BUILDING THE BEST BOARDS IN FINANCE

"How's my favourite judge?" was how Nelson Mandela would begin his calls to Mervyn King when he wanted a favour. That's Professor Mervyn King, former South African Supreme Court judge and corporate director. When Mr Mandela became president in that country's first fully representative election, it was to Professor King that he turned to help draft the corporate guidelines the newly democratic nation would need to maintain a free economy. It is to the global south – and the east – that we turn in this issue for inspiration in this our 30th anniversary year.

In the corporate world, where much of our clients' financial futures are invested, and for all the noise around COP26, there has been extraordinary cooperation between standard setters and framework providers to create sustainability reporting that is as reliable as mainstream financial reporting has become, and indeed to put it in the mainstream. That is important because it means investors and their advisers can have a much clearer picture of how companies in which they are invested are meeting the sustainability requirements that are a growing part of their requirements. This collaboration among standard setters has been led by the International Financial Reporting Standards (IFRS) Foundation which has expanded its mandate to establish an International Sustainability Standards Board (ISSB).

Professor King, writing in the introduction to a major new work on 'Corporate Governance 3.0' (see next page), comments: "The more informed corporate reporting is, the more transparent is the board's accountability but sustainability standards need to be as reliable, consistent and rigorous as are financial reporting standards. The intent is for the SSB to lie alongside the International Accounting Standards Board (IASB) both under the oversight of the IFRS." He adds: "Corporate leaders at the top have to endeavour to ensure that the perception of external stakeholders is that they are steering the company as effective leaders, that there are adequate and effective internal controls, that there is trust and confidence in the company by the community where the company operates, and that the company is seen to be a responsible corporate citizen."

Across the southern seas, in Sydney, Clare Nickson Havens (below) has produced fascinating research (page 60) on the importance of financial boards' mindsets in dealing with the climate – and other challenges. Clare (pictured below) has many years' experience working as a bank analyst at UBS in London and New York and in investor relations and corporate responsibility at National Australia Bank in Sydney. Clare is currently a strategic adviser to boards and is a graduate of the Australian Institute of Company Directors. She knows her onions.

POETRY CORNER

For the latest from our incisive 'poet-in-residence' Nigel Campling, Chartered FCSI, former soldier, senior civil servant, merchant banker and now corporate mentor, see *cisi.org/rofmfeb22*

MOVING TOWARDS OUTCOMES-BASED GOVERNANCE AND REPORTING

A major new book, *Corporate Governance 3.0*, seeks to tackle the challenge of checklist approaches in governance head on. According to Professor Mervyn King in his introduction (see previous page): "A rules-based corporate governance model which is mandated is not the pathway. It becomes a mindless, checklist exercise. What has to happen is a mindful, outcomes-based approach to governance. This fits in with the corporate reporting narrative which has become outcomes-based, such as [that] set out in the Integrated Reporting Framework, as well as the Sustainable Development Goals.

"The board is the steward of the company's assets and finalises and approves management's proposals on strategy. The collective mind of the board has to be applied to the long-term issues which will impact on the company. Corporate leaders have, in the first decade of the 21st century, focused on the company's activities and its product on the three critical dimensions for sustainable development, namely the economy, society and the environment. In the second decade of the 21st century, there was a focus on the impacts which these critical dimensions had on the limited liability company."

Tim Sheehy, director general of the Governance Institute, says of the book: "To map the evolution of corporate governance and then evaluate it in the context of today's environment is not an easy task but *Corporate Governance 3.0* does just that. It starts at the beginning but distinguishes itself when it takes the reader across jurisdictions and across all levels of an organisation. It critiques the evolution of governance in meeting today's challenges such as more intensive shareholder engagement or the importance of board behavioural dynamics. It looks at the role of all the participants in the governance matrix, including the often-overlooked company secretary."

The authors are Dr Karl George, managing director of the Governance Forum; Simon Osborne, Chartered Governance professional consultant and former chief executive of the Chartered Governance Institute UK & Ireland; and Professor Alexander Van de Putte (see below). I contributed (pro bono) to a chapter on financial reporting.

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THE EMERGENCE OF A NEW MODEL OF CORPORATE GOVERNANCE[1]

ALEXANDER VAN DE PUTTE, PROFESSOR OF STRATEGIC FORESIGHT, IE BUSINESS SCHOOL AND CHAIR OF CORPORATE GOVERNANCE & STEWARDSHIP, AIFC, PREDICTS THE FUTURE FOR BOARDROOMS

Professor Alexander Van de Putte is chief strategy officer, chair of Corporate Governance & Stewardship, and chair of the Academic Council of the Astana International Financial Centre. At IE Business School, one of Europe's top business schools, he is professor of strategy and strategic foresight.

Alexander is an economist and engineer by training. He holds advanced degrees in management and decision sciences from Boston University, was a BAEF Fellow at Harvard Business School, holds a PhD in applied economics (strategy & finance) from the University of London, a doctorate in international relations from the Geneva School of Diplomacy, and a PhD in engineering (complex adaptative systems) from Cambridge University.

Footnotes in this piece are available online at cisi.org/rofm-feb22

INTRODUCTION

In 2015 and 2016, respectively, countries from around the world ratified the UN Sustainable Development Goals and the Paris Agreement. This implies that countries have made commitments to mobilise US$100bn a year in climate finance until 2025 under the Paris Agreement.

An analysis conducted by Amundi, one of Europe's largest asset managers, shows that ESG compliant investments between 2014 and 2017 resulted in annualised excess returns of 3.3% in North America, and a remarkable 6.6% in Europe, compared to non-ESG compliant investments. In addition to Amundi, other global asset managers – including BlackRock, BNP Paribas, Vanguard, and Fidelity Investments – have launched ESG funds. In a departure from history, in August 2019 the prominent US Business Roundtable announced that 181 CEOs of the most influential global companies committed to the redefinition of the purpose of the corporation. The CEOs pledged to commit to deliver value to all stakeholders, for the future success of companies, communities and country. There seems to be a clear trend emerging that sustainable investment practices are increasingly considered by both institutional investors and in the boardroom of multinational corporations.

This chapter will make the case that corporate governance 4.0 is emerging, where company directors will have to consider building inclusive, sustainable, and more resilient businesses for the benefit of humanity, not just the shareholder and in the short term.

1. CAPITALISM AS WE KNOW IT

The economist Milton Friedman, winner of the 1976 Nobel Memorial Prize in Economic Sciences, in 1970 famously wrote in the *New York Times* that "there is one and only one social responsibility of business, and that is to increase its profits". He further argued that executives who claim that companies

have "responsibilities for providing employment, eliminating discrimination, avoiding pollution and whatever else are undermining the basis of a free society".

The resulting Friedman doctrine influenced corporate governance laws in the US and corporate governance practices in other Anglo-Saxon countries and resulted in short-termism, compliance-driven and a shareholder-centric focus of the board. The unintended consequences of the Friedman doctrine and the resulting shareholder orientation of corporate governance are both profound and lasting. Indeed, shareholder capitalism has led to global climate change, inequality, and lack of economic resiliency.

Global climate change is indeed one of those externalities that needs to be internalised by a company in order to contribute to the sustainable long-term success of the company. When Lord Nicholas Stern released *The Economics of Climate Change: The Stern Review* in 2006, the cost of global climate change was estimated to be US$500bn or slightly less than 1% of global GDP.[2] He further argued that, although the cost of stabilising global climate change is significant, there is still time to prevent the worst impacts from happening. Today, 15 years later, the cost of global climate change is US$16tn (almost 19% of global GDP), a compounded annual growth rate of 26%. In October 2019, then Bank of England governor Mark Carney said: "Firms ignoring the climate crisis will go bankrupt."[3]

Thomas Piketty in *Capital in the twenty-first century* demonstrates that market capitalism has shown some important flaws.[4] According to Piketty, market capitalism had quite a good outcome during the 20th century – purchasing power rose, inequalities receded. However, based on analysis of data starting from the First Industrial Revolution during the late 18th and early 19th centuries, he arrives at a different set of conclusions: the second half of the 20th century was an outlier, the rich are getting richer, and the poor are getting poorer. Thus, although market capitalism has shown that it can be effective in mobilising and allocating capital, and thus can provide a powerful basis for growth, it is less effective at distributing wealth.

In addition to lacking sustainability, the Fukushima nuclear disaster[5, 6] and Covid-19 made it apparent that our global value chains are far from being resilient. The recent blockage of the Suez Canal further attests to a lack of resiliency of our global physical trading – a single container ship brought 12% of global trade to a standstill and it took more than a month for it to be cleared. Therefore, it is important to focus not only on the sustainability but also on the resiliency of global trade networks. Unfortunately, executives and policy leaders alike tend to revert to the old way of doing business after the crisis has waned.

In conclusion, shareholder capitalism has led to growth, but its growth is not sustainable or inclusive, and is far from being resilient. What is needed is sustainable capitalism or stakeholder capitalism, a form of capitalism that aims to simultaneously balance and grow or maintain all five capital stocks.[7] This is similar to the argument made by Jonathon Porritt in his book *Capitalism as if the world matters*.[8]

2. A NEW PHILOSOPHY IS EMERGING

Government and businesses both increasingly consider that the climate crisis poses an existential threat to companies and countries alike, because markets are increasingly internalising the cost of global climate change. Many governments around the world have announced sweeping reforms to decarbonise. For example, over the next ten years, the US wants to reduce emissions by 50–52% from 2005 levels,[9] the EU by 55%,[10] and the UK by 78% compared to 1990 levels over the next 15-year period.[11]

// INVESTMENTS IN CLIMATE-RESILIENT INFRASTRUCTURE CAN DRIVE SIGNIFICANT NEAR-TERM JOB CREATION //

Similarly, governments around the world have taken action to reduce inequality. In its 2015 report on income equality, the Organisation for Economic Co-operation and Development argued that not everyone in society benefits from economic growth and that those groups in society that have lower-level skills and have not committed to lifelong learning suffer most, not just economically but also health wise, including mental health.[12] There are some relatively straightforward solutions to help address inequality – mass tertiary and technical vocational education, basic healthcare for all, and social security. Business can also play an important role by offering better pay to workers and providing workers and staff with educational opportunities. Recently, Amazon announced that it will raise wages for more than 500,000 workers by US$3 per hour. At US$15 per hour, workers would earn more than twice the US$7.25 per hour US federal minimum wage.[13] Most German multinationals have their own vocational training schools. For example, Siemens, one of the world's largest industrial companies, has around 14,000 of its staff enrolled in training and reskilling programmes for its current and future staff. Siemens argues that both staff and the company benefit from its training programmes – the employees develop more relevant skills that result in higher pay, healthier jobs and social promotion, while Siemens benefits from motivated staff, higher productivity, and increased competitiveness.

Addressing sustainability, inequality, and resiliency often go hand in hand and McKinsey argues that investments in climate-resilient infrastructure and the transition to a lower-carbon future can drive significant near-term job creation while increasing economic and environmental resiliency.[14]

In addition, both shareholder and stakeholder activism are on the rise largely because of the passive behaviour of company executives in addressing ESG issues. Consider the case of oil giant Shell, for example. Royal Dutch Shell Plc was ordered on 26 May 2021 by a Dutch court to reduce emissions by 45% by 2030 compared to 2019 levels,[15] after Friends of the Earth, six other NGOs, and 17,000 Dutch citizens filed a court case. Although Shell's initial reaction

was to appeal the court's ruling, Ben van Beurden, Shell's chief executive, announced on 9 June 2021 that it is determined to rise to the challenge.[16]

Both ExxonMobil and Chevron have been reluctant to articulate and communicate their strategy for a low-carbon future and navigate the sustainable energy transition. Earlier this year, Engine No. 1, a hedge fund manager, forced ExxonMobil to replace two of its board members with more sustainability focused directors.[17] Similarly, a significant majority of Chevron shareholders forced the group to reduce its carbon emissions, following a campaign spearheaded by Follow This, a Dutch activist NGO.[18]

Why are we then observing this different type of shareholder activism? One reason may be the fact that ESG compliant investments outperform unsustainable investments as previously mentioned.

Another reason may be BlackRock CEO Larry Fink's letters to shareholders. Ever since 2016, Fink has urged company CEOs to invest for the long term and for the benefit of society. This is quite remarkable given that BlackRock is by far the world's largest asset manager with US$8.7tn under management.[19] CEOs around the world (e.g. 181 US Business Roundtable chief executives) are moving, or being moved by various shareholders, towards a different type of capitalism, a different way of defining how a company delivers value, who receives it, and how that value is defined.

This new philosophy is increasingly driven by stakeholder or sustainable capitalism. In his 2021 book, Klaus Schwab, the executive chairman of the World Economic Forum, defines stakeholder capitalism as "a model where companies seek long-term value creation instead of short-term profits; governments cooperate to create the greatest possible prosperity for their people, and civil society and international organisations complete the stakeholder dialogue, helping balance the interests of people and the planet".[20]

Economist Joseph Stiglitz, winner of the 2001 Nobel Memorial Prize in Economic Sciences, argues that stakeholder capitalism should replace shareholder primacy as the principle of corporate governance.[21] Stiglitz views corporations as shared enterprises, which are made up of people, including employees, investors, and managers. At the centre of this perspective is to whom is the board accountable? In the United States, accountability is to the shareholders, who are considered the owners of the company, while in the UK and other commonwealth nations, accountability is to the company.[22] Here, the shareholders own shares in the company but are not considered the owners of the company because there are other parties that hold claims against the company. Fox and Lorsch (2012) argue along the same lines by stating: "In legal terms, shareholders don't own the corporation – they own securities that give them a less-than-well defined claim on its earnings."[23]

// THE MINDSETS OF SHAREHOLDERS, REGULATORS, AND OTHER STAKEHOLDERS ARE CHANGING RAPIDLY //

Whether stakeholder capitalism will ultimately prevail remains to be seen. What is clear is that the mindsets of shareholders, regulators, and other stakeholders, including civil society, are changing rapidly and are increasingly embracing the idea that stakeholder capitalism is superior to shareholder supremacy.

3. THE EVOLUTION OF CORPORATE GOVERNANCE

Although some form of corporate governance has been around since the formation of the East India Company (1600), the Hudson's Bay Company (1670), and other chartered companies, a type of company created by the British Crown, modern era corporate governance started in the United States[24] during the hostile takeover movement of the early 1980s.[25] ***Corporate Governance 1.0*** was effectively designed to fence off undesirable takeover bids and many corporate boards introduced protective practices.[26] These practices were, however, seen as acting against the interests of some shareholders. The emergence of institutional investors (e.g. pension funds), which are considered to be more active in company affairs compared to retail investors, shifted the balance of power away from management towards the shareholders.[27, 28]

Corporate Governance 2.0 emerged following corporate scandals and failures across the Atlantic – Enron and WorldCom in the US, Polly Peck and Coloroll in the UK, Parmalat in Italy, and Ahold in the Netherlands. This resulted in growing public distrust of the corporation, and various committees were formed to articulate proposals about how to largely reduce the possibility of corporate scandals and failures. In the UK, The Committee on the Financial Aspects of Corporate Governance, chaired by Sir Adrian Cadbury, issued the 1992 Cadbury Report that sets out recommendations to help prevent future corporate failures, including the separation of the roles of the chief executive and the chair, the requirement to have a minimum of three independent non-executive directors, and the creation of an audit committee.[29] Similarly, in the US the 2002 Sarbanes-Oxley Act (SOX) required public company boards to have audit committees that are entirely composed of independent non-executive directors. SOX also required that the board meeting minutes reflect deliberations of material issues accurately.[30]

Following the 2008 global financial and economic crisis (GF&EC), it became clear that corporate boards are too short-term focused and are not skilled at peripheral vision. The GF&EC was anticipated by various economists, yet bank executives failed to act. The result was catastrophic for both the financial sector and the world economy. The market capitalisation of global banks shrank by more than 75% between 2007 and 2009, and Lehman Brothers collapsed. The ripple effect on the global economy was even more pronounced, resulting in a deep V-shaped global recession.[31] With new Dodd-Frank and Walker affecting especially financial sector players – the 2009 Walker Report[32] and the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act[33] – ***Corporate***

TABLE 1: FOUR GENERATIONS OF CORPORATE GOVERNANCE

Corporate Governance 1.0	Corporate Governance 2.0	Corporate Governance 3.0	Corporate Governance 4.0
• Defensive-driven governance • 1980s	• Compliance-driven governance • 1990s	• Foresight-driven governance • Since 2008	• Outcomes-driven governance • Emerging since 2015
• Triggered by undesirable corporate takeover bids	• Triggered by corporate scandals and failures	• Triggered by the global financial and economic crisis	• Following the 2015 SDGs and the 2016 Paris Agreement
• Anti-takeover charter amendments (ATCAs)	• Sarbanes-Oxley (US) • The Cadbury Report (UK)	• Dodd-Frank (US) • The Walker Report (UK)	• King IV Code (SA) • The Dutch Code (NL)
Focus on hostile takeover defences	**Focus on preventing fraudulent failure**	**Focus on balancing conformance and performance**	**Focus on the sustainable long-term success of companies**

Source: Sustainable Foresight Institute, 2016

Governance 3.0 effectively became a reality. Both regulations made specific recommendations to strengthen risk management in financial institutions, through the creation of a separate forward-looking risk committee.[34] Although the economy recovery was swift, many of the economic, social, and environmental imbalances remained unaddressed.[35] Also, both the Walker Report and Dodd-Frank Act fell short in recommending that multinational corporations should also establish forward-looking risk committees in addition to the typically backward-looking audit committee. With global climate change reaching a tipping point, the United Nations developed both the Sustainable Development Goals (SDGs) and the Paris Agreement. Both were ratified in 2015 and 2016 respectively. The SDGs are a call for action by all countries to promote prosperity while protecting the planet,[36] while the Paris Agreement is a legally binding international treaty to foster climate resilience and to limit global warming to below 2°C, preferably to 1.5°C, compared to pre-industrial levels.[37] ***Corporate Governance 4.0*** was spearheaded in South Africa with the King IV Code in 2016, which lays out a set of principles and practices to achieve desired outcomes, where businesses adopt a philosophy of accountability to current and future stakeholders for the benefits of society.[38] Similarly, one of the key objectives of the Dutch Corporate Governance Code is to promote long-term value creation and sustainable business growth.[39] There are two key differences between the two codes: 1) The King IV Code has adopted an 'apply and explain' philosophy, while the Dutch code remains with the more traditional 'comply or explain', and 2) The South Africa code mandates the use of integrated reporting, while the Dutch code promotes sustainable business growth but does not mandate integrated reporting. Table 1 above provides an overview of the four generations of corporate governance, what triggered it, and its underlying philosophy.

The emergence of Corporate Governance 4.0 coincides with the emergence of the Fourth Industrial Revolution.

The First Industrial Revolution started in Britain in the 18th and 19th centuries and was driven by the invention of the steam engine and the development of the iron and textile industries. Europe gradually overtook China and India as the engines of global growth.

The Second Industrial Revolution, which started around 1870, witnessed the emergence of steel, oil, and electricity, the development of modern forms of transportation of goods (e.g. shipping and rail), and the transition from coal to oil. Rapid industrial development in Britain, Germany, France, Italy, Japan, and the US followed. This is often referred to as the era of mass production and vertical integration.

The Third Industrial Revolution, also referred to as the information age, was driven by the mass diffusion of technologies, such as the personal computer and the internet. This in turn led to the globalisation of companies and the rise of emerging markets, especially China, which became the world's manufacturing hub, and the emergence of the commodities super cycle. During the first 15 years of this century, China consumed about 50% of the world's commodities, compared to 10% during the last 15 years of 20th century.

In 2007, Alexander Van de Putte and Ged Davis at the World Economic Forum oversaw the development of the medium-term scenarios on the emergence of the digital ecosystem,[40] or the convergence of the physical and digital worlds, and the precursor of the Fourth Industrial Revolution (4IR) described by Klaus Schwab in his 2016 book *The Fourth Industrial Revolution*. In it, Schwab argued that we stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one other. He defines the 4IR as: "... a range of new technologies that are fusing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human."[41] Although the 4IR has the potential to contribute to more sustainable, inclusive, and resilient business growth, this is not guaranteed; boards play an even more important role in this fast-paced environment in contributing to the sustainable long-term success of the company.

// MANY ECONOMIC, SOCIAL AND ENVIRONMENTAL IMBALANCES REMAIN UNADDRESSED //

THE FUTURE OF LEADERSHIP IN FINANCIAL INSTITUTIONS

CLARE NICKSON HAVENS – THE DIRECTOR'S MINDSET IS THE MOST POWERFUL LEVER FOR CHANGE AND IS HOW ASPIRING BOARD MEMBERS CAN GROOM THEMSELVES FOR GREATNESS

Clare Nickson Haven's postgraduate research into sustainability leadership at the University of Cambridge Institute of Sustainability Leadership focused on governance and climate response, specifically the active mindset of bank board directors regarding climate response. Clare's research was supervised by Dr David Good of the department of psychology. Clare is also co-author of 'Building the right board to respond to the climate challenge' (see *cisi.org/rofmfeb21*). Clare is a speaker at sustainability and governance events, including the Sustex 2021 conference and a webinar for the CISI in 2021 (see *cisi.org/board-climate*). Clare's commentary and research into banks has been featured in CNN Money, MSNBC, Euromoney, the *Wall St Journal* and other global financial press/TV. Clare is currently a special adviser to the Business Council for Sustainable Development in Australia, was a member of the Australian Sustainable Finance Initiative Working Group, and is a member of the Finance and Investment Taskforce and the Award Panel at NSW Circular. Clare is also a member of the UN Principles for Responsible Management Education Working Group on Sustainability Mindset.

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The full bibliography for this article can be found at cisi.org/rofm-feb22

Donella Meadows, author of *Thinking in Systems*, which describes a way of thinking that looks at a whole system and requires understanding of how each element within that system interacts, famously identified 'Places to intervene in a system', ranking each leverage point by its potential for impact. 'The mindset or paradigm out of which the system arises' is the second most impactful on Meadow's list, published in *Whole Earth* magazine in 1997, with the top spot going to 'The power to transcend paradigms'. Given the board of directors heavily influences how 'the system' works, overseeing strategy implementation, appointing, and removing the CEO, and with responsibility for ensuring climate-related risks are considered, the mindset of individual board directors, and the collective board, and its power to transcend paradigms, are the most crucially important powerful levers for change.

Research carried out by the University of Cambridge Institute for Sustainability Leadership, *Bank 2030: accelerating the transition to a low carbon economy*, identifies that an 'active mindset' regarding climate response is what differentiates pioneering UK banks from others.

AN ACTIVE MINDSET LEADS TO PIONEERING BEHAVIOURS

Some of the behaviours associated with active mindset at a firm level include:

- engaging in long-term, forward-thinking
- having a collaborative approach – working with regulators, policymakers and others
- publicly taking responsibility for addressing the climate
- having thorough risk awareness (such as keeping updated with recommendations from the Taskforce on Climate-related Financial Disclosures)
- proactively seeking to fund the transition to a low-carbon economy
- embedding climate response within the firm
- being innovative
- actively seeking information and knowledge
- ensuring customers are capable of transitioning.

But what is this active mindset underlying these behaviours? How can we develop an active mindset as individuals, and ensure it is nurtured in the board context to achieve pioneering, outperforming results?

BOARD DIRECTORS HAVE HARD-TO-IMITATE DYNAMIC CAPABILITIES THAT LEAD TO OUTPERFORMANCE

My research, explained in more detail in the next article, indicates that board directors have 'dynamic capabilities' that can enable the firm on whose board they sit to outperform peers during times of great uncertainty such as exists during the transition to a low carbon economy. These dynamic capabilities, described in a 1994 paper by Professor David Teece at Berkeley and Gary Pisano at Harvard as a competitive advantage gained from "timely responsiveness and rapid and flexible product innovation", can be thought of as:

- how the director detects signals, using many different sources
- how they use these signals to inform their plans
- how these plans transform capabilities or assets
- and, finally, how the director reflects on this process of signal detection, planning, and transformation.

The theory is that directors and boards which have well developed dynamic capabilities lead to firm outperformance during times of volatility. I used these dynamic capabilities as a proxy for 'active mindset' which is not a term that has been defined in academic literature. (A brief note here that active mindset differs from growth mindset, as discussed by renowned psychologist, Professor Carol Dweck, which focuses on motivation – I am speaking of active mindset around climate response being the underlying capabilities that cause us to proactively invest in the transition

to a low-carbon economy as well as appropriately consider the risks stemming from climate change.)

But how can we develop these dynamic capabilities or active mindset? Can we identify areas for improvement to enhance our personal and collective capabilities?

THESE CAPABILITIES ARE BEING DEVELOPED BY PIONEERING DIRECTORS

The research suggests that there are four factors which we can enhance to develop our dynamic capabilities or active mindset:

- **Our human capital** – our experience and knowledge
- **Our social capital** – our public and private networks, including other boards on which we sit
- **Our cognition** – our understanding of climate-related issues
- **And our emotional capital** – including our conviction narrative [construction of internal narratives that yield conviction in the face of uncertainty] and how open we are to receiving new or conflicting information; how able we feel we are to effect change (perceived self-efficacy); and how capable we are at reflecting in the moment during decision-making.

AN ACTIVE MINDSET HELPS DIRECTORS OVERCOME FIRM-RELATED CONSTRAINTS

In my research of bank boards, one of the most frequently cited reasons given by chairs and non-executive directors for a less than stellar climate response was the perceived constraints of the type of firm they serve. Some directors in the banking sector described feeling unable to be innovative around product, for example due to various recent financial crises and scandals. However, importantly, other bank directors spoke of bold climate-related initiatives they are undertaking.

How do we overcome the constraints of context and what differentiated these directors from those that felt constrained?

The directors who were innovating around climate appeared to have well-developed active mindsets; they were making the most of their human and social capital; their curiosity and eagerness to learn new things meant their cognition was strong. Importantly, they were open to receiving new and contradictory information that challenged their own views and they felt empowered to be innovative in their climate response. So, by developing their human and social capital, cognition, and emotional capital, these directors are developing an active mindset in their climate response, accelerating and amplifying their impact.

SIMPLE TECHNIQUES TO DEVELOP ACTIVE CLIMATE MINDSET

Some of the techniques these directors are using include:

- **Human capital** – increasing knowledge and experience through learning, both formally and informally through engaging with other sectors. One bank board director described joining the board of an energy company to really understand energy issues. Another technique is through engaging as often as possible with employees – both formally and informally and from all parts of the firm, not only those 'highflyer' employees cherry-picked by management to meet with the board.
- **Social capital** – using existing social networks and joining new ones in different geographies or with different sectors.
- **Cognition** – engaging with experts, again, both formally and informally, to better understand and extend one's understanding.
- The greatest opportunity for development of the active mindset tends to be one's emotional capital. Although we are often aware of our biases, we don't seem to attempt to try and address these biases. The first step of self-awareness is to observe one's conviction narrative or beliefs and whether new information is something we are attracted to or feel uncomfortable with.
- Finally, reflection-in-action is a useful tool to use during decision-making, especially when modelled by an experienced chair. By reflecting on one's decision-making process in the moment, one opens oneself up to new information, becomes aware of biases and potential ways to address them, includes more perspectives from others in the room, and role-models decision-making to less experienced directors.

DEVELOPING AN ACTIVE MINDSET MODEL TO HELP ADDRESS CLIMATE CHANGE

CLARE NICKSON HAVENS PROBES THE KEY ROLE OF 'ACTIVE MINDSET' IN BOARDS

My first aim was to add theoretical depth to the active mindset construct through development of an active mindset model. Identifying relevant literature was challenging as research combining psychology and leadership is relatively uncommon (Helfat & Peteraf, 2015; Huse, 2007), with strategic management and leadership researchers apparently reluctant to delve into the 'black box' of the mind (Hambrick, 2007, p.338).

I began with a review of the literature from the cognitive and positive psychology perspectives to inform a definition of mindset. I then identified categories of active mindset behaviours in practice. Seeking to find underlying drivers of these active mindset behaviours, I identified dynamic capabilities of a firm's upper echelons (including board directors) that could be a competitive advantage during the transition to a low-carbon economy. These dynamic capabilities and their underlying task-related attributes form the foundation of the active mindset model, along with factors that mediate dynamic capabilities. I found literature on the importance of reflection and evaluation insightful, and it was also incorporated into the model. Finally, I included perspectives on multi-level systems change and developing conceptual models.

1 DEFINITION OF MINDSET

My investigation of psychology research revealed that mindset, *einstellung*, is rooted in cognitive psychology

(Gollwitzer, 1990). I define mindset as an unfixed (Molden & Dweck, 2006) worldview (Schein, 2017), influenced by one's cognitive processes associated with tasks (Gollwitzer, 1990, 2012), the filtering of knowledge and information, and including one's beliefs (French, 2016; Molden & Dweck, 2006; Rimanoczy, 2010). The fact mindset is unfixed is crucial to this research as it infers mindsets can be developed, thus improving directors' practice. Although not specific to active mindset, this definition is helpful, and I incorporated it in the active mindset model.

2 ACTIVE MINDSET BEHAVIOURS IN PRACTICE

Although specific mindsets are hard to delineate (French, 2016), mindset-related behaviours are observable (Rimanoczy, 2021), and identifying active mindset behaviours in practice could help inform understanding of the active mindset construct. Usefully, CISL's *Bank 2030: accelerating the transition to a low carbon economy* report and the Prudential Regulation Authority's *Transition in thinking: the impact of climate change on the UK banking sector* report provide examples of active mindset and strategic behaviours in practice (CISL, 2020; PRA, 2018). I categorised these examples as: long-term, forward-looking thinking; seeing commercial opportunities; collaboration; being innovative and pioneering; seeking information and knowledge; having clients capable of transitioning; embedding response in the organisation; risk awareness; and taking responsibility (see Table 1).

I then searched the literature seeking to identify possible mindset-related drivers of these behaviours and to capture the 'active' dimension of the mindset. The dynamic capabilities perspective proved a useful starting point.

3 DYNAMIC CAPABILITIES FORM THE FOUNDATION OF THE PROPOSED ACTIVE MINDSET MODEL

A firm's upper echelons (including board directors) have hard to imitate dynamic capabilities that could be a competitive advantage for their firm (Åberg & Torchia, 2020; Hambrick & Mason, 1984) during the transition to a low-carbon economy. Dynamic capabilities involve "adapting, integrating and reconfiguring skills, resources and functional competences" in response to a shifting environment (Teece & Pisano, 1994, p.538). The dynamic capabilities perspective was originally applied at a firm level (Teece & Pisano, 1994), then at an individual manager level (Adner & Helfat, 2003; Helfat & Peteraf, 2015), and at the board level (Åberg & Shen, 2019; Åberg & Torchia, 2020). I have applied dynamic capabilities at the mindset level of the bank board director. I suggest that the active mindset comprises dynamic capabilities that lead bank board directors to take a pioneering approach (CISL, 2020), leading to their bank outperforming peers (PRA, 2018), during the transition to a low-carbon economy.

Dynamic capabilities include: (1) sensing and scanning the horizon for signals; (2) seizing and planning using data acquired in the sensing/scanning phase; and (3) reconfiguring and transforming, based on these signals and planning (Teece, 2007). In this application of dynamic capabilities to mindset of bank board directors, these dynamic capabilities reflect the unfixed, cognitive processes associated with tasks, and the filtering

TABLE 1: CATEGORIES OF BEHAVIOURS ASSOCIATED WITH ACTIVE MINDSET, WITH EXAMPLES IDENTIFIED IN THE CISL AND PRA REPORTS

Categories of behaviours associated with active mindset	***Bank 2030*** CISL (2020)	***Transition in thinking*** PRA (2018)
1 Long-term, forward-looking thinking	• Forward-looking; sees low carbon future as inevitable. • Future not based on historic data.	• Longer horizons. • Proactively seek to address short-termism.
2 Seeing commercial opportunities	• See commercial opportunities of transition. • Stimulated low carbon pipeline at scale, innovative transition, and collaborative finance.	• Long-term financial interests.
3 Collaboration	• Collaboration. • Forging strategic partnerships. • Shared vision. • Engage with policymakers, regulators, to help shape future of finance.	• Enhancing organisation's capabilities through partnering.
4 Innovative and pioneering	• Innovation. • Scaled pioneering practices.	• Leveraging enhanced disclosure and scenario analysis.
5 Seeking information and knowledge	• Empower employees with training and time, supported by risk management.	• Proactively seek to address knowledge gaps. • Proactively seek to address the broad-based source of problems. • Deepening understanding. • Enhancing organisation's capabilities through appointing experts internally.
6 Clients capable of transitioning	• Clients capable of transitioning; sector transition roadmaps. • Relationships prioritised over transactions; trust. • Connects clients with experts.	• Engaging with clients to understand their long-term risks.
7 Embedded in organisation	• Aligned business and operating model with net zero.	• Firm-wide framework. • Link climate response to KPIs/remuneration.
8 Risk awareness	• Incorporated forward-looking analysis of physical and transition risk into the risk framework. • Measuring financial risks from climate change.	• Enhanced risk management and governance. • Considering how to classify risk. • Climate factored into risk appetite. • Assessment of risk embedded in strategy.
9 Taking responsibility		Public support of climate disclosures. Recognise sector's role in mitigating effects of climate change. Reviewing board-level responsibility.

TABLE 2: CATEGORIES OF ACTIVE MINDSET BEHAVIOUR MAPPED TO DYNAMIC CAPABILITIES, TASK-RELATED ATTRIBUTES, COGNITIVE CAPABILITIES, AND STAGES OF THE PROPOSED ACTIVE MINDSET MODEL

Active mindset behaviour extrapolated from PRA (2018) and CISL (2020)	**Dynamic capability** Teece (2007)	**Task-related attribute** Aberg and Shen (2019)	**Cognitive capability** Helfat and Peteraf (2015)	**Stage of proposed active mindset model**
• Long-term, forward-looking thinking • Seek information and knowledge • See commercial opportunities • Innovative and pioneering • Take responsibility	• Sense	• Alertness • Discovery processes • Recognise opportunities • Anticipate threats	• Perception and attention	• Scan
• Risk awareness • Collaboration	• Seize	• Respond to opportunities and threats • Apply reasoning and problem-solving skills • Make strategic investments to develop new capabilities	• Problem-solving and reasoning	• Plan
• Embedded in organisation • Clients capable of transitioning	• Reconfigure	• Enhance, align and modify resources and capabilities to sustain growth and profitability	• Language, communication, and social cognition	• Transform

Stage of active mindset model	**Emotional capability**	**Components of critical reflection**	
• Reflection	• Awareness of conviction narrative and mental state • Self-regulation • Motivation	• Assumption analysis • Imaginative speculation • Reflective scepticism • Contextual awareness	

Source: Goleman, Brookfield, Rimanoczy, Tuckett and Nicolic

of knowledge and information included in the definition of mindset described in section 3.1. Predicting that such capabilities could lead to the behaviours associated with active mindset at pioneering banks identifed in Table 2, I included dynamic capabilities as the foundation of the active mindset model.

3.1 Task-related attributes of dynamic capabilities

Through further review of the literature, I identified task-related attributes of the dynamic capabilities (such as recognising opportunity and risk) and associated cognitive capabilities (such as perception and attention) that appeared relevant to the active mindset behaviours identified earlier (Table 1). I mapped these task-related attributes and cognitive capabilities to active mindset behaviours, in order to inform the proposed active mindset model. This mapping was agreed with a psychologist from the University of Cambridge. (See Table 2.)

3.2 Mediators of dynamic capabilities

A further review of the literature identified factors that mediate dynamic capabilities. A director's dynamic capabilities depend on what they include in their field of vision, their selective perception, and their interpretation (Hambrick & Mason, 1984), and these are influenced by their:
(1) Human capital – experience and knowledge (Adner & Helfat, 2003; Vygotskiĭ, 2004).
(2) Social capital – networks including 'board interlock', which refers to participation on other boards (Adner & Helfat, 2003; Wincent, Anokhin, & Örtqvist, 2010).
(3) Cognition, defined by the American Psychological Association as "all forms of knowing and awareness, such as perceiving, conceiving, remembering, reasoning, judging, imagining, and problem solving" (Åberg & Torchia, 2020; Adner & Helfat, 2003; Dewey, 1910).
(4) Emotional capital – emotional competences, defined by the American Psychological Association as one's developed repertoire of skills, especially as it is applied to a task or set of tasks (Adner & Helfat, 2003; Andrade, 2015).
(5) Objective reality – context (Aquino, Freeman, Reed, Lim & Felps, 2009; Hambrick & Mason, 1984).

I included these mediators of dynamic capabilities in the proposed active mindset model. Given the focus of my research and the lack of research on the psychological characteristics that influence upper echelons' hard-to-imitate capabilities (Hambrick & Mason, 1984), I focus on emotional capital here. Emotional capital captures the 'beliefs' aspect of the definition of mindset (section 1 above).

My review of the psychology literature pertaining to emotional capital and competences identified that conviction narrative, self-efficacy, and reflection-in-action are useful considerations relevant to the active mindset construct.

Conviction narrative

Tuckett and Nikolic (2017) define conviction narrative as a preferred narrative one constructs using cognitive and affective (emotional) resources of approach or avoidance, in order to cope with radical uncertainty in decision-making. Not only do bank board directors face uncertainty in their decision-making regarding climate response, the very nature of banking, which involves intangible financial assets, 'abstract entities' of uncertain worth (Tuckett, 2018, p.64), makes the environment doubly uncertain, and thus awareness of bank board directors' conviction narrative especially necessary.

Underpinning one's conviction narrative is one's mental state. In a divided mental state, emotions of avoidance and discomfort prevent acceptance of conflicting narratives and can manifest at the board level as groupthink (or 'groupfeel' as Tuckett calls it (2018, p.76)). Conversely, an integrated mental state is associated

with the ability to be open to new information and tolerate doubt (ibid.). Including multiple viewpoints when engaging in an intellective task, such as consideration of climate response, improves performance and practice (Watson & Michaelsen, 1988 in Forbes & Milliken, 1999). Importantly, neither mental state is fixed. A director being aware of and articulating their conviction narrative, and being aware which mental state, divided or integrated, they bring to different decisions, could influence their active mindset regarding climate response.

// INDIVIDUALS WITH HIGH LEVELS OF DECISION-MAKING AND PERCEIVED SELF-EFFICACY CAN BETTER IDENTIFY OPPORTUNITIES //

Self-efficacy

Perceived self-efficacy, belief in one's capabilities (Bandura, 1997), is another important aspect of emotional capital to add to the active mindset model. Directors tend to overestimate the extent to which they are 'on their own' (Huse, 2007, p.216) and awareness of one's perceived self-efficacy, and that of the collective board, could improve practice. Individuals with a high level of perceived self-efficacy tend to be persistent, undeterred by complexity, and feel less stress and anxiety, which can positively influence their performance (Forbes, 2005). Individuals with high levels of decision-making and perceived self-efficacy can better identify opportunities (ibid.), which is relevant to this study, given the need to recognise climate-related risks and opportunities.

Importantly, Bandura (1995) suggests that perceived self-efficacy can be developed through several techniques: (1) mastery experiences (acquiring the cognitive, behavioural, and self-regulatory skills for devising and executing appropriate course of action); (2) vicarious experience (seeing others succeed by perseverant effort); (3) social persuasion (being told one has the capability); and (4) physiological and emotional states (a positive mood affects one's judgement of one's efficacy), and these are useful tools for bank board directors to use in order to develop emotional capital.

Reflection-in-action

Reflection-in-action is also a useful component of the proposed active mindset model. Reflecting on one's intuitive knowing in the midst of action, and articulating this process (Schön, 1983), could help develop organisational learning (Senge, 1990) during the transition to a low-carbon economy. Similarly, Forrester (1971) stresses the benefits of articulating one's own assumptions and goals and those of others, which is supported by Westphal and Bednar (2016) in their work on social-psychological bias. In practice, this could happen when an experienced chair or director articulates their thought process to other directors.

In summary, I suggest that the dynamic capabilities, sensing, seizing, and reconfiguring, have task-related attributes and associated cognitive capabilities that lead to active mindset behaviours identified in Table 2. These capabilities are hard to imitate and can lead to a bank outperforming peers during the transition to a low carbon economy. These capabilities are mediated by human and social capital, cognition, emotional capital, and objective reality/context. Each capability is explored in more detail below.

3.3 Sense/scan

As shown in Table 2, sensing/scanning capabilities apply to the task-related attributes of alertness, discovery processes, recognition of opportunity, and anticipation of threats before they materialise (Denrell, Fang & Winter, 2003), and these respond to the active mindset behaviours identified in Table 2: long-term, forward-looking thinking;

FIGURE 1: PROPOSED ACTIVE MINDSET MODEL, INCLUDING DYNAMIC CAPABILITIES AND THEIR TASK-RELATED ATTRIBUTES, AND MEDIATORS OF DYNAMIC CAPABILITIES

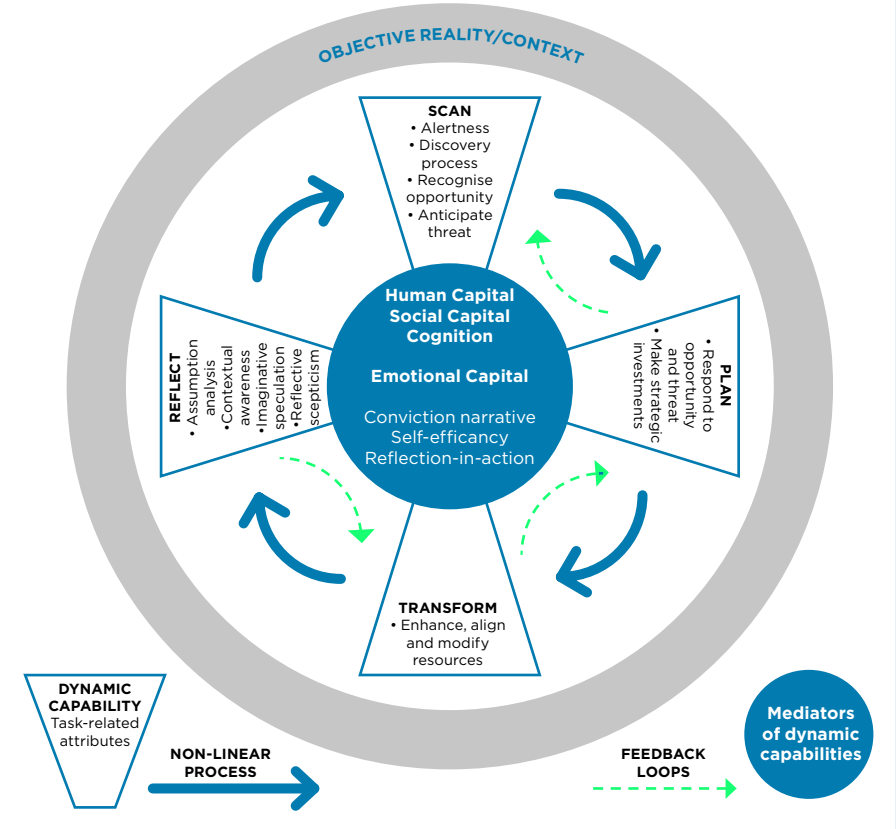

TABLE 3: MAPPING OF ACTIVE MINDSET MODEL STAGES WITH LITERATURE AND INTERVIEW QUESTIONS

Stage of active mindset model and task-related attributes	Approach found in the literature	Interview question
• **Sense/scan** • Alertness • Discovery processes • Recognise opportunities • Anticipate threats	• Discovery processes (Aberg & Shen, 2019); Proximal learning (Vygotsky, 2004 [1934]) • Question assumptions (Garfinkel, 1964) • Scanning, searching, creation, learning and interpretive activity (Teece et al., 1997) • Context-specific knowledge and practical wisdom (Teece, 2007) • Entrepreneurial vision (Schumpeter & Nichol, 1934; Kirzner, 1973; Teece, 2007) • Attention, detecting signals, alert mind (Posner & Petersen, 1990) • Construction of useful, meaningful information leading to pattern recognition and different interpretations (Helfat & Peteraf, 2015; Aberg & Shen, 2019) • Recognise opportunities and anticipate threats (Aberg & Shen, 2019)	(1) Describe your information gathering process around climate. (2) What resources do you have to help you understand climate impact? (3) What is driving climate response? (4) How do you approach never-before-seen climate risks? (5) Does your experience on other boards influence your thinking? (6) To what extent do you ask critical questions?
• **Seize/plan** • Responding to opportunities and threats • Apply reasoning and problem-solving skills • Make strategic investments to develop new capabilities	• Embed knowledge, zone of proximal development (Vygotsky, 2004 [1934]) • Strategise, make unbiased judgement, timely responses to multiple growth trajectories (Teece, 2007; Wincent et al, 2010) • Problem-solving ability (Teece 2007; Wincent et al, 2010; Helfat & Peteraf, 2015) • Validate the business model using judgement, insight and intelligence based in part of prior experience (Westphal & Fredrickson, 2001; Teece, 2007) • Question assumptions (Garfinkel, 1964) • Respond to opportunities and threats (Aberg & Shen, 2020) • Director is ultimate negotiator for focusing firm (Stiles, 2001) • Regulate levels of innovation (Stiles, 2001) • Examine and question strategy - breaking old organisational habits (Stiles, 2001) • Apply reasoning and problem-solving skills, evaluating information (Helfat & Peteraf, 2015; Aberg & Shen, 2019; Aberg & Torcia 2020) • Overcome cannibalisation bias (Teece et al., 2007) • Make strategic investments to develop new capabilities (Aberg & Torcia, 2020)	(7) Describe how you responded to a specific climate risk or opportunity. (8) How do you ensure you are ahead of competitors regarding climate response? (9) How do you overcome anti-innovation and anti-cannibalisation bias? (10) Are your customers considering climate impacts? (11) How do you influence climate strategy? (12) Describe any collaboration initiatives relating to climate.
• **Transform** • Enhance, align and modify firm's resources and capabilities to sustain growth and profitability	• Adapt, integrate and reconfigure assets, operational capabilities and organisational structures (Teece, 2007; Aberg & Torcia, 2020) • Use cumulative knowledge and experience to ratify decisions (Huse, 2007) • Effect replacement of CEO and executives where necessary (Aberg & Shen, 2019) • Develop governance mechanisms (Teece et al., 2007) • Incentive alignment (Teece et al., 2007) • Overcome resistance to change (Helfat & Peteraf, 2015; Aberg & Shen, 2019) • Enhance and align and modify firm's resources and capabilities to sustain growth and profitability (Aberg & Torcia, 2020) • Social cognition, mental activities that influence behaviours regarding others, build trust, open discussions (Helfat & Peteraf, 2015)	(13) How do you ensure your approach is dynamic, creative and innovative? (14) How do you overcome resistance to change? (15) How do you ensure you have active mindset skills on the board?
• **Reflect** • Assumption analysis • Contextual awareness • Imaginative speculation • Reflective scepticism	• Reflection-in-action (Argyris & Schon, 1974; Schon, 1983) • Reflective thinking (Dewey, 1910) • Critical reflection (Brookfield, 2017) • Sustainability mindset (Rimanoczy, 2021) • Conviction narrative and mental states (Tuckett & Nikolic, 2017) • Self-efficacy (Bandura, 1995) • Social psychological bias (Westphal & Bednar, 2005)	(16) Describe your process of reflection.

seeking information and knowledge; seeing commercial opportunities; being innovative and pioneering; and taking responsibility.

Sensing/scanning involves the cognitive capabilities of perception and attention (Helfat & Peteraf, 2015), including signal detection (Posner & Petersen, 1990), searching, learning, and interpretive activity (Teece, 2007), and construction of useful, meaningful information leading to pattern recognition, enabling different interpretations (Helfat & Peteraf, 2015). The sensing/scanning capability is specifically relevant to this study, as it implies directors who have a "wide field of vision" (Hambrick & Mason, 1984, p.195), seeking climate-related information from a range of sources, and who utilise their human capital (their experience and knowledge) as well as their social capital (their networks including board interlock) (Adner & Helfat, 2003), should be able to detect signals that those with low sensing capabilities do not, thus contributing to their bank's outperformance (Åberg & Torchia, 2020; Hambrick & Mason, 1984; Teece, 2007).

Importantly, sensing/scanning capabilities can be developed (Helfat & Peteraf, 2015). Tacit, embodied knowledge can increase through individual learning (Huse, 2005; Nightingale, 1998; Vygotskiĭ, 2004), increasing human capital and cognition. Individual learning can increase perceived self-efficacy, one's belief in one's own capabilities to respond to situations (Bandura, 1995), thus,

increasing emotional capital (Andrade, 2015). This is important, as perceived self-efficacy 'sets the slate of options for consideration', affecting the type of information collected and how it is interpreted (Bandura, 1995, p.23). Broadening social networks by, for example, serving additional boards (Wincent et al., 2010) increases social capital and can also increase sensing/scanning capabilities.

3.4 Seize/plan

Seizing/planning capabilities apply to the task-related attributes of responding to opportunities and threats; applying reasoning and problem-solving skills; and making strategic investments to develop new capabilities (Åberg & Shen, 2019), responding to the active mindset behaviours of risk awareness and investing in collaboration.

Seizing and planning use the cognitive capabilities of problem-solving and reasoning (Helfat & Peteraf, 2015), using insight and intelligence based partly on prior experience (Teece, 2007). Experience and knowledge are part of a director's human capital, which can be developed (Adner & Helfat, 2003). Problem-solving, strategising, making unbiased judgement and timely responses to overlapping, diverse issues (Teece, 2007) are particularly relevant to this study, where directors must make many simultaneous decisions regarding climate as well as other issues.

The seizing/planning capability also includes the ability to focus the firm, regulate levels of innovation, examine and question strategy, and break old organisational habits (Stiles, 2001), all pertinent to bank board directors' climate response.

3.5 Reconfigure/transform

The task-related attributes of the reconfiguring or transforming capability are to enhance, align, and modify resources and capabilities to sustain growth and profitability (Åberg & Shen, 2019), and respond to the active mindset behaviours of ensuring the climate response is embedded in the organisation and having clients capable of transitioning.

Reconfiguring/transforming cognitive capabilities include language and communication to overcome resistance to change; and social cognition, mental activities that influence behaviours regarding others, build trust and enable open discussions (Helfat & Peteraf, 2015). The reconfiguring/transforming capability uses cumulative knowledge and experience, human capital, to ratify decisions (Huse, 2007 in Åberg & Shen, 2019).

Climate-related board reconfiguring/transforming tasks include replacing the CEO, developing governance mechanisms, and aligning incentives (Teece, 2007) with climate response.

4 THE IMPORTANCE OF REFLECTION

Reflection, the ability to explicitly question 'tacit agreements' (Rimanoczy, 2021, p.44), to articulate one's unspoken assumptions and goals and to enquire into those of others (Garfinkel, 1964; Schön, 1983), is particularly helpful in a complex system (Forrester, 1971), such as a bank board director's climate response. Reflection and evaluation (Gollwitzer, 1990) enable the addressing of biases, the suppression of issues, and 'non-decision making' (McNulty & Pettigrew, 1999, p.52), all pertinent to a director's climate response, and I included a stage for reflection in the active mindset model.

Active reflection is an element of deep thinking, and enables great learning (Dewey, 1910), increasing human and emotional capital and cognition, thus mediating dynamic capabilities. Similarly, reflection can help individuals become aware of the gap between their values and their actions, leading to revised behaviours (Schön, 1983 in Rimanoczy, 2021), which is useful here, as I seek to identify ways to improve practice.

// ACTIVE REFLECTION IS AN ELEMENT OF DEEP THINKING AND ENABLES GREAT LEARNING //

Task-related attributes of reflection include assumption analysis; contextual awareness; imaginative speculation; and reflective scepticism (Brookfield, 2017 and Schön, 1983 in Rimanoczy, 2021). These task-related attributes are underpinned by emotional intelligence and cognitive capability (Rimanoczy, 2021), echoing Adner and Helfat (2003) and Andrade's (2015) observations on the importance of emotional capital and cognition to dynamic capabilities.

5 THE PROPOSED ACTIVE MINDSET MODEL

In Figure.1, I detail the proposed active mindset model derived from this review of literature, incorporating: the dynamic capabilities (as outlined in 3; 3.3; 3.4; 3.5) and their underlying task-related attributes (section 3.1); the mediators of dynamic capabilities (section 3.2), human capital, social capital, cognition, and emotional capital; and the stage of reflection (section 4). The overarching influence of objective reality/context (section 3.2) is also incorporated, and the model encapsulates the definition of mindset outlined in section 1.

This cognitive model is recursive and includes feedback loops (Eggers & Kaplan, 2013), denoting the importance of adaptation (Teece, 2007). This is supported by research into multi-level systems change which suggests non-linear mechanisms, including learning and adaptation, are prevalent among leading financers of clean energy projects and can help overcome finance regime resistance to sustainability (Geddes & Schmidt, 2020). McNulty and Pettigrew (1999) also note that choice-making is complex, with phases of identification, development, and selection not necessarily following each other in a linear manner.

Although the stages of the proposed model appear clearly delineated, in reality the lines between the different stages possibly overlap (Teece, 2021) as execution can be impacted by uncertainty over intended outcome or when the action is complete (Gollwitzer, 1990). However, the model is a useful tool with which to begin to explore the active mindset construct.

In the following chapter, to be published in the next *Review of Financial Markets* and addressing my second aim, I test for evidence that the stages of the model exist in the directors' accounts using interview questions derived from the literature and identify areas where practice can be improved. Table 3 details the interview questions mapped to the literature and the stages of the active mindset model.