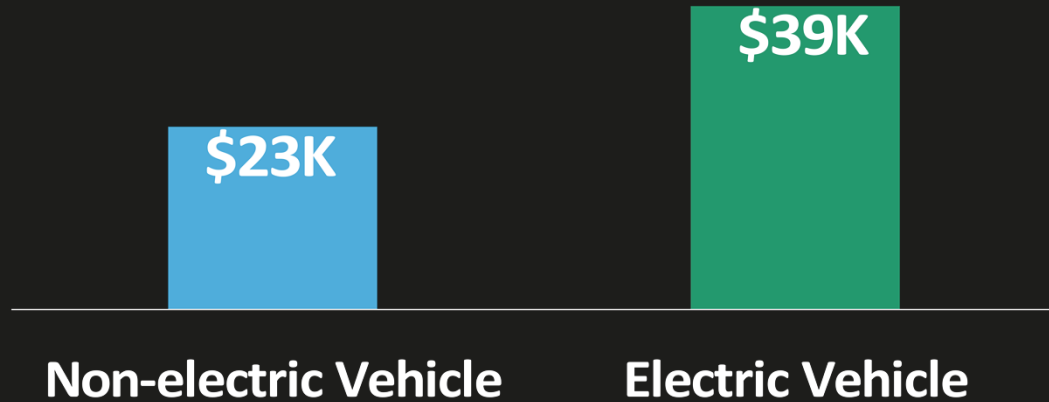
Despite strong interest from consumers, only about 4% of potential buyers ultimately purchase an EV.

		
		
Purchase Price	Driving Range / Charging	Choice

The most common reasons cited for not purchasing an electric vehicle include concerns about cost, driving range, charging availability and limited choice.



Average U.S. Sales Transaction Price (January 2018, US\$)



Cost is probably the biggest impediment to the wider adoption of EVs.

Without government subsidies, electric vehicles are more expensive than non-electric vehicles.

Instead of an internal combustion engine, EVs have battery packs. High battery costs are the primary reason why EVs cost more than non-electric vehicles. Battery costs have come down a lot in recent years but EV batteries are still two to three times more expensive than the cost of an equivalent internal combustion engine.

A number of studies suggest that batteries may not reach cost parity with internal combustion engines until about 2025 to 2030.

Charging: Range & Availability



Another impediment to EV sales is range anxiety, which refers to concerns about being stranded due to a vehicle having insufficient range to reach its destination. One way to deal with range anxiety is to increase the size of the battery but this makes electric vehicles even more expensive.

Having ready access to charging stations could also help alleviate range anxiety. The number of stations is growing but more will be needed as EV use increases. Developing this infrastructure is not a slam dunk.

I recently had an electric panel added to my garage that will allow me to install a charging station if I get an electric car. Based on my personal experience, I can tell you the electrical work required isn't cheap. With that being said, I have a garage but many people do not. People living in apartments may have to deal with strata councils if they want chargers installed in their buildings. Others may be parking their cars on the street where it wouldn't be practical to install a charger. These issues are not insurmountable but they are still challenges nonetheless.



This is a Ford F-150 pickup truck. The Ford F-Series was the top-selling vehicle in the U.S. last year. Pickup trucks from Chevy and Dodge were number two and number three. SUVs round out the top 5.

Guess how many major car companies make electric pickups right now?
That's right, none.

If you are looking for an SUV, it is not much better. You do have the Tesla Model X, but its base price not including sales taxes is over \$100,000 and the wait time for delivery is a couple of months.

While we expect more options in the future, limited choice is a common reason today for not buying an electric vehicle.

70 million electric vehicles

We have seen industry forecasts that suggest there could be up to 70 million electric vehicles in 2025 compared to 2 million today.

Given concerns about costs, driving range, charging infrastructure and limited choice, getting to 70 million EVs by 2025 may not be as easy as some people think.



**70 million electric vehicles
= 40 out of 1,000 vehicles in 2025**



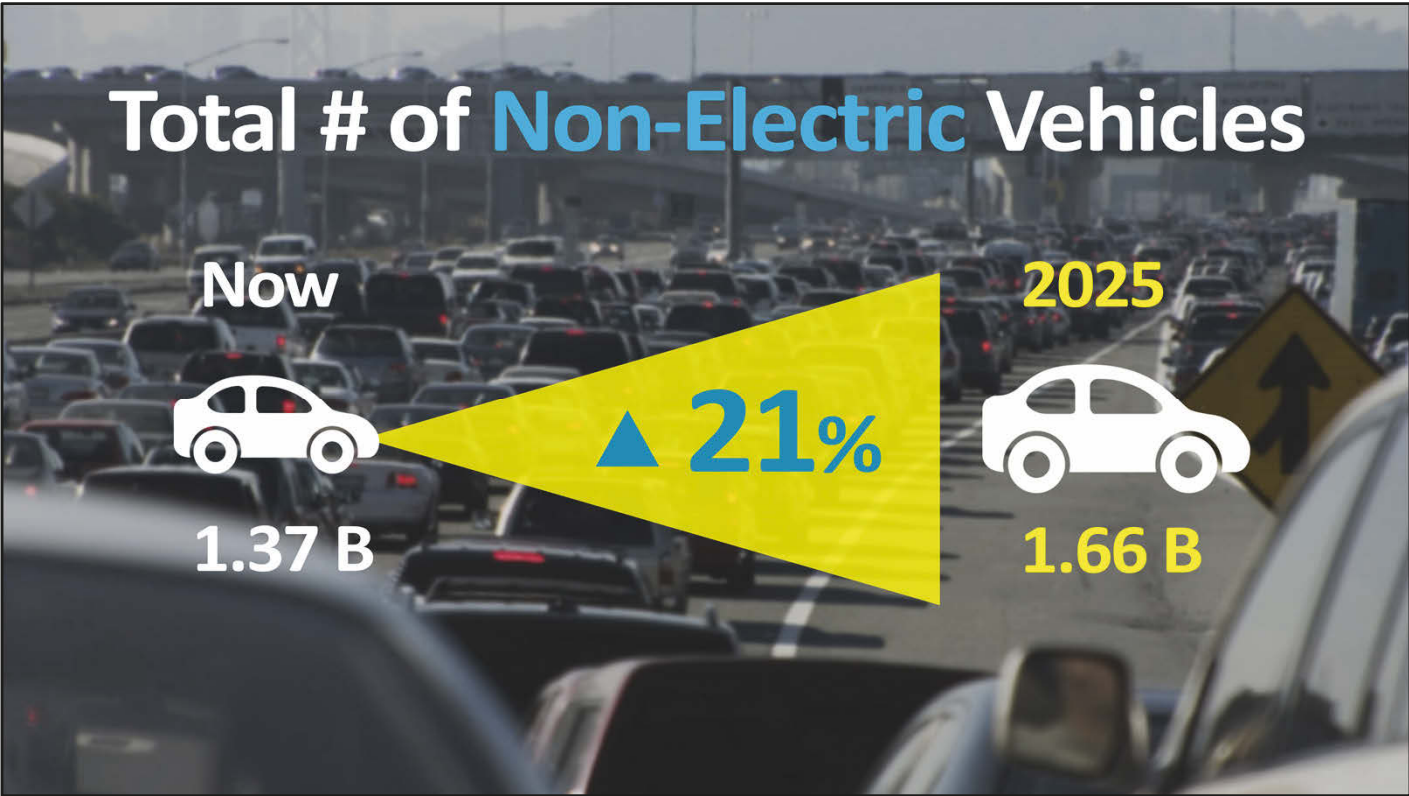
Regardless, even if we reach 70 million EVs in 2025, electric vehicles will still only account for 40 out every 1,000 vehicles in use in that year.

The vast majority of vehicles will still have internal combustion engines.



With so much going on these days, sometimes it is easy to forget that the world's population and the global economy are still growing.

More people and more money equals more vehicles.

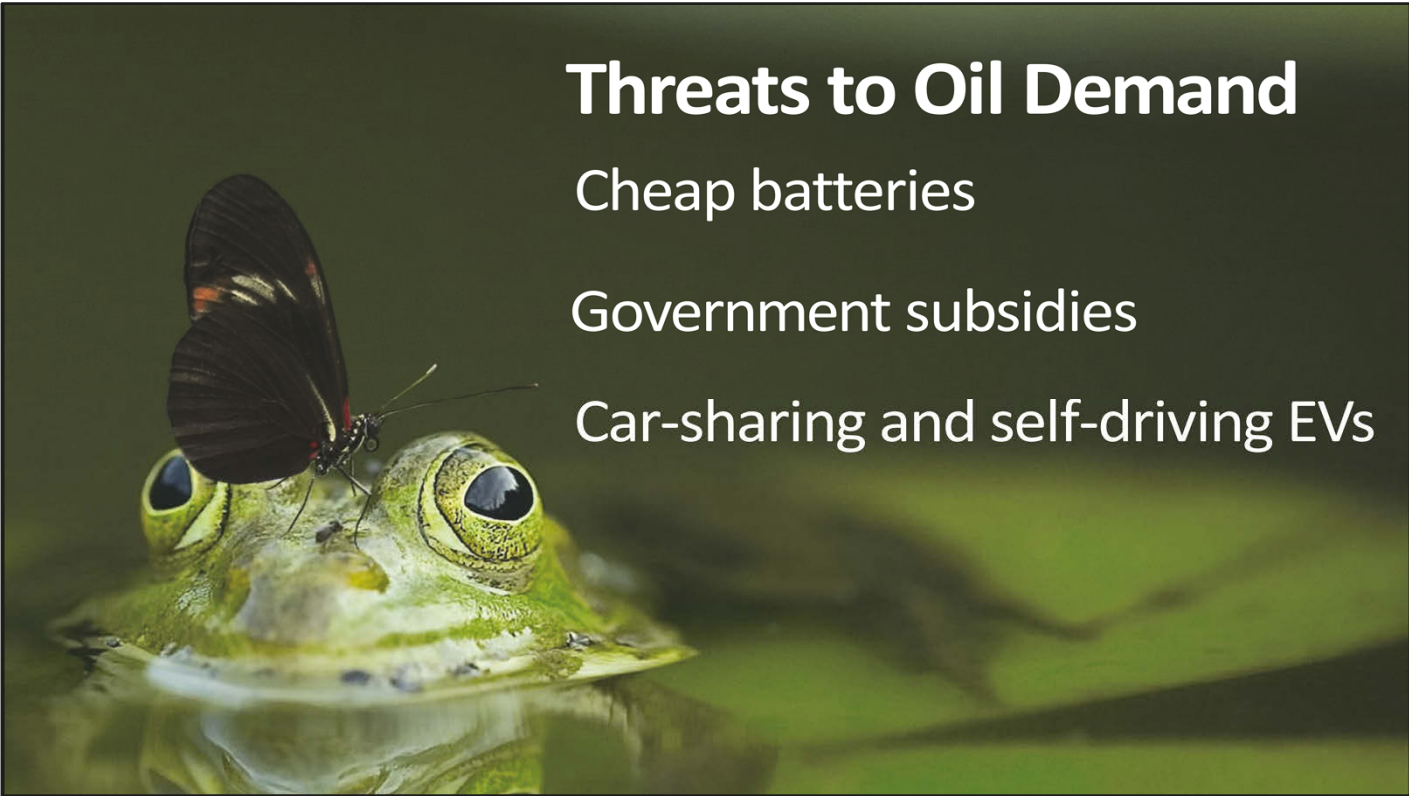


There are over 1.3 billion non-electric vehicles in use around the world today. For perspective, that's one vehicle for every 6 people on this earth.

As the world's population and economy grow, the total number of vehicles in use in the world increases every year by about 45 million.

Even as electric vehicles increase in popularity, the total number of non-electric vehicles will likely still increase by over 20% through 2025.

Obviously, this will be positive for global oil demand.



Threats to Oil Demand

Cheap batteries

Government subsidies

Car-sharing and self-driving EVs

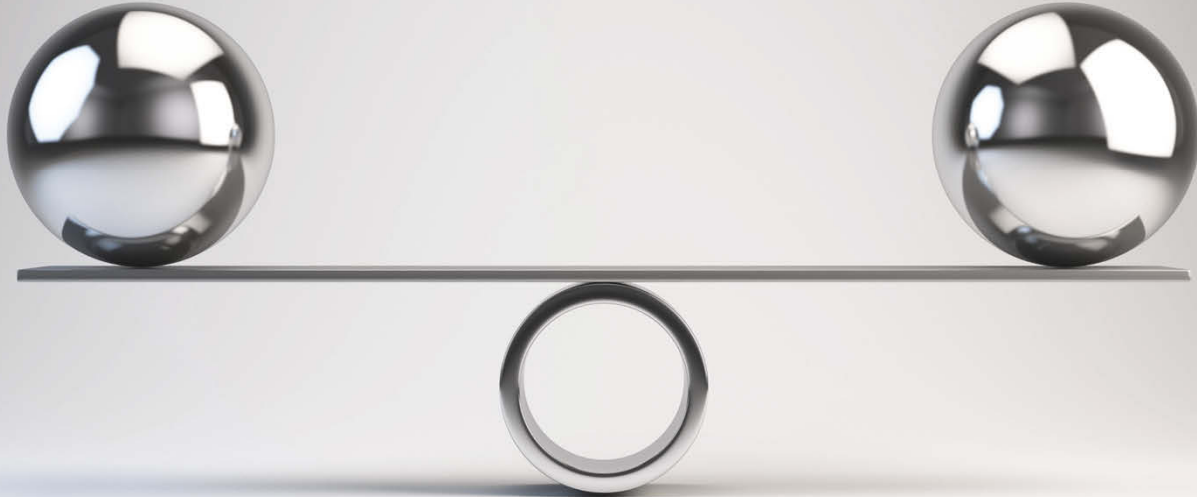
While we expect oil demand to keep growing into the foreseeable future, we do not want to be complacent like this butterfly sitting on the frog's nose. We are still very aware of the risk that EVs could pose to oil demand over the very long run. With this in mind, we are keeping an eye on developments in the EV sector.

Battery costs are an important consideration given that electric vehicles still cost a lot more than non-electric vehicles.

Government subsidies can have a significant impact on EV sales if they close the cost gap between electric and non-electric vehicles.

EVs are expensive right now, but spreading the costs over more people through car sharing services could lead to faster adoption rates. Self-driving vehicles are more likely to be electric so wider and faster adoption could also be a risk over the long run.

Oil Prices Will Be Determined by Supply and Demand



Oil company share prices generally move in the same direction as oil prices. So far, we've only looked at the potential impact of electric vehicles on oil demand but demand is only part of the oil price equation. Oil demand doesn't fluctuate very much from year to year. The volatility we see in oil prices is usually driven more by changes in supply rather than demand.

For example, oil prices in 2014 started falling when global oil supply increased. After reaching a low of US\$26 per barrel in February 2016, oil prices have increased by about 130%, despite there being greater demand for electric vehicles. That's because producers slashed capital expenditures and cut production when oil prices crashed. As the saying goes, "the cure for low prices is low prices."

While we see all these gloom and doom scenarios for oil, you would think there would be a lot of excitement for natural gas and uranium. They help produce the electricity required to recharge all of these electric cars. But, there isn't a lot of enthusiasm for natural gas and uranium right now because producers are suffering from too much supply in the market.

EVs and Portfolio Strategy

Monitor potential threats

Identify opportunities

Stay diversified

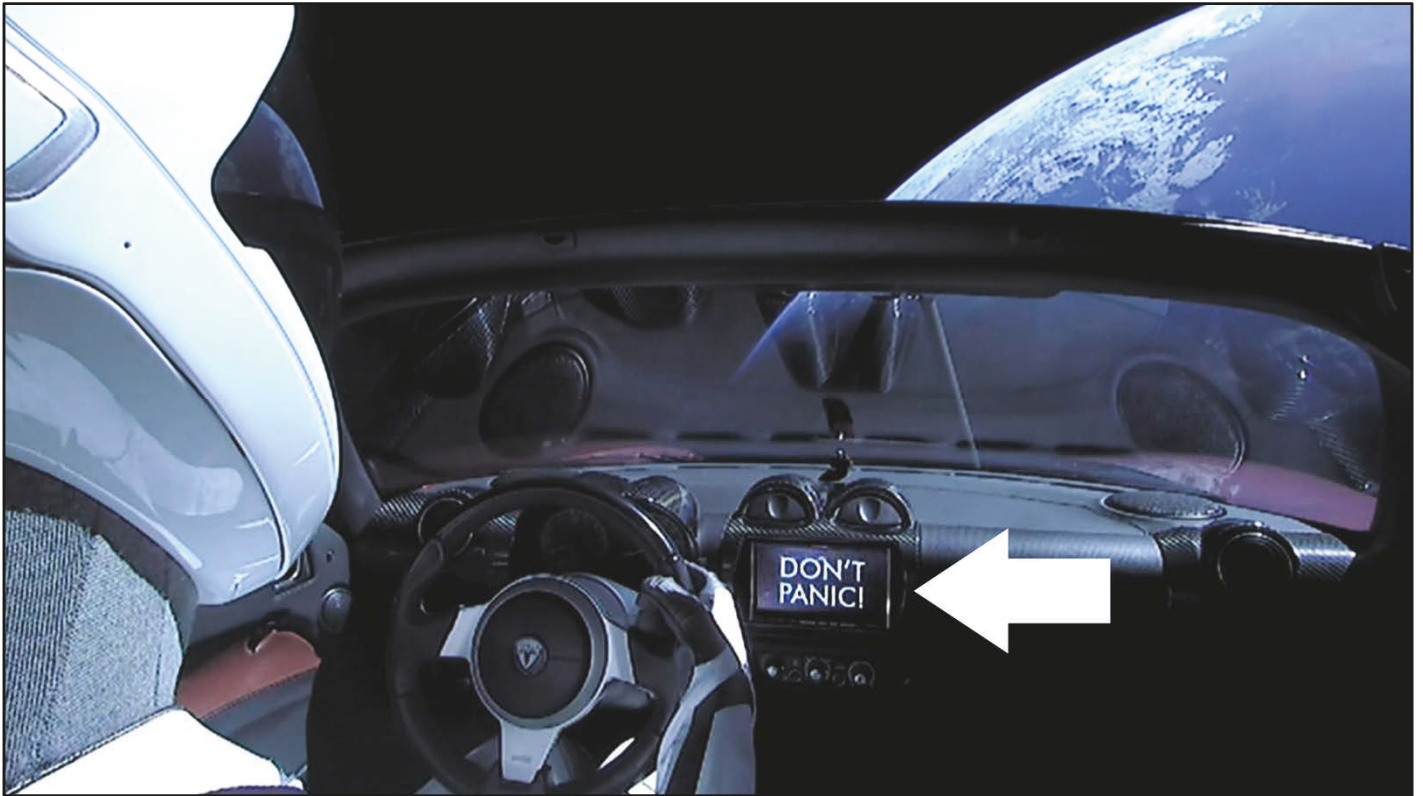


In terms of our portfolio strategy regarding EVs, we continue to monitor potential threats to our oil stock investments.

We are not just playing defense. Electric vehicles have a long growth runway ahead and we are looking for opportunities to capitalize on this trend. However, this is not easy as many stocks related to electric vehicles are speculative and expensive. It's also hard to tell who the winners will be. That being said, we are looking at the lithium sector and may have a potential new idea in the near future.

While we remain optimistic about the oil sector, change can bring unexpected surprises so we recommend clients to stay diversified and not have too much exposure to oil stocks and the Resource sector.

Most importantly, investors should not make drastic portfolio moves in response to growth in EV sales.



Even Tesla's Roadster in space is saying "DON'T PANIC!" and we believe this is pretty good advice when it comes to our oil investments.

Investment Thesis for Oil Recommendations



When it comes to our current oil stock recommendations, our general investment thesis is that we believe oil demand will continue to grow through the foreseeable future. Also, the current oil price environment is inhibiting capital investment and production growth.

We believe the combination of these factors will lead to higher oil prices.

Higher oil prices should lead to higher share prices for the oil stocks that we are recommending.



These stocks include Cenovus, Canadian Natural, Chevron and Royal Dutch Shell.

When one is constantly bombarded with headlines on the death of the oil industry due to the rise of electric vehicles, we believe it is helpful to take a deep breath and focus on the long term.

Before the Great Recession, investors were concerned about the world running out of oil. Now, people are concerned about insufficient demand. While investor attitudes can gravitate to the extreme, reality is more likely to fall in the middle with lots of opportunity to make money along the way.

We believe thinking long term is one of the keys to successful investing.

Things are much better than they appear.



In the case of the oil industry, the long-term outlook is probably a lot better than it may appear to many people.



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