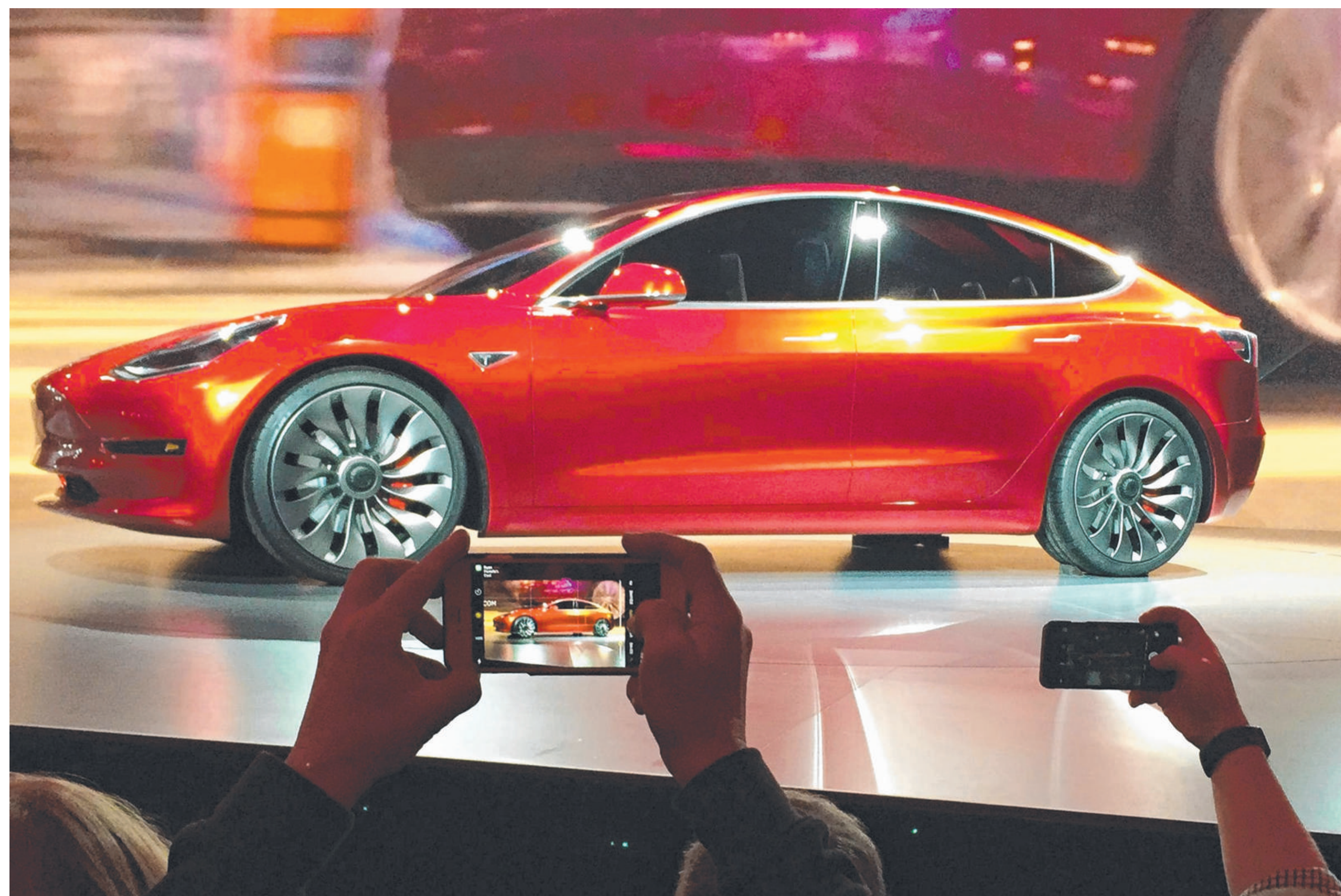
New ideas offer new ways to lose cash

The rush to invest in battery commodities ignores the basics

ROGER MONTGOMERY



Investors hoping to ride the electric car wave should remember that the high prices for lithium, nickel and cobalt will inevitably decline

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It's easy to be excited by new technology. From artificial intelligence, 3D printing and autonomous electric vehicles to ride sharing and drone delivery, there are so many new opportunities to speculate and lose.

Most inventors simply want to summit the peak of their knowledge by bringing their ideas to life. Far less time is spent thinking about the second and third order consequences, and very few legislators are qualified to put appropriate guidelines and restrictions in place before the technology's influence breaks free from the lab.

Whether it is the adverse impact on organ donation from the eventual decline in accidents brought about by autonomous vehicles, or the use of your Fitbit's health data by insurance companies to create an uninsurable underclass, there is very little commentary on how new technologies will change the world beyond the initial intended benevolence.

What's more, it is even harder for investors to profit: picking winners is difficult and often only the consumer wins.

Since the late 1940s more than 458 manufacturers globally have delivered television sets but fewer than 90 exist today. And of 78 US TV manufacturers, none can apply the "Made in USA" label today. Consumers 1, investors less than 1.

If you were present when Karl Benz first pottered around the garden in his horseless carriage, would you have picked a winning car manufacturer? In the US, from more than 1800 manufacturers that existed between 1894 and 1930, only four serious ventures exist today: Chrysler (Fiat), Ford, General Motors and Tesla, and of those Chrysler and GM were rescued by the government during the GFC.

Separately, Tesla — led by the charismatic Elon Musk — doesn't make a profit.

Fast-changing technology is rarely the path to profit for investors, but lured by the massive gains made — often only on paper — by early exponents, many investors hope that owning shares in the winner will be a ticket to life-changing wealth.

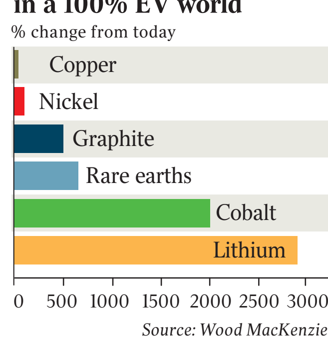
Today it is battery technology that has everyone aflutter, but once again late investors who hope to ride the electric autonomous vehicle wave need to appreciate that commodities are cyclical and even though an early step change in demand might see raw material prices rise, there will also be a rise in producers and a rise in the search for substitutes.

With Volkswagen announcing it has allocated $25 billion for battery equipment as well as an expansion of electric vehicle production plants from the current three to 16 by 2023, and commitments from Renault-Nissan-Mitsubishi, Volvo and Tesla, supply bottlenecks are likely. Perhaps that is why Apple has entered negotiations for long-term cobalt supply contracts to protect its iPhone development and production pipeline.

The metals that matter

Current battery technology requires lithium, cobalt and nickel, and unsurprisingly all are experiencing excitement-inducing price fluctuations as global technology and auto manufacturers compete in a land grab to secure the essential ingredients.

In early 2018, all three metals were rising in price and, while lithium demand is expected to grow by more than 40 per cent in the next three years, those expectations will also produce an expansion of supply. Billions of dollars of investment, much of it speculative, will ensure that prices will inevitably decline. Only those speculators able to successfully navigate the lag between irrational exuberance, expanding raw metal production and the production of refined battery-grade materials will profit.



Another essential ingredient, Cobalt, is benefiting from battery production with its price doubling between 2016 and 2017, and rising by more than 100 per cent year-on-year by February.

Commodity research house Wood Mackenzie, which has estimated that battery production drove 49 per cent of cobalt demand in 2017, believes battery demand will drive 61 per cent of demand in 2022. But it also predicts that a significant surplus will begin to accumulate in 2019 onward, driving a reduction in price.

Cobalt investors also have to keep an eye on regulatory uncertainty in the Democratic Republic of the Congo, which supplies more than 60 per cent of global cobalt. Mining sector reforms there that increase royalties on cobalt and levy a 50 per cent tax on "super profits" highlight some of the risks that investors might face. Meanwhile, the largest DRC producers responsible for 85 per cent of the nation's production have quit the country's Chamber of Commerce amid a dispute over the reforms.

And investors shouldn't ignore China's role in the game-changing technology. China produces more than 80 per cent of the world's refined cobalt and has signed an agreement with Glencore — the world's largest cobalt miner — for three years of supply or 50,000 tonnes, equivalent to about half the world's total cobalt production last year.

But on the supply side, Glencore has also stated that it will expand output from the DRC from 39,000 tonnes to 65,000 tonnes in 2019.

Another (current) essential EV battery ingredient is nickel and, while it is a much smaller input, Wood Mackenzie expects demand for electric vehicles as well as energy storage to more than double by 2020 from 2016 levels, and for the 2022 nickel price (that's four years away) to almost double the 2017 price.

The purpose of citing all that commodity research is to demonstrate that while new technology promises an easier, safer and healthier world, investors should not forget the fundamentals of commodity supply and demand. Higher prices beget higher supply and a search for substitutes that ultimately lowers prices, sending producers broke and clearing the decks for another rise in price.

If there is one thing that new technology will do, it is that it will expand the opportunities for investors and speculators to lose money.

Roger Montgomery is founder and chief investment officer of the Montgomery Fund.

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Don't just go along for the ride with Tesla — there's a rocky road ahead

ELIZABETH MORAN

The excitement surrounding the Tesla brand and the energetic "can do" voice of its chairman and CEO Elon Musk is infectious — so much so, you can almost feel it.

Electric cars, autonomous vehicles and EV batteries are the future. The newest and most affordable model from Mr Musk, the Tesla 3, reportedly has a wait-list of 500,000 supporting the popularity of Tesla's cars and ongoing growth.

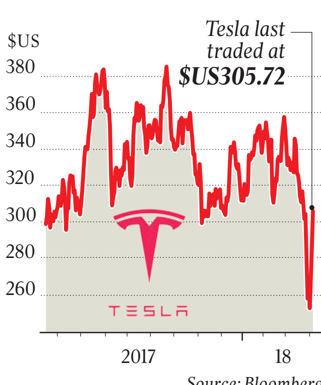
Both shareholders and bond investors have bought into the Tesla story.

Tesla shares have previously performed very well, trading from around $US41 in 2013 to $US267 on April 4 this year, but in the first quarter of 2018 they were down a staggering 30 per cent. What went wrong?

The poor performance is attributed to two main causes: lower than expected production numbers of the Tesla 3, and the fatal crash of a so-called driverless vehicle last month, which had the effect of grounding exuberant investors.

It is interesting to note that bond investors haven't had the same rollercoaster ride as the shareholders. Tesla's most recent bonds were issued last August. It raised $US1.8 billion in a 10- year bond issue, paying a paltry 5.3 per cent fixed rate per annum.

The bonds were rated a low B- or equivalent and the return offered was almost 3 per cent per annum lower than equivalent rated bonds with shorter terms to maturity. In other words, the Tesla bonds offered an irrationally low return for significant risk.



Telsa 2027 bond prices have consistently declined, trading at a discount to $US100 face value from day one.

Adding to bond holder pain, last week Moody's downgraded Tesla bonds to Caa1, citing slower production of the Model 3, maturing convertible debt of $US230 million that would need refinancing in November 2018 and $US920m in March 2019. What's more, the bonds sit behind $US1.9bn ($2.5bn) of senior secured debt, which must be repaid before the bonds in a wind-up. The lower credit rating should mean it will cost more to issue new bonds in future and increases the risk of default for the 2027 maturity bonds from 32.5 per cent to 50 per cent over the term until maturity.

The Standard and Poor's credit rating is one notch higher at B-.

Tesla bond prices reached a low $US87 early this week before the latest Tesla update. Based on this purchase price, yields were higher at 7.6 per cent per annum, if held to maturity, but the return is still below comparable bonds.

This week the company released better production figures. While still short of the promised 2500 Tesla 3 vehicles per week, total production for all three models for the first quarter of 2018 was up 40 per cent compared to the fourth quarter of 2017.

Further, the company stated it would not need to raise additional funding for the rest of the year, allaying investor fears of further raisings.

After the announcement, the share price gained 6 per cent while bond prices rose $US2 to $US89. How should investors begin to assess the options?

There are headwinds for both share and bond investors. Revenue at Tesla, while growing strongly from $US7bn in 2016 to $US11.7bn in 2017, has been in lock-step with total debt. As a result no new additional funding is likely to restrict growth, particularly if production continues to fall below expectations.

The company is consistently cashflow-negative and loss-making with huge capital expenditure. Yet at the end of 2017, the market capitalisation was $US53bn.

The March 2019 maturing debt whether paid out of existing liquidity or new financing could be a pressure point. Funding from internal sources will reduce much needed liquidity while external refinancing by issuing new bonds should cost much more than the latest 5.3 per cent per annum bond issue. In 12 months the market will have more data on car production, a key metric to Tesla's ongoing survivability.

If you are a strong believer in the Tesla story, then you are best to stick with the shares. If the dream comes true, the share price has enormous potential. But you should prepare for a rocky road. Shares seem priced for perfection and consistent higher production of the Tesla 3, so more disappointments will inflict more volatility. The downside is a total wipe-out.

More sceptical investors could seek limited comfort in the bonds. The equity cushion of $US48bn sitting below bondholders would absorb losses. For my money, I'd ignore Tesla completely.

Elizabeth Moran is a director of education and research at FIIG Fixed Income Specialists.

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Mum is 92, a widow, and now at an age where she is struggling to care for herself. We have been advised that she will need to make the move to an aged-care facility as home care is not an option. The cost of various facilities varies markedly. Our preferred option has a deposit of $650,000 and care fees of about $26,000 a year. Mum owns her home worth about $1.05m and $35,000 in the bank. She receives the full age pension. Our concern is to ensure mum is comfortable in her final years and can afford the care costs.

In order to be admitted to an aged-care facility, your mum will need to be assessed by the aged care assessment team. This will usually be booked by her GP or the hospital. Once an ACAT assessment confirms your mum requires residential care, you can approach facilities to discuss admission.

While you are deciding on a facility, it is really important to recognise that your mum is entitled to 63 days of respite care. In the first instance, this may be a rehabilitation hospital but may become an aged-care facility on a trial basis. There is a daily care cost associated with this care but this gives you time to assess the facility. The 63 days can be extended by a further 21 days in certain circumstances subject to approval from the Department of Aged Care.

Given your mum's assets, she will be financially assessed as being an unsupported resident. This is important, as she will not be reliant upon finding a place for those with "low means", which offer limited choice.

Before focusing on the costs, I encourage you to focus on finding a facility that your mum and the family will be happy with. Once you find the right facility, then the process of working out how to fund her admission can be determined.

Care costs for an aged-care facility comprise:

- A daily care fee of $50.16 per day, set at 85 per cent of the single full aged pension.
- A means-tested care fee, determined by your mum's assets and income. To have this amount determined you complete an income and assets assessment form (SA457) and lodge this form with the Department of Human Services. If this form is not completed your mum will be required to pay the full cost of care and will receive no government subsidy. This fee is capped and a lifetime limit applies. The facility may also charge an extra and additional services fee which applies to premium or extra services.
- The refundable accommodation deposit which covers the cost of accommodation.

The RAD can be misunderstood and causes the most concern. As the name suggests, the RAD is refundable when a resident leaves a facility. A facility is obliged to repay a RAD within 14 days of the resident giving notice of vacating or within 14 days of being shown a Grant of Probate or Letters of Administration. The full value of the RAD is refunded unless it has been used to fund ongoing costs.

You have the choice to either pay the RAD in full or choose a periodic payment known as a daily accommodation payment or a combination of both. The DAP payment is calculated as a percentage of the equivalent RAD, currently 5.77 per cent. So if you didn't pay the $650,000 RAD, your mum would pay $102.75 per day as a DAP. You have 28 days from signing the admission papers to decide. The facility cannot refuse admission based on your preference and you can change your mind.

There are various strategies available to reduce the means-tested care fee, maximise Centrelink Age Pension entitlements and manage the future viability of your mum's care.

Visit www.myagedcare.gov.au or phone 1800 200 422 for further information.

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