WHITE PAPER

CLIMATE CHANGE
AND STRANDED ASSET IMPAIRMENT VALUATION

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Businesses and investors are now becoming more and more aware of the potential risks and threats of climate change but not all recognise the inherent financial risk as capital assets employed in high-risk sectors will become obsolescent and 'stranded'. As these assets cease to deliver adequate financial return to the business, they will need to be impaired, writing-off balance sheet value and ultimately reducing profitability.

In this article we seek to understand better the relationship between climate change and stranded assets, the sectors that are being impacted by it and the issues surrounding impairment.

What are stranded assets?

Stranded assets are assets that have an unanticipated, premature or early write-down; they could experience devaluation or be converted to a liability. The result of which is they pose a significant risk to the balance sheet. The cause of becoming stranded can be due to a multitude of different factors and may vary depending on the sector industry. Typically, these influences could be down to transformation, innovation and political instability. Or from what is becoming increasingly prominent; environment-related factors and as a consequence the resulting mitigant regulation.

Which sectors are particularly vulnerable?

Any sector can be impacted but with global commitments to halt climate change sectors that create high carbon emissions or cause water scarcity are already becoming targeted.

Some of these sectors are explored in more detail here.

Energy & Utilities

The much-heralded 2015 Paris Agreement saw 196 countries committing to limit the increase in global temperature to well below 2°C, preferably aiming for 1.5° C. At the time Mark Carney, who was then the Financial Stability Board (FSB) chair, summarised that a carbon budget consistent with the Paris agreement 2°C target "would render the vast majority of reserves 'stranded' - oil, gas and coal that will be literally unburnable without expensive carbon-capture technology".*1

This sets a rising cost to owning assets that emit high levels of carbon. Giuseppe Corona, who manages global investor AMP Capital's $284-million Global Listed Infrastructure Fund, adds further detail commenting, "Coal assets are most at risk of becoming stranded. Oil assets are probably second in line. Gas is the one that is tricky; of all the conventional energy sources, it's possibly the cleanest." *2

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Mark Carney

The challenge then is identifying when a risk of stranded assets is more likely. Particularly, as Giuseppe Corona continues saying: "being able to predict and outpace the rapid technological, political and social evolution regarding carbon is now one of the biggest challenges."

Interestingly one of Hickman Shearer's energy clients, Eskom, are a great example of an asset owner who is looking to invest in clean energy rather than further impairing assets. As Africa's biggest greenhouse gas emitter, they are planning to invest over $10bn (£7.4bn) by 2050 to replace the vast majority of its coal-fired power stations with renewable energy.*3

Evidently, investment in renewable energy is an excellent example of a technical revolution providing a long term solution to materially reducing fossil fuel-based emissions in the sector. In tandem, the Medium Combustion Plant Directive (MCPD), requiring capex to clean exhaust emissions and restricting the commercial use of non-compliant diesel generator sets, demonstrates how regulation is stranding assets as a result of climate change mitigation.

In perspective, the International Energy Agency has warned that $1.3 trillion of oil and gas assets could be left stranded by 2050, if the fossil fuel industry does not adapt to greener climate policies.*4 The unanswered question though is what long-term effect will this balance sheet write-down have on these companies?

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Mass Transport

Movement of mass items; be that people, resource or products has been integral to all markets globally for decades. The blockage of the Suez Canal in March 2021 for six days illustrated very clearly how a simple break in the supply chain can lead to billions of pounds of trade being halted. Equally longer-term disruptions due to economics, environmental regulations and changes in attitudes can result in a significant rise of stranded assets in any mass transport sector.

Marine Cargo

The growth of the global merchant fleet has accelerated as tankers, bulk carriers and container ships have become bigger, faster, more automated and specialised, transporting billions of tonnes of goods. Their detrimental impact on air quality only increases as the sector grows; in context, if the shipping sector was a country it would be the sixth largest greenhouse gas (GHG) emitter.*7

However, climate related regulations are being implemented to stem this impact with the implementation in 2020 of the Global Sulphur Cap limiting it to 0.5% in shipping fuel. At the same time the International Marine Organisation (IMO) also adopted amendments to MARPOL Annex VI which will ban carriage of non-compliant fuel for use by ships.*8

These regulations are forcing the shipping sector to respond by installing expensive scrubbing systems to reduce dangerous gaseous emissions. Owners therefore, have stark choices either to retrofit vessels to maintain asset value or accept the asset as being stranded and impaired at salvage value.

98.3%

fall in monthly

air passenger arrivals to the UK*5

Aircraft

Time has shown that stranded assets can relate to anything which has become redundant, and this is no more so, than for air travel in the current Covid-pandemic. Here monthly air passenger arrivals to the UK fell from 6, 804,900 in February 2020 to 112,300 in April 2020, a fall of 98.3% according to the ONS.*5 This was reflected in striking images of rows of passenger aircraft stranded with an estimated two-thirds, which is approximately 16,000 jets lying dormant on tarmac around the world.*6

The pandemic is obviously unprecedented and unrelated to climate but it is effecting change as we have all learned that technologies like Teams and Zoom are working relatively well and can replace some of the air travel that they used to do.

Technologies will likely replace some air travel in the future evidenced by the increasing number of 737 MAX and Airbus A330 being more permanently stored and de-commissioned for spares or scrapped as a result of demand for improved fuel efficiency requirements. Typically, under utilised assets or those held for sale will then ultimately be impaired to a lower holding value.

Automotive

The internal combustion engine has long been the preferred mode of passenger and freight transport, however OEMs purely focused on the internal combustion engine (ICE) could soon face distress or closure as the traffic lights finally change to red. Alongside fuel efficiency, the rise of alternative fuels, improved battery storage, and investment in electric vehicle infrastructure, regulation is driving the demand for electric vehicles.

As a result, many OEMs will be in a race to sell, switch or shut their production facilities to avoid being left with stranded and zero value capital assets. Some believe traditional manufacturers and the very large number of engine component suppliers are playing a 'zero sum game' as the growth in electric cars renders these production facilities stranded and valueless. *9

Despite the pandemic, global sales of electric vehicles accelerated in 2020. They rose 43% to 3.24 million, despite car sales generally decreasing during this time. Of those purchased all-electric cars accounted for 69% of sales in 2020, with the remainder 31% being plug-in hybrids.*10

Of the vehicles purchased in 2020

69% *10

were all-electric cars

Several key players are responding:

- General Motors are investing in development. In fact GM recently invested $1.5 billion to expand and enhance its battery testing lab and research and development facilities, while also focusing on manufacturing facilities, domestic supply chain development, electric vehicle infrastructure and design.

- In July 2021 when Honda closed its Swindon site due to global changes in the car industry and the need to launch electric vehicles. The closure directly impacted 3,500 employees but is estimated that it will have affected 15,000 people across the entire supply chain for the vehicles.

- Honda are now also leaving Formula 1 at the end of 2021 stating, "the decision has been made because the automobile industry was going through a once-in-one-hundred-years period of great transformation".

Automotive traffic is now going in one direction and the demise of fossil fuel powered vehicles is certain. This is already impacting on capital asset values and will continue to do so as ICE production assets become stranded and impaired.

Food and Drink

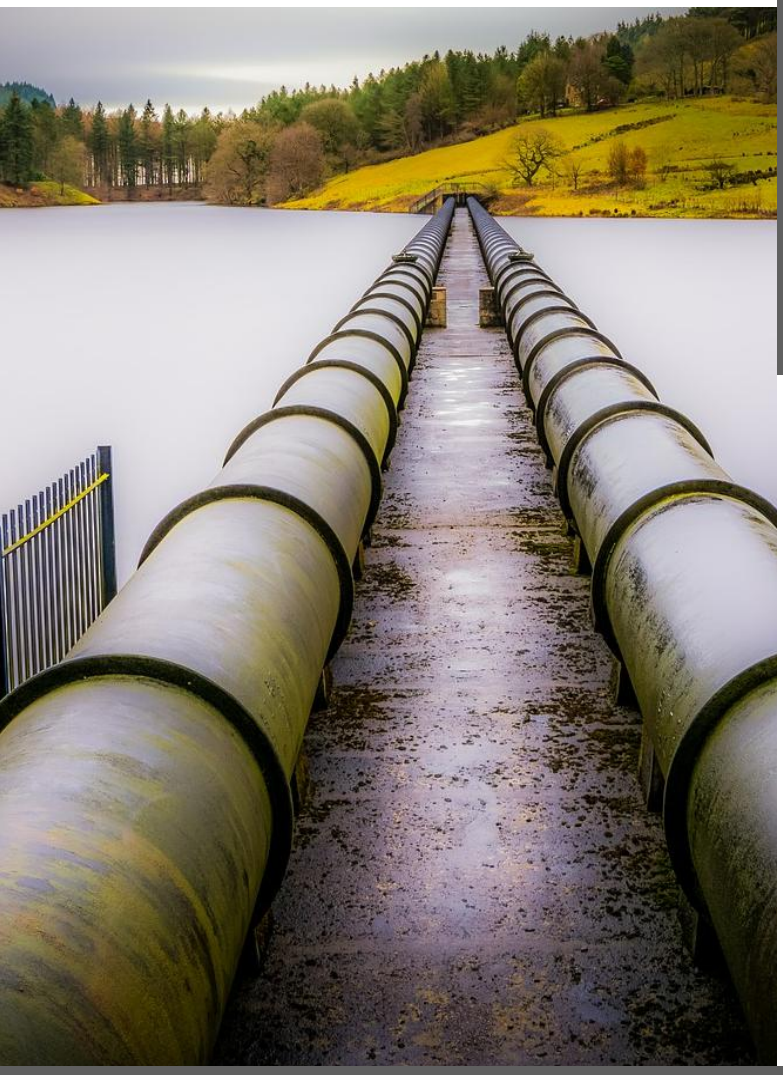
The peril of stranded assets is equally of increasing concern for the food and drink sector but interestingly it is impacted more by the environment and forces of nature, and less so by regulation, as water supply and stress become more apparent. The World Economic Forum has ranked water-related crisis as one of the top global risks over the next decade which will have a material impact on capital asset values.*11

These global risks including changing weather patterns causing both flooding and water scarcity are providing challenges for many water intensive manufacturing sectors including:

- South African droughts causing grain production to be nearly halved, leading to many campaigns to driving to stop any development of coal mines with their excessive water consumption.

- Venezuelan water scarcity led to two-day working-weeks because of electrical production shortages from their hydropower plants.

- Taiwan's government who restricted water use to a chip-factory to retain the local domestic supply. Mexico's government who refused a permit to brewers Constellation Brands to withdraw water as it expected to use 25% of the available water supply.



The World Economic Forum ranks *11

water related crisis as top global risk

Water scarcity is being monitored by regulators and operators. In India the largest 1,000 listed companies in India will shortly be required to prepare detailed disclosures on water withdrawals, consumption, discharges and treatment processes.

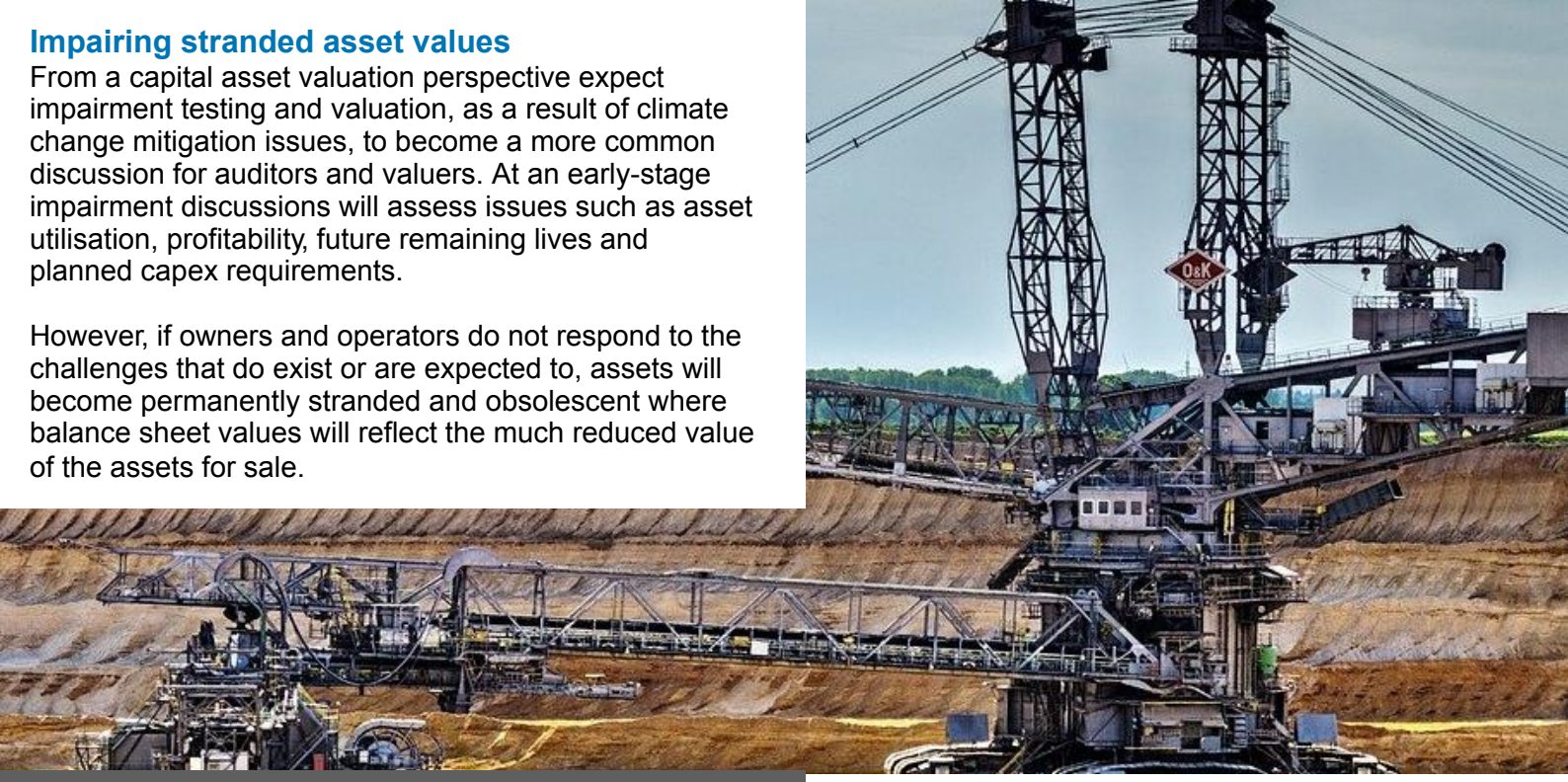
In the USA the Securities and Exchange Commission, found 58 companies that mentioned "water risk" in their 2020 filings, up from 41 the previous year. Take brewing where Molson Coors, in the risk section of its 2020 annual report to the SEC, said clean water is "a limited resource in many parts of the world and climate change may increase water scarcity and cause a deterioration of water quality in areas where we maintain brewing operations."

The filing also notes rising competition for water-related resources in places where Molson Coors or its suppliers also make other products. It is not unreasonable to predict that assets in water scarce regions will become stranded and financially impaired.

Impairing stranded asset values

From a capital asset valuation perspective expect impairment testing and valuation, as a result of climate change mitigation issues, to become a more common discussion for auditors and valuers. At an early-stage impairment discussions will assess issues such as asset utilisation, profitability, future remaining lives and planned capex requirements.

However, if owners and operators do not respond to the challenges that do exist or are expected to, assets will become permanently stranded and obsolescent where balance sheet values will reflect the much reduced value of the assets for sale.



We need to respond to the challenges that exist or are expected to;

or assets will become permanently stranded and obsolescent.

Financial and environmental balance sheet reporting The Tragedy of the Commons theory rose in the popular consciousness in the 1960s when ecologist Garrett Hardin explored how it could be viewed through the lens of environmental science. He focused on the causes of depletion of natural resources and the impacts of climate change as governments, corporations, and individuals failed to consider the cumulative effect their actions had on our shared environment.

Ironically, our failure to respect and preserve the Commons that we rely upon for our survival, have now been exploited to such an extent that we need regulation to enable them to flourish and survive. As the Commons are now largely owned by government and corporations, who desire healthy balance sheets, it is these stakeholders who will be required to make the investments to prevent the revenue generating assets that we rely upon from being stranded and obsolete.

One vital step forward is not only the measurement and valuation of financial performance but also environmental and social performance to understand who is providing real value to shareholders. In the meantime, government regulators and investors, will continue to introduce and manage ‘carrot and stick’ regulations and strategies to halt the effects of climate change penalising those stranded in the old paradigm.

SOURCES:
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