fathom
Independent Thinking

Net zero transition may require scrapping $20 trillion of ‘dirty’ assets

1 November 2022

Brian Davidson

- The transition to net zero emissions by 2050 will create huge investment opportunities, but there will be risks and costs too
- One of the key costs relates to assets becoming ‘stranded’[1]: we find that, globally, $20 trillion worth of fixed capital falls into this category,[2] and that these assets belong to households, the corporate sector and governments
- In a paper published last week, co-authored by Fathom Consulting and BNY Mellon Investment Management, we specifically considered the risks facing the corporate sector and presented a new, unique, scoring methodology to measure the so-called transition risks by sector[3]
- Scrapping or paying to retrofit assets before they reach the end of their useful life is just one of the so-called transition risks facing corporations; other risks include exposure to carbon taxes, and the speed at which organisations must decarbonise
- The table below breaks down these risks by sector — more details can be found in the methodology of the full paper, which can be accessed via the link at the bottom of this document

S&P 500 transition risks by sector

Z scores

	Overall transition risk	Carbon tax 1	Carbon tax 2	Carbon tax + transition speed	Transition speed 1	Transition speed 2	Stranded assets 1	Stranded assets 2	Stranded assets 3	Disclosure
Utilities	2.0	3.6	2.3	4.2	3.4	3.2	0.5	1.9	0.0	-0.8
Energy	1.6	0.8	3.3	4.5	0.2	-0.3	2.2	1.0	2.0	0.6
Airlines	1.2	2.5	1.1	0.1	-0.8	-0.3	1.9	1.9	4.0	0.1
Road & rail	0.3	0.0	-0.4	-0.1	-0.2	-0.3	1.3	2.9	-0.2	-0.3
Real estate	0.2	-0.5	-0.6	-0.4	2.4	3.2	-1.1	-0.1	-0.3	-0.4
Hotels, resorts & cruise lines	0.1	0.0	0.1	0.2	-0.6	-0.3	0.4	-0.1	0.7	0.6
Materials	0.0	0.2	0.1	0.4	-0.4	-0.3	0.2	0.0	-0.2	-0.4
Food products	0.0	-0.4	0.0	0.0	-0.3	-0.3	0.9	0.2	-0.2	-0.3
Automobiles & components	-0.1	-0.4	0.8	1.3	-0.5	-0.3	-0.3	-0.6	-0.2	-0.3
Capital goods	-0.1	-0.4	0.0	0.0	-0.8	-0.3	0.4	-0.2	-0.3	0.8
Casinos & gaming	-0.1	-0.4	-0.7	-0.5	0.8	-0.3	-1.2	-0.5	-0.3	2.1
Air freight & logistics	-0.1	0.1	0.2	-0.1	-0.8	-0.3	1.0	0.5	-0.3	-1.5
Consumer durables & apparel	-0.2	-0.5	-0.5	-0.3	-0.5	-0.3	-0.5	-0.7	-0.4	1.7
Food & staples retailing	-0.3	-0.3	-0.6	-0.4	-0.4	-0.3	0.1	-0.1	-0.3	-0.3
Restaurants	-0.3	-0.4	0.0	0.1	-0.7	-0.3	-0.5	-0.3	-0.4	-0.1
Beverages	-0.3	-0.4	-0.2	0.0	-0.5	-0.3	0.2	-0.2	-0.4	-1.1
Communication services	-0.3	-0.5	-0.7	-0.5	0.6	-0.3	-1.3	-1.0	-0.4	1.0
Retailing	-0.4	-0.4	-0.6	-0.4	-0.3	-0.3	-0.8	-0.6	-0.4	0.5
Health care	-0.4	-0.5	-0.7	-0.5	-0.2	-0.3	-0.7	-0.7	-0.4	0.6
Household & personal products	-0.4	-0.4	-0.5	-0.4	-0.2	-0.3	0.5	-0.1	-0.4	-1.7
Tobacco	-0.4	-0.4	-0.4	-0.2	-0.1	-0.3	0.3	-0.1	-0.4	-2.2
Commercial & professional services	-0.4	-0.5	-0.7	-0.5	-0.3	-0.3	-0.8	-0.9	-0.4	0.6
Financials	-0.4	-0.5	-0.7	-0.5	0.3	-0.3	-1.2	-1.0	-0.4	0.4
Information technology	-0.6	-0.5	-0.7	-0.5	-0.4	-0.3	-1.3	-1.1	-0.4	0.2

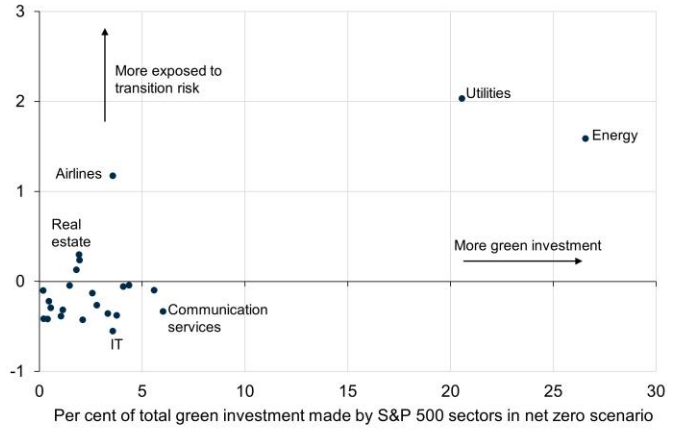
Note: all variables and ratios have been calculated and adjusted so that higher scores reflect more exposure to transition risk *Source: BNYM / Fathom Consulting*

1. I.e., they will need to be scrapped or retrofitted at a cost before they reach the end of their useful life.
2. The longer the transition is delayed, the higher this figure will become, if the Paris goal of limiting global warming to well below 2.0°C is to be met.
3. The views in this note reflect those of Fathom Consulting.

Continued

- We find that transition risks vary significantly by sector and are disproportionately skewed towards energy, utilities and airlines; these three sectors also happen to be three of the most CO_2-intensive and, in the case of energy and utilities, will need to make nearly half of all corporate-sector green investment — a topic we will explore further in a subsequent note

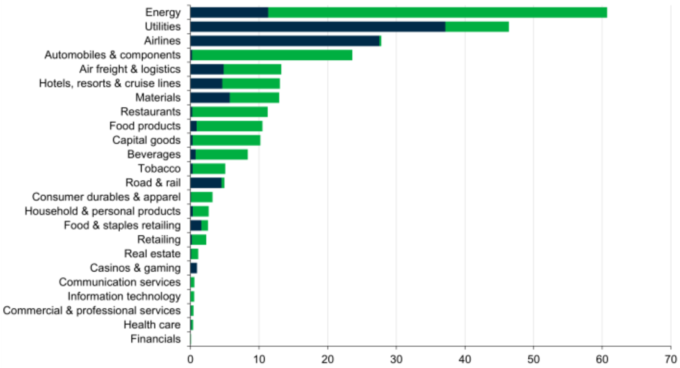
Green investment required and transition risk, S&P 500



Source: Refinitiv Datastream / BNYM / Fathom Consulting

Carbon tax effect

Per cent reduction in EBITDA* due to $50/ton carbon tax**



*Earnings before interest, taxes, depreciation, and amortisation
**Assuming tax is fully absorbed by company on its scope 1 emissions and 50% absorbed on its scope 2 and 3 emissions. Uses financial and emissions data between 2018 and 2020
Note: carbon tax effect is calculated using publicly-available financial data and greenhouse gas emissions data accessed via Refinitiv Eikon

Source: Refinitiv Eikon / BNYM / Fathom Consulting

- The green investment needs, CO_2 intensity and exposure to risk of these sectors poses a conundrum for investors who want to decarbonise their portfolios and make a ‘positive’ climate impact

- In Fathom’s judgement, instead of shunning these sectors, such investors should a) invest in the companies that have the most serious decarbonisation and green investment plans, and b) encourage incumbents to step up their green investment – not only would that have a positive climate impact, but it would also reduce transition risk for the companies in question

- A serious conversation needs to be had between all stakeholders – households, governments, corporates and investors – as to who bears the cost of the polluting assets that will become stranded if the world is to meet the Paris climate goal

Continued

This is the third in a series of notes summarising the key findings of Fathom Consulting and BNY Mellon Investment Management's pioneering, in-depth report An investor's guide to net zero by 2050*, on the spending on fixed capital to achieve net-zero carbon emissions by 2050*

In a report that was aimed primarily at investors, we also assessed the opportunities and risks likely to emerge from what is set to be the largest redeployment of capital in history

An investor's guide to net zero by 2050*, by Brian Davidson, head of climate economics at Fathom Consulting, and Shamik Dhar, chief economist at BNY Mellon Investment Management, was published on 25 October 2022. For more on today's note, see section 3 of the main report.*

Access the full report

Further reading:

$100 trillion needed to meet Paris goal – in context

An investor's guide to net zero by 2050: key takeaways

The bumpy road to climate transition

Fathom Consulting
47 Bevenden Street
London
N1 6BH
Tel: +44 (0)20 7796 9561

Contact information
brian.davidson@fathom-consulting.com
www.fathom-consulting.com

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