

Market inflection points

By Ben Scheltus, CEO, Climate Alliance Limited

- Rapid changes in market dynamics have a material impact on the success of businesses.
- International agreements to limit global warming will restrict the amount of fossil fuels that can be burned in the future.
- This may create difficulties for the fossil fuel industry, including 'stranding' assets.

Transport using horsepower has existed for centuries, with horse-drawn carriages a common form of transport for the general public in Europe and the US by the late 1800s. Then, in the 1890s, the first 'horseless carriages' (automobiles) appeared on the city streets. From the late 1890s to the 1920s, carriages and automobiles shared the road. Early cars were expensive and unreliable, regarded more as amusing novelties than as a serious means of transportation. But by 1910 innovations in mass production and engine technology had created a vehicle that was both more reliable and more affordable; it soon became clear that the car was here to stay.

It took only about 30 years for a very large industry based on horse transport to disappear. What did the owners of these businesses think about the threat posed by automobiles? How did they react?

Are the power companies, petrol powered car manufacturers and fossil fuel companies the horse carriage manufacturers of today? Are these industries facing imminent demise?

How long could that take and who will be hit first? Darwin was reputed to have said, 'It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.' Do these industries need to start adapting? Do they think they need to adapt?

Although there have been substantial changes in industry over the last 100 years, the changes over the last 20 years have been particularly breathtaking. Take, for example, the video rental business, which only first made an appearance about 35 years ago. How many video rental stores still exist in your neighbourhood? Good availability of high speed Internet and Netflix have made not only video stores redundant, but also CD's and DVD's. New computers are no longer sold with a CD or DVD burner or player.

If you are in the taxi business, the cost of your taxi licence in Victoria was probably about \$300,000. The threat posed to the traditional taxi industry by the Uber business model is considerable. By combining the connectivity supplied by the Internet, satellite technology and mobile phones, Uber has managed to turn the industry on its head. It is unlikely that governments will be able to arrest this development. How will the taxi licence owners be compensated for their licences that may have become stranded assets? Uber started its business only six years ago.

From a technology perspective, the achievement of Elon Musk is even more impressive. From a standing start in 2003, a group of engineers designed

an all electric car based on the power train design invented by Nikola Tesla in 1888. Cleverly targeting high net worth individuals, a Tesla is a 'must have' car to park next to your Ferrari, Porsche and Bentley. The manufacturers of the latest range of premium German cars are also betting heavily on the future of hybrid and electric cars.

Importantly, Musk proved that the all electric car technology is viable and at the same time he developed batteries that are usable in other applications. He has made car design publicly available, so that it can be applied to lower cost cars. He is now focusing on building a 'Giga factory' in Nevada to manufacture low cost batteries for the home. In combination with widely distributed solar panels, these batteries will result in a dramatic change in the power purchasing patterns of homeowners.

The first sub-four minute mile was run by Roger Bannister in 1954. Once he had achieved this great feat, his record lasted only 46 days. Now that Musk has shown the way, there will be a proliferation of other battery manufacturers and technologies that will greatly increase the diversity and competition in this sector.

It is unclear at present how this will play out on the viability of the power generation and distribution businesses. However, it is likely to have a negative impact on their future revenue streams. The challenge is made greater for the power distribution businesses due to the very large investments they made recently in upgrading the networks — potentially increasing the magnitude of the stranded assets. In addition, the price of solar is decreasing so rapidly, that in many jurisdictions it is already on parity with centralised power generation costs. Solar panel installations started to be rolled out in volume only six years ago in Australia.

Rapid changes in market dynamics always have a material impact (either positive or negative) on the success of businesses. They can make it very difficult for directors to anticipate and assess the risks.

One interesting but often overlooked change in market dynamics is the confluence of social and economic drivers of change: China's single child policy and the energy source used for power generation. Chinese parents in the larger cities have been very concerned about the potential impact of the severe air pollution on their (typically) only child. The levels of pollution caused by coal fired power have been substantially above any globally accepted standards. The fine coal dust can find its way into the blood stream of their children. As a result, the Chinese government has aggressively reduced the use of coal for power generation for their larger cities. As Australia is heavily dependent on coal exports, this trend will impact the Australian economy and coal exporters in particular.

The elephant in the room is the issue of stranded assets in the fossil fuel industry. The size of the industry globally and the reliance of investors on its success makes this a critical issue for directors in many sectors.

Governments internationally have agreed to limit global warming of the Earth's atmosphere to 2°C. As the atmosphere has a limited capacity to absorb carbon dioxide, this 2°C goal greatly limits the amount of fossil fuels that can be burned in the future. Estimates vary, but the result is that a very large proportion of the proven fossil fuel reserves will need to stay in the ground. This will have a material impact on the valuation of the shares of fossil fuel companies.

Mark Carney, Governor of the Bank of England, told a World Bank meeting that the 'vast majority of reserves are unburnable if global temperature rises are to be limited to 2°C or less.'¹

It is worth noting that even though this restriction has not been applied yet, there has already been a substantial reduction in the market price of fossil fuels — with most fuels trading about half of what they were a year ago. If the unburnable carbon limitation comes into force, it will create further difficulties for the fossil fuel industry,

including 'stranding' many of their assets (reserves, mining leases, ports, railways, shipping and equipment).

This issue could substantially impact not just the fossil fuel industry (coal, gas and oil producers), but also investors and suppliers that rely heavily on the success of those industries.

The fossil fuel industry is particularly important to Australia, due to its heavy dependence on coal exports. Coal accounted for almost 13 per cent of Australia's total goods and services exports in 2012–13 down from 15 per cent in 2011–12.²

The investments sunk into this industry are very large and in the absence of any external limitations to its export and sale, coal could have an attractive future due to Australia's huge coal reserves.

However, 'It is estimated that over 90 per cent of Australian coal reserves cannot be burned. Effectively tackling climate change, that is, meeting the 2°C warming limit, makes it highly unlikely that any of Australia's potential coal resources beyond the reserves already being exploited would ever be developed. This includes the Galilee Basin deposits, which in general have high costs of development and contain relatively low-grade coal.'³

A substantial correction in the share value of companies in this important sector will also impact the investments made by companies in the superannuation, insurance and banking sectors.

Uncertainty around climate policy is a significant source of portfolio risk for institutional investors to manage over the next 20 years. The economic cost of climate policy for the market to absorb is estimated to amount to as much as approximately \$8 trillion cumulatively, by 2030.⁴

In the February edition of this journal, Sarah Barker, Special Counsel, Minter Ellison, argued that proactivity and engagement are necessary to discharge a director's duties. In recent cases the courts have emphasised that there are certain minimum obligations inherent in the duty of care.



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In short, a 'reasonable' director must:

- proactively acquire, and maintain, an 'irreducible core' of knowledge and understanding of the fundamentals of their corporation, including in relation to its activities, its financial position and the relevant regulatory framework'
- monitor corporate affairs and policies
- take diligent and intelligent interest in the information available to them or which they might appropriately demand from the executives or other employees and agents of the company'.⁵

Unfortunately, information available to directors on the topic of climate change is often either couched in complex scientific language or is presented in an extremist manner (from both directions). This makes the task for a director to 'inform themselves' as per s180 of the *Corporations Act 2001* a difficult one.

However, as can be seen from the examples above, the market inflections can be dramatic and permanent. Climate change will drive a number of changes in markets and the impact of these changes will affect many industries and it will be critical that boards estimate the potential impact and likelihood of risks presented by climate change.

For many years, we at Climate Alliance have strived to address this issue. Our goal is to make it easier for directors to inform themselves on this important topic. We maintain that this issue should be treated just like any other risk to business. We believe directors

should assess this risk on its merits and not discount it just because some individuals choose not to accept the underlying science.

As Sarah Barker states in the same article, 'Accordingly, a 'reasonable' director could not also genuinely maintain that the risks and opportunities presented by climate change were insignificant or improbable — regardless of whether the prevailing consensus conflicts with their genuine personal ideologies'.⁶

From reading the papers in Australia currently, one would think that this topic is no longer relevant and that it has gone away. Looking internationally, however, nothing could be further from the truth. It would be imprudent to assume that the current situation will not change and change quickly. The preparations for the UN climate change conference in Paris at the end of 2015 give the indication that countries much larger than Australia are taking action on climate change very seriously. The EU has announced very aggressive carbon reduction targets, and the US and China are moving on a similar path. It is very likely that Australia will be forced into a position that is very different from the current position preferred by our current government in Canberra.

Company secretaries, we believe can play an important role in having the risks associated with climate change brought to the attention of the board and the board risk committee.

To go back to the analogy at the start of this article — make sure you're one of the new 'horseless carriage' manufacturers and not in the business of supplying the horse end of the carriage! ▀

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Notes

- 1 www.theguardian.com/environment/2014/oct/13/mark-carney-fossil-fuel-reserves-burned-carbon-bubble
- 2 www.minerals.org.au/resources/coal/exports
- 3 <https://www.climatecouncil.org.au/unburnable-carbon-why-we-need-to-leave-fossil-fuels-in-the-ground>
- 4 www.mmc.com/content/dam/mmc-web/Files/Climate_Change_Scenarios_Implications_for_Strategic_Asset_Allocation.pdf
- 5 <https://www.governanceinstitute.com.au/knowledge-resources/publications/journal/?categoryid=17022&page=2>
- 6 <https://www.governanceinstitute.com.au/knowledge-resources/publications/journal/?categoryid=17022&page=2>