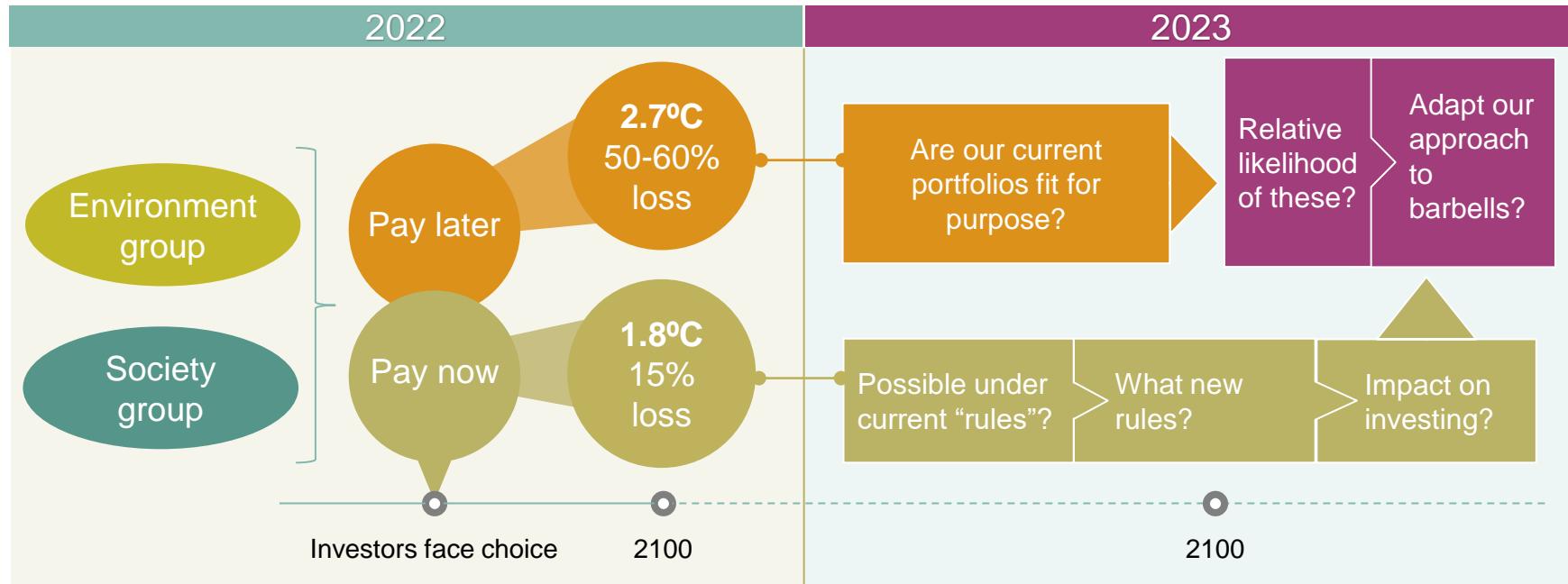


The rules of the game and their consequences

IFT Macro working group

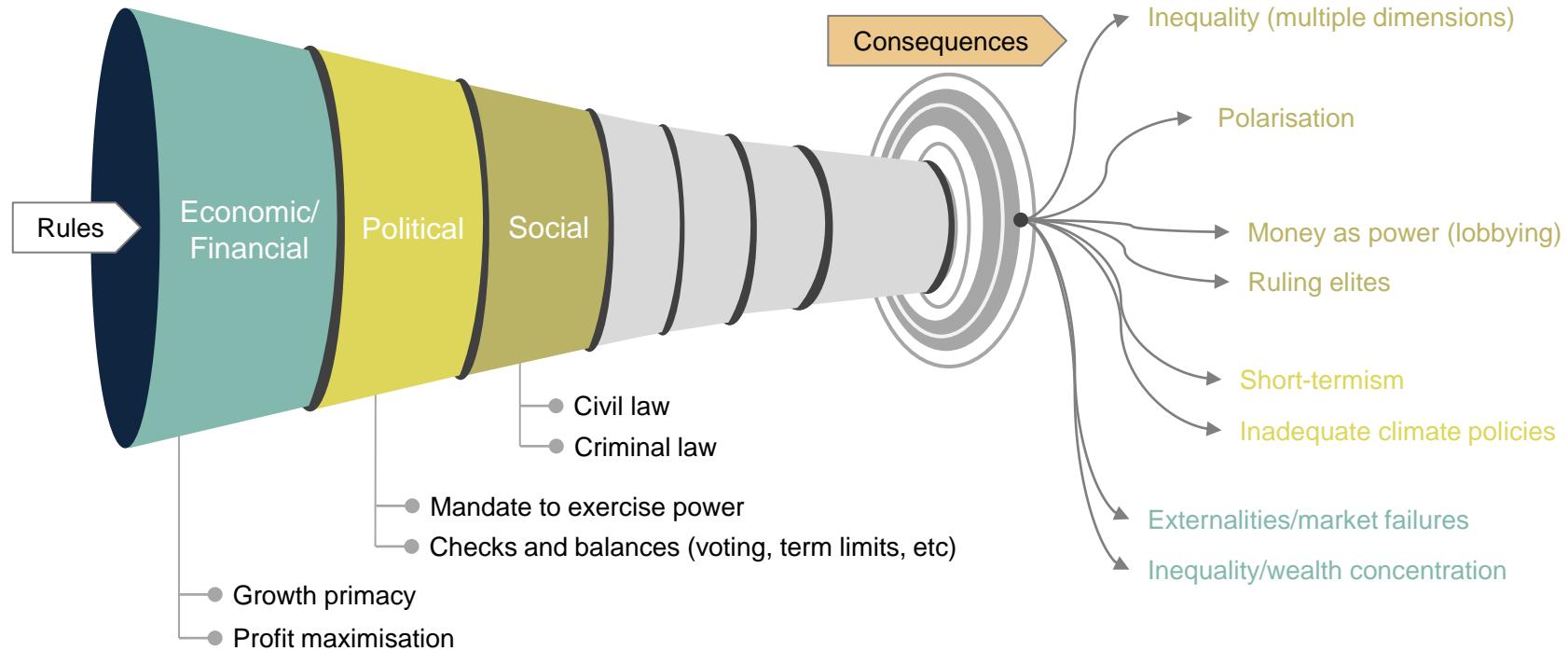


Investing for tomorrow – macro view



Time commitment:	5 x 1.5 hours MS Teams calls, plus pre-reading and reviewing
WG call dates:	Mar, May, July, Sep, Nov
Output:	Co-created paper. Possibly, scenarios

The rules of the game and their consequences



Thought experiment – thinking right to left

- Place yourself on the right-hand side of the page. It is 2050. It was confirmed two years ago that the world had achieved net-zero emissions for the first time. The predicted pathway is for this balance to be maintained, and climate scientists are becoming increasingly confident that global warming will not exceed 1.8C above pre-industrial times
- It is time to leave your time capsule and have a look around at 2050. What do you see? Or, what don't you see? You notice the absence of chimneys, and you are struck by quite how many wind turbines and solar panels there are. The buildings look different, somehow. More stilts; less angles to catch the wind. And everyone seems to be cycling or walking. Maybe the '15-minute city' idea has flourished? You aren't quite sure about the health of nature – perhaps because the plants are unfamiliar, and maybe it will take a while for them to settle into their new climate zones
- How would you describe the economic activity you see? Pretty similar to the 2023 you just left behind, or quite different? Does consumerism seem to have the same grip? Or does life seem to be more about food, drink, arts, crafts and experiences? Smaller, more local, more circular? Does society look healthier or not? And what about politics? Has the redistribution of power following the fossil fuel age gone well?

We now return to 2023 and consider what we have learned. We believe the following statements to be true:

- A significant transition has occurred from carbon-based energy to non-carbon energy
- Extreme weather events and physical risks are significantly worse

Thought experiment – returning to the left-hand side of the page

The true statements above don't get us very far. For example, is the transition to a net-zero economy where carbon capture offsets the emissions from carbon still being burned? Or is the transition to an absolute-zero economy where we no longer burn carbon, and did not need to build carbon capture machines? We should therefore supplement the statements with beliefs. Beliefs around issues such as:

- The energy- and cost-efficiency of carbon capture and storage
- The extent of remaining fossil fuel burning / the extent of shrinkage of fossil fuel financial value, and size of workforce
- The extent to which the ideology of GDP growth has been challenged
- The extent to which capitalism has been reformed
- The extent to which insurance is still available for more frequent and more severe physical risks
- The extent of climate migration

Note: the current ideology around GDP growth and current form of capitalism contain no 'stopping rule' – more is better. To remain within planetary boundaries (such as a finite carbon emissions budget), some form of stopping rule is required.

Is limiting global warming to 1.8C possible under the current rules of the game?
If not, what new rules are required?

Glossary | how we are defining these terms

- **Rules of the game** | the current framework of laws, policies, and regulations that govern how humans interact with each other, with other species and with the planet's natural systems and resources
- **Barbelled outcomes** | scenarios where the possible outcomes do not overlap, meaning if one occurs the other cannot
- **Business-as-usual (BAU)** | a scenario where current growth ideology and profit maximisation continue with associated consequences for greenhouse gas emissions, energy use, and policy. We associate this with 2.7-3C of warming by 2100
- **Well below 2 degree Celsius (WB2C)** | scenarios where the global temperature increase is limited to below the target of 2 degrees Celsius set by the Paris Agreement. These scenarios typically involve much more aggressive reductions in greenhouse gas emissions and potentially radically different energy, economic, political systems and models compared to BAU ones
- **Brown growth** | a scenario where the priority is given to economic development and the ecosystem is considered secondary. Systemic risk is assumed to not be a significant threat and humans will always have the technology to ensure their survival. Income is viewed as the most important component of well-being and market-based capitalism as the best system for generating non-financial well-being
- **Green post-growth** | a scenario where priority is given to the ecosystem and economic development is considered secondary. Systemic risk is assumed to pose a significant threat and it is important to repair the ecosystem, even if it means sacrificing some economic development. Non-financial well-being, rather than income or wealth, is viewed as the most important measure of success in life and post-growth economics as necessary for sustainability

Glossary | how we are defining these terms

- **Stopping rule** | a set of limits on economic activity and resource consumption to ensure that they remain within ecological boundaries and do not exceed the carrying capacity of the planet
- **Double materiality** | is the combination of the impact of the external environment on the company (this arises from risks and opportunities, and can be referred to as *financial* materiality), and the impact the company on the external environment
- **(Climate) tipping points** | are critical thresholds in the Earth's systems where a tiny change could trigger a shift to a new state
- **Carbon budget** | the maximum amount of cumulative net global greenhouse gas emissions that would result in limiting global warming to a given level with a given probability
- **Irreversibility of time** | time travels in one direction only, meaning that consequences (of decisions or events) cannot be undone
- **Path dependency** | is a characteristic of complex adaptive systems where the future possible paths of the system depend on the path already taken to the present state

Limitations of reliance and contact details

Limitations of reliance – Thinking Ahead Group 2.0

This document has been written by members of the Thinking Ahead Group 2.0. Their role is to identify and develop new investment thinking and opportunities not naturally covered under mainstream research. They seek to encourage new ways of seeing the investment environment in ways that add value to our clients.

The contents of individual documents are therefore more likely to be the opinions of the respective authors rather than representing the formal view of the firm.

Limitations of reliance – WTW

WTW has prepared this material for general information purposes only and it should not be considered a substitute for specific professional advice. In particular, its contents are not intended by WTW to be construed as the provision of investment, legal, accounting, tax or other professional advice or recommendations of any kind, or to form the basis of any decision to do or to refrain from doing anything. As such, this material should not be relied upon for investment or other financial decisions and no such decisions should be taken on the basis of its contents without seeking specific advice.

This material is based on information available to WTW at the date of this material and takes no account of subsequent developments after that date. In preparing this material we have relied upon data supplied to us by third parties. Whilst reasonable care has been taken to gauge the reliability of this data, we provide no guarantee as to the accuracy or completeness of this data and WTW and its affiliates and their respective directors, officers and employees accept no responsibility and will not be liable for any errors or misrepresentations in the data made by any third party.

This material may not be reproduced or distributed to any other party, whether in whole or in part, without WTW's prior written permission, except as may be required by law. In the absence of our express written agreement to the contrary, WTW and its affiliates and their respective directors, officers and employees accept no responsibility and will not be liable for any consequences howsoever arising from any use of or reliance on this material or the opinions we have expressed.

Contact Details

Tim Hodgson | tim.hodgson@wtwco.com

Andrea Caloisi | andrea.caloisi@wtwco.com

Isabella Martin | isabella.martin@wtwco.com