frontiers | Frontiers in Sustainability

ORIGINAL RESEARCH
published: 13 July 2022
doi: 10.3389/frsus.2022.888409

Change in Financial Firms and Avoiding Harm to People and Environment

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This paper explores issues of Corporate Social Responsibility (CSR) and Net Zero change in financial firms, with reference to top teams, employees, customers, citizens, and other stakeholders. It proposes a holistic approach to managing these problems of change, of reducing harm to people and environment, and contributing to social sustainability. Changes in financial firms and financial markets to become CSR and Net Zero oriented are being driven by major external change. There are increased demands to reduce harm to individuals, teams, and the environment, and to maintain social sustainability. The change pressures combine with problematic internal firm and external network predispositions. These exacerbate barriers to change and contribute to CSR and Net Zero problems. The paper uses a conceptual framework or "Behavioral theory of the financial firm" (BTTF) to think holistically about these problems and their impact on humans, their social systems, and physical systems. The BTFF is a basis for management and stakeholders to promote change based on credible organizational practices and prevention of exploitation of human capital and social conditions. These support social sustainability and occupational health and safety, or the ability of current and future generations to create healthy, living, and liveable communities in financial firms, and amongst external stakeholders. This holistic narrative and metaphor approach is a means for individuals and teams in the firm and externally to answer the question, "What is going on here?" when responding to uncertainty. The contribution of the paper focuses on firms, practitioners, and academics by closing knowledge and values gaps in fields of practice and academia. This has potential "to make a difference" in; researching, learning, thinking, and believing about desirable actions and responses to problems and harms, and to demands for Net Zero and CSR oriented change in financial firms and wider systems.

Keywords: financial firm, CSR, Net Zero, harm, people

OPEN ACCESS

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Specialty section:
This article was submitted to Sustainable Organizations, a section of the journal Frontiers in Sustainability

Received: *02 March 2022*
Accepted: *30 May 2022*
Published: *13 July 2022*

Citation:
Holland J (2022) Change in Financial Firms and Avoiding Harm to People and Environment. Front. Sustain. 3:888409. doi: 10.3389/frsus.2022.888409

OUTLINE OF PAPER

The research questions of the paper are *How can financial firms understand and manage problems of Net Zero and CSR change? How can they avoid harmful impact on humans and environment and contribute to social sustainability?*

Section Introduction—Change, Motivation, Gaps and Problem explores the background to CSR and Net Zero change in financial firms. It clarifies the motivation for the paper, the problem addressed, the need for holistic understanding, and approach adopted.

Section A Behavioral Theory of the Financial Firm (BTFF) briefly outlines how financial firms can become net zero oriented and corporate socially responsible (CSR) in a systemic way. This involves using a conceptual framework or "Behavioral theory of the financial firm" (BTFF) (Holland, 2019a,b,c, 2021, 2022) where the firm is portrayed as connected empirical themes or metaphors (Morgan, 1997) of "Head," "House," "Community," and financial "Machine." These are interpreted in an interdisciplinary frame (de Bakker et al., 2019).

Section What Are CSR Problems and Harms in Financial Firms—Historic, Continuing? uses the BTTF to succinctly summarize and connect CSR problems and harms (historic and current), arising in financial firms, markets and networks. The problems concern harmful impacts on employees, customers, and stakeholders, and on social sustainability of shared social environments. This indicates likely Net Zero change problems.

Section How Change Behavior in Financial Firms to be CSR and Net Zero Oriented? uses the BTTF change narrative to explore Net Zero and CSR *change* in problematic internal predispositions, in each metaphor area of "Head," "House," "Community," and financial "Machine." The BTFF is means for financial firm teams and individuals to learn and think coherently about how to manage Net Zero and CSR change. This is a holistic approach to reduce harm to people and environment. The changes provide the physical, technology, social and financial decision means, to support social sustainability (Sachs, 2012; Schönborn et al., 2019).

Section Summary summarizes the paper. It argues the BTFF and enhanced "integrated thinking" can "make a difference" in, researching, learning, thinking, and believing about desirable Net Zero and CSR actions and responses to problems and harms (Shiller, 2019). **T**he contribution of the paper is focused on firms, practitioners, and academics by closing knowledge and values gaps in fields of practice and academia. They are means to make financial firms more comprehensible, visible, manageable and accountable. They are means to enhance the role of financial firms in achieving CSR and Net Zero aims as well as their conventional financial functions. They are means to develop research and literature in these areas.

INTRODUCTION—CHANGE, MOTIVATION, GAPS AND PROBLEM

This section explores the background to CSR and Net Zero change in financial firms. It clarifies the motivation for the paper, the problem addressed, and approach adopted. Glasgow COP26 (2021) note that going "Net Zero" involves ongoing reduction of greenhouse gas emissions and ensuring that remaining emissions are balanced by implementing methods to absorb carbon dioxide from the atmosphere. The EU defined Corporate Social Responsibility (EU, 2011) as

> "the responsibility of enterprises for their impacts on society." "Respect for applicable legislation, and for collective agreements between social partners, is a prerequisite for meeting that responsibility. To fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of: maximizing the creation of shared value for their owners/shareholders and for their other stakeholders and society at large; identifying, preventing and mitigating their possible adverse impacts."

The motivation for the paper comes from climate change (IPCC, 2021) and world-wide demands for corporate social responsibility and social sustainability (EU, 2011; UNDP, 2016). It arises from recognition of complexity of the problems, when Climate change interacts with Corporate social responsibility (CSR) issues (and Biodiversity) in complex physical, natural, and human systems. This complexity lies at the heart of the research problem. The motivation derives from the central role of financial firms in change (EBA, 2021; GFANZ, 2021; UNEP FI, 2022). It arises from recognition by the author, and network of researchers, that ideas matter and can make a difference. In particular, by making financial firms and their CSR and Net Zero changes, comprehensible, visible, and accountable to a wider community of stakeholders.

Changes in climate (IPCC, 2021) and global social systems (Dashwood, 2020; Falkner, 2021) combine with problematic *internal financial firm* predispositions in knowledge, values, purpose, and social and economic organization to create major problems. These contribute to financial firm problems of understanding and responding to climate change, and CSR problems, both historic and current. Cases occur where top teams and employees cannot, or do not wish to adjust to external Net Zero and CSR change pressures, and problems arise in financial firms and external networks

This identifies the problem concerning the need for a holistic understanding of *Net Zero and CSR change* in financial firms, and avoidance of harms. More specifically, problems arise in understanding change in financial firms facing complex changes in the wider system of the world economy and society, and the world of finance. This exacerbates knowledge gaps and values gaps in fields of practice and academia. Knowledge gaps arise in the field of practice because of problems of learning and adaption during rapid and complex change (Zimmermann, 2019; Larsen, 2021).

Knowledge or literature gaps arise in academia because of the fragmented nature of literature, theory, and hypothesis testing concerning financial firms and their change processes. These arise in part because conceptual connections between finance theory and other social and management sciences remains very limited (Holland, 2019a). Values gaps exist in both practice and academic domains because of the central role of finance theory in explaining and influencing finance phenomena. This focuses on increases in financial value and "crowds out" pro-social Behavior (Bénabou and Tirole, 2006) concerning social responsibility and Net Zero aims. For example, there is very limited research by traditional finance academics on matters of climate change (Diaz-Rainey and Robertson, 2017; Hong and Scheinkman, 2020). This fragmented, partial approach indicates that a holistic response is required to respond to these issues. In this paper this concerns further development of "Behavioral theory of the financial firm" or BTFF (Holland, 2016, 2019a) to reflect combined issues of CSR change and Net Zero oriented change in financial firms. This involves use of case study and event data in a grounded theory approach (Strauss and Corbin, 1998), interpreted in an interdisciplinary frame (de Bakker et al., 2019).

The contribution of the paper is focused on firms, practitioners, and academics by closing knowledge and values gaps in fields of practice and academia. They are means to make financial firms more comprehensible, visible, manageable and accountable. They are means to enhance the role of financial firms in achieving CSR and Net Zero aims as well as their conventional financial functions. They are means to develop research and literature in these areas.

A BEHAVIORAL THEORY OF THE FINANCIAL FIRM

This section outlines how financial firms and employees can become Net Zero oriented and socially responsible (CSR) in a more systemic way. This involves developing a firm-wide hypothesis (Poterba, 2021) about change in the financial firm, individuals, teams, and environment. The approach is based on a "Behavioral theory of the financial firm" (BTFF) (Holland, 2019a) grounded in empirical and theoretical narratives (Golden-Biddle, 2007). The empirical narrative reveals the mutual, reciprocal nature of organizational dynamics: between contextual resources (firm social structure and knowledge, control mechanisms, technology), employee working conditions, and decisions; during change. The narrative employ metaphors (Morgan, 1997) in form of "Head," "House," "Community," "Machine" to explore change.

Morgan (1997, p. 6) notes that when "managers think of organizations as machines they tend to manage and design them as machines made up of interlocking parts that each play a clearly defined role in the functioning of the whole."

The financial firm "Machine" is seen as a financial decision and finance resource transformation means. This assumes the firm organization is made up of highly structured and connected decision routines and decisions in an integrated firm hierarchy. The GFC showed (Holland, 2010) how this metaphor, has major problems when finance theory, based on logic, dominates human aspects, and ignores the complexity of organizational life. Morgan (1997, p. 5) argues the,

> "Machine" metaphor is incomplete, ignores human aspects, is biased, and elevates rationality. It is misleading as the "organization is not a machine and can never really be designed, structured, and controlled as a set of inanimate parts" and . . . ." the challenge is to become skilled in the art of using metaphor: to find fresh ways of seeing, understanding, and shaping the situations that we want to organize and manage."

This paper accepts this challenge using metaphors of "Head," "House," and "Community" to outline the human or non-financial dimensions to financial firms. The firm is not just a "Machine" to do things. Its non-financial context defines what people think they are, how they feel about work activities and functions, and how this affects "success." This metaphor view in a BTFF is used to explore the CSR and Net Zero change in financial firms and how this can be used to avoid harm to humans and environment. The following paragraph summarizes the four-part metaphors and narrative, used in the BTFF conceptual framework.

The first part of the empirical narrative' involves top teams ("Head") "looking out" to learn (Pedler et al., 1997) about external climate change and CSR change pressures and "looking in" and learning how to change the firm and avoid harm to individuals, teams, and environment. *The second part* involves Top teams making Net Zero and CSR oriented strategic changes to purpose, "socio-technical" infrastructure in the firm "House." *The third part* concerns how firm social and knowledge resources are mobilized, how changes are enabled and driven by organization processes. The latter involve Net Zero and CSR based purposeful interactions at individual, team, firm, and network levels. The *fourth part* highlights how changes to the non-financial context and working conditions, supports Net Zero and CSR oriented, financial decisions, and products. The latter concern creation of new Net Zero and CSR oriented financial assets and liabilities (and derivatives of) in each firm's specialist domain such as banking, fund management, and insurance. These satisfy CSR and Net Zero aims and avoid harms.

The empirical narrative is further developed in Sections What Are CSR Problems and Harms in Financial Firms—Historic, Continuing? and How Change Behavior in Financial Firms to Be CSR and Net Zero Oriented?. These interacting socio-technical resource elements and financial resources are integrated in purposeful ways in **business models** (VRF, 2021). This is the basis for transforming the inputs, through business activities, into outputs and outcomes in a financial "Machine" that aims to fullfil the organization's strategic purposes (IIRC, 2013, 2021; VRF, 2021). The empirical narrative is interpreted using an interdisciplinary theory approach (Knights and Willmott, 1997) to form a theoretical narrative and BTFF. This reflects Hirshleifer's (2015) argument that there is a need to move from Behavioral finance to social finance. These empirical and theory issues are explored in more detail in Holland (2021) on Net Zero change in financial firms, and Holland (2022) on CSR change in financial firms.

WHAT ARE CSR PROBLEMS AND HARMS IN FINANCIAL FIRMS—HISTORIC, CONTINUING?

This section uses the BTTF structure to succinctly summarize and connect the main CSR problems and harms arising in financial firms and externally. The historic CSR problems indicate likely future Net Zero and CSR change problems. They indicate potential harmful impacts on employees, customers, other stakeholders, and how these can damage the social sustainability of their shared social environments. This analysis highlights major problems and harms to avoid. It indicates where firms can adapt in systematic way relative to Net Zero and CSR change pressures, and how it can foresee and manage potential problems and harms. It also provides new insights into how CSR reporting by financial firms can be critically appraised and improved.

CSR Problems in Top Teams or the "Head"

Major CSR related problems of purpose, and motivation arise in top teams, and these have harmful impacts throughout financial firms. There have been issues of negative CSR related Behaviors and policies by top teams, and their harmful impact on employee Behavior, with subsequent harmful impact on customers. These harms arise in conjunction with problems of understanding the social and knowledge infrastructure of the firm, especially with invisibility of intangibles during rapid change.

Several authors have identified these difficulties in implementing CSR policies in core activities in financial firms (Thompson and Cowton, 2004; Scholtens, 2009; Wu and Shen, 2013; Tran, 2014; Avery, 2016). Financial firms face knowledge-based problems of communication when reporting on CSR, climate change, and financial value creation, (Gray et al., 2001; Michelon et al., 2015; Avery, 2016).

Historic problems arose in firms such as RBS and Wells Fargo due, in part, to top team ignorance, indifference, or hypocrisy about CSR. The GFC showed how knowledge and perceptual barriers in top teams arose from ideological positions, short-term views, and dominance of conventional finance theory focussed on shareholder wealth (Holland, 2019a). Problems have emerged in clarifying a combined CSR and financial purpose of firms. This creates conflicts between CSR and financial performance aims and varies with CSR motivation. For example, Wu and Shen (2013) note three CSR motives in US banks, namely, strategic choices, altruism, and greenwashing. They find the relationship between CSR and financial performance is positive, non-negative, and non-existent, for each specific motive.

Other top team and employee *knowledge-based* barriers exist for financial firms undertaking CSR programs. Tran (2014) noted problems of understanding costs and benefits prevented Chinese banks from engaging in CSR. They include financial costs of CSR and difficulty of measuring benefits, financial or social. The absence of a national policy and regulatory structure with sanctions and incentives were key barriers. These problems are expected to decline with UN (UNIDO, 2019), and EU (2011) CSR leadership. They are expected to decline with collaboration amongst financial firms to develop principles on CSR practices, costs, benefits, and impacts (e.g., PRB, 2019).

However, climate change, COVID-19, and technology change reveal how problems continue to arise in implementing CSR ideas with employees and customers. For example, Fancy (2021) as ex head of sustainability at Blackrock expressed considerable skepticism about practitioners and market forces setting the rules of the game in areas of ESG (Environmental. Social, Governance) and closely associated CSR issues. In his experience at the heart of one of the largest investment "machines," fund managers managing ESG funds were still dominated by short term financial incentives, and nearly always chose the wealth gain over the ESG gain (Rushe, 2021). This prioritization of finance can crowd out prosocial Behavior (Bénabou and Tirole, 2006) and create harm for employees, customers, and stakeholders. CSR and Net Zero oriented intrinsic motivation and action is crowded out by finance only extrinsic incentives. Section How *Change Behavior* in Financial Firms to be CSR and Net Zero Oriented? explores how this can be ameliorated.

Internal "Community" CSR Problems

There are many ongoing problems of balancing shareholder wealth aims and stakeholder CSR aims, especially with employees. Pay and inequality issues within financial firms create perceptions of significant harm being created to employees and citizens. Pay gaps between top teams and employees is very high in financial firms such as in top ten US banks, "that pose the greatest risks to our financial system, the average pay gap was 265 to 1 in 2017. Among the four giants at the top, the average ratio was 319 to 1" (Anderson and Wakamo, 2018). Despite public and political pressure, top teams still mobilize shareholders to defend them against external pressures and support them on pay and top team incentive schemes (Anderson and Wakamo, 2018). The gender pay gap is a major issue. Wright (2018) analyzed the gender pay gap data at nearly 400 firms from across the UK financial services industry and commented that the, "..financial services sector performs worse than the rest of the economy on every aspect of gender pay gap reporting."

COVID-19 in 2020–2021 accelerated digitisation processes in financial firms. This raised CSR issues concerning employees. Increases in "social distancing," remote working, and video communication, and workload, changed working experience of all employees. Some of this is welcome by employees in terms of work-life balance, gaining some control over the location and timing of work (Jones, 2021). Some of this change is not welcome. Firms may experience major problems in safeguarding employee wellbeing and being conscious of physical and mental health issues in a "work at home" world. They may experience problems in ensuring employees are engaged and motivated and in monitoring safety of employees (Jones, 2021). Employees may face wage reductions, increased pay gaps, and lose their jobs as productivity is increased, and gains appropriated by top teams and shareholders. If this exacerbates pay, gender and diversity inequality, then much harm will be done to social sustainability. This is a major CSR challenge for financial firms. If top teams in financial firms wish to achieve their CSR aims and avoid "CSRwash," they must articulate clear policy about change, and how it varies with different tasks and teams such as top teams, middle management, customer facing functions, back office, risk-management, and market facing trading divisions. They must engage with employees to reflect new employee work preferences, whilst sharing productivity gains between finance capital, top teams, employees, and stakeholders. Section How *Change Behavior* in Financial Firms to be CSR and Net Zero Oriented? explores how engagement can occur.

External "Community" CSR Problems

Financial firms continue to exploit technology change pressures—with new strategies designed to reduce costs, hold onto the existing customer base, and maximize the financial value of products sold and delivered. Such rapid change creates perceptions of significant harm being created to customers in key segments. They occur as they experience a world dominated by digital transacting, increased complexity, costs, and risks. In contrast financial firms create more power over customers, reducing their costs and risks, and increasing profits. In banks (Rawstorne, 2015), this has involved strategies such as "automating" branches with series of "smart" self-service machines supported by "experts" *via* phone or video. The main job of "experts" is to accustom customers to using the new technology to complete transactions, acquire information for the firms, and encourage customers to transfer to internet banking and more products. This approach transfers "processing" tasks and risks to customers.

Rawstorne (2015) notes that "Banks claim they are making the lives of tech-savvy customers easier....But most customers find the machines deeply irritating and alienating." From customer perspectives, this is a prelude to more dramatic change. As customer use of the automated branch falls and they migrate to smart phones, card use, and full internet banking, the bank can justify closing branches and ATMs, removing paper statements, and force customers to use card or "smart phone" services (payments, account statements etc). The bank limits customer choice (channel use, mode of processing transactions, products, and services) to bank defined technology alternatives.

The experience of COVID-19 during 2020–2022 accelerated the digitisation process as "social distancing," remote working, and video communication, changed the experience of all age groups. In banks, this led to increased productivity through drastic reduction in use of cash, accelerated bank branch closures, and increased use of internet banking. Banks may argue this intensifies their focus on customers and increases the trends to ethical and responsible banking. Rolfe (2020) found technology change during COVID-19 accelerated erosion of consumer trust in banks. Financial firms focus on economic gains and take benefits and transfer costs when interacting with customers. This shows a failure in relating CSR values to dominant financial values. From the bank perspective the increased "digitisation" increases the profitability of the economic relationship, with retail customers and small businesses such as restaurants. The lack of:alternative payment means, competition between banks on cost of payments, and banning of surcharges (EU, 2015); means that banks transfer extra cost (over cash) into prices to customers to protect margins.

The rapid shift to digitized services, and increased software complexity in aging systems, has also created IT vulnerabilities in terms of IT failures, service outages, and IT errors. IT problems at RBS, Nationwide, HSBC, Barclays, TSB, Tesco bank, and Lloyds from 2012 to 2018 reflect this. These IT vulnerabilities have in turn created new opportunities for fraud and hacker attacks. Aldasoro et al. (2021) reported that financial firms were hit by hackers relatively more often than other sectors during the COVID-19 pandemic. Customers faced costs of such outcomes immediately and have often been blamed for problems. They rely on Ombudsmen, Regulators, and CSOs such as UK consumer champion "Which?" to defend them—rather than banks correcting problems and paying compensation immediately. Social responsibility to customers has been a low priority despite the banks effectively forcing customers to migrate to digital banking. However, in 2019 the major banks covering many UK customers adopted a voluntary code of conduct requiring them to refund fraud victims in full if they have shown reasonable diligence (Shaw, 2019).

"Machine" Problems

Such CSR related problems can lead directly to financial risk and financial value problems for financial firms (EBA, 2021). This demonstrates the need to jointly consider—interactions between—non-financial resources and financial resources—and between CSR and financial aims. A failure in achieving CSR outcomes and product delivery, leading to harm to customers and employees; can damage relations and reputation with customers, reduce motivation and capabilities of employees; and impair financial functions of financial firms. It can reduce a firm's ability to secure financial resources (say deposits) and impair the ability to allocate them to new lower risk and higher financial margin products (say providing loans to existing customers).

There are recent examples of financial firms such as Wells Fargo (in 2010–2016) exploiting change opportunities to develop huge knowledge, informational and transactional power relative to retail and small business customers and then using these capabilities in irresponsible, unethical, and fraudulent ways. The Wells Fargo case (Avery, 2016) shows how vulnerable financial firms are to threats to their financial reputation once unethical Behavior is revealed (Thompson and Cowton, 2004). The RBS case in the GFC and Wells Fargo case reflect bank misuse of their power, knowledge, and transactional advantages over customers; to reduce immediate costs for the banks, boost profits, and fail to deliver their CSR promise to customers. This hypocrisy and deceit are short sighted given the long-term reputational costs for banks and loss of friendly direct contact with customers (Thompson and Cowton, 2004). Hence financial firms pay increasing attention to reputational and relationship risks caused by CSR related errors or misBehavior which affect confidence in supply and use of financial resources (Carnevale and Mazzuca, 2012). COVID-19, climate change, and CSR change pressures have posed new issues and financial risks for financial firms (EBA, 2021).

HOW CHANGE BEHAVIOR IN FINANCIAL FIRMS TO BE CSR AND NET ZERO ORIENTED?

This section uses the BTTF change narrative to explore Net Zero and CSR change in problematic internal predispositions in metaphors of "Head," "House," "Community," and "Machine" and during their interactions. This is a holistic way for teams and individuals to learn and think about how to change Behavior to deal with CSR and Net Zero change problems. It is a new way to think holistically how to avoid harm to humans and environment. These provide physical, technology, social and financial decision means, to support social sustainability or ability of current and future generations to create healthy, living, and liveable communities in financial firms and amongst external stakeholders. They seek to enhance the occupational health and safety of employees and stakeholders. This reflects a wider change where the corporate role in social sustainability to meet the needs of both present and future generations, is gaining importance in politics, society, and the economy, and is seen as a core component of response to global challenges of the future (Sachs, 2012). This section explores how "corporate social sustainability culture, expressed as explicit "items" of corporate values and practices emphasizing employee and societal well-being" (Schönborn et al., 2019) are related to financial function and success of a financial firm.

Strategic Changes in, and by the "Head"

This section discusses the first *part of the* strategic "change narrative". This explores how changes a*t the "Head" of the firm*, are strategic means to respond to potential and actual harm caused by problems of top team ignorance, indifference, or hypocrisy about CSR and climate change.

The "change narrative" starts with how external climate change and CSR change pressures are driving learning and strategic changes at board and executive team levels in "learning organizations" (Pedler et al., 1997) in case firms such as NatWest (Rose, 2020a,b) and Schroders (Harrison and Leppard, 2020), and in peer groups alliances such as GFANZ (2021) or PRI (2020). In the case of **climate change** and CSR change pressures (Mirfenderesk, 2009), top teams are learning how to develop adaptive strategic plans and strategic choices to develop resilient firms capable of managing the new risks, and to continue to deliver their core financial functions and performance in the economy. As noted by Porter and Kramer (2011), firms have embarked on strategic efforts to create shared value by reconceiving the intersection between society and corporate performance and rethinking "value."

This involves top teams ("Head") **"looking out"** to learn (Pedler et al., 1997) how the increasingly intense change pressures are *changing the* nature of Net Zero and CSR change in firms. They learn how external change and problematic internal predisposition contributed to problems in financial firms in recent history (see Section What Are CSR Problems and Harms in Financial Firms—Historic, Continuing?) and create new strategic opportunities and threats (Porter, 1985). Top teams are actively engaging with, and learning from, peer groups, elites, and shareholders in the financial community, and from stakeholders in wider society. They learn about risk, uncertainty, and complexity induced by climate change and CSR change pressures, biodiversity concerns, technology change, and their physical risks. This is the basis to learn about transition risks arising from political and regulatory changes. They develop the "rules of the game" (Bourdieu, 1990) and shared "capitals" and "habitus" in the finance community on how to avoid harm to humans and environment.

The first part of the change narrative also involves **"Looking in"** learning (Pedler et al., 1997) and concerns learning by top teams and other teams. Top teams learn and make strategic choices about new enabling infrastructure and conditions with new sustainable advantages and resilient dynamic capabilities in their firms (Fiksel, 2003; Souza et al., 2017). They learn how to change Net Zero and CSR orientation of critical internal factors in the firm and their predispositions. They make the changes *together* in an incremental adaptive way over time (Matthews, 2018; Larsen, 2021). Top teams, employees and their teams are using these learning opportunities and experiences to develop shared dynamic capabilities and resilience (Teece, 2007; Ortiz-de-Mandojana and Bansal, 2016) in CSR and Net Zero oriented resources in the firm. The adapted resources include knowledge intensive capabilities and social infrastructure (intangibles) and technology (tangibles). The latter formed intellectual capital (Meritum, 2002) in the firm, in teams and individuals.

Top management in these "Learning organizations" (Pedler et al., 1997) seek knowledge to support new thinking to strategically allocate capital (financial, intangible, technology) to create an effective Net Zero and CSR oriented organization. They are thinking how to reorganize the "Head." Pathan (2009) showed how, in US banks, CEO power to control board decisions, negatively affected bank risk-taking. This was evident in the GFC when CEOs and "dominant coalitions" (Cyert and James, 1963) in RBS and BOS took extreme risks and failed (Holland, 2010). Corporate governance reform recognized this power must be counterbalanced in new boards and executive teams (FCA, 2015, 2021).

Thus, a priority area is for top teams ("Head") to change the "Head" and avoid harm caused by the "Head." They "look in" and learn how to make changes in top teams ("Head") in terms of governance, composition, diversity and capabilities of boards and executive teams (Ethical Finance Conference, 2018, 2019, 2020). These create top team capabilities to develop a consensus view based on challenge in their debate about climate change and CSR and about harm in the firm and externally. They create capabilities to manage these risks and deliver core financial functions and financial value. This informs strategic choices about the Net Zero and CSR purpose and orientation of firms, and about performance metrics for achieving Net Zero and CSR outcomes in firms such as NatWest and Schroders (Harrison, 2020; Rose, 2020a,b). They learn how to change top team Behavior and create a "tone from the top," *as part of* the means to promote "Change awareness activities" amongst all employees.

Shen et al. (2016) find that CSR oriented banks overwhelmingly outperform non-CSR banks in terms of return on assets and return on equity. This suggests that those bank top teams that collaborate and learn, internally and externally, about CSR policies, are more likely to create additional financial value than those who do not collaborate. Such external collaboration and collective action on CSR are essential given the likelihood of considerable variation possible between financial firms on strategic change (Zimmermann, 2019). This is basis to agree on common actions that build financial stability and resilience in a complementary way with climate change and CSR resilience.

Top team practitioners such as Vaccoro (2019) of Triodos bank (Triodos Bank, 2019) and Haresnape (2018) of Gatehouse Bank (Ethical Finance Conference, 2019) are aware they must avoid negative Behaviors and attitudes manifest in the GFC and cases such as Well Fargo (Avery, 2016). Top teams must avoid creating a negative climate change and CSR change "tone" to organizational factors such as: hierarchical power relations, culture, team spirit, shared knowledge, internal communication and feedback systems, control systems, incentive schemes and many other elements. They must avoid these organizational factors creating a negative "team spirit" in the wider firm and specialist decision teams about combined Net Zero, CSR, and financial aims. Rice (2019) argued that individuals at all levels in financial firms must ask what they can do to change their Behavior and activities to avoid such problems and harms. Employees at all levels must be persuaded to buy into change ideas and new aims to change their mindset.

This learning at the top also requires *critical thinking* in top teams in financial firms about the dominance of conventional finance theory, shareholder wealth aims and short-termism. Stakeholder theory (Donaldson, 1995) and literature on corporate legitimacy (Power, 2003; Preda, 2005) can help top teams develop their ideas. Financial firms require ideas from this external debate to be diffused through the firm and employed at the point of financial decisions and discussion about potential harms. This requires incentives to reflect the new relationship between of climate change, CSR, and financial aims. They must avoid "crowding out" pro-social Behavior based on Net Zero and CSR aims (Bénabou and Tirole, 2006) by continuing and intense financial pressures. Net Zero and CSR oriented intrinsic motivation must not be crowded out by finance only extrinsic incentives.

Given change pressures, diverse boards with such clear climate change and CSR purpose, and explicit performance metrics, are expected to improve performance—Net Zero, CSR and financial—and reduce harm to people and environment. This reflects findings in the literature. Change in top team areas such as, gender and knowledge diversity of leaders and in boards of banks is associated with environmental performance (Birindelli et al., 2018, 2019). Jizi et al. (2013) found evidence that US bank board independence and board size, the two board governance characteristics "usually associated with the protection of shareholder interests, are positively related to CSR disclosures." Kilic et al. (2015) found that CSR reporting of banks improved during 2008 to 2112, and this was associated with size, ownership diffusion, board composition and board diversity.

Organizational Conditions to Change Behavior

The *"House" metaphor* is used to explore the second part of the change narrative. This shows how top teams in financial firms make CSR and Net Zero oriented change to the firm "socio-technical" context (Mumford, 2000; Mitleton-Kelly, 2003) made up, inter alia, of organization structure, culture, knowledge, and technology. These "House" changes influence working conditions, Behavior of employee, customers, and stakeholders. They are intended to reduce problems and harms arising from dysfunctional socio-technical structures.

The case financial firms "look in" and learn (Pedler et al., 1997) how combinations of "House" intangibles and tangibles can be adapted for CSR and Net Zero aims and integrated in financial firm business models (IIRC, 2013). These changes are strategically matched to changes in the external environment concerning CSR pressures and climate change. They are designed to develop resilience in the face of uncertainty (Teece et al., 1997) and to influence Behavior, financial practices, and decisions throughout firms.

Net Zero strategic change involves greening of internal physical operations, offices, and transport systems by financial firms. It involves allocation of financial capital to customers from carbon into green energy and implementing GFANZ proposals (2021) to achieve Net Zero aims. CSR strategic change supports a shift to CSR oriented financial practices with employees, customers, and stakeholders. It involves allocation of financial capital to customers with high reputation for their CSR oriented Behavior with their customers and stakeholders. These strategic choices are critical to create information and make financial transactions possible. They create a positive change "atmosphere" in organizational conditions, and their influence on employee Behavior, and on interactions with customers to reduce harm and deliver finance.

Thus, practitioners recognize that deep rooted CSR and Net Zero orientation must be achieved in core "socio-technical" factors and their connections to intensify change influence on individuals and teams. They appreciate that influence of the formal CSR and Net Zero change policy must be continuously supported and strengthened from top teams down to front line employees, whilst maintaining the financial orientation and function of the firm. Top teams in case firms such as NatWest (Rose, 2020a,b), and Schroders (Harrison, 2020) are making it clear that key organizational factors in their "socio-technical" system: such as authority roles and power in the hierarchy and organization, culture, control systems, targets, feedback systems, and incentives; have an explicit CSR and Net Zero orientation intended to reduce harm to people and environment. These top teams use an explicit holistic narrative or systems view of the firm, and its role in financial markets, the real economy and society to communicate their "integrated thinking" (IIRC, 2013; VRF, 2021) to employees.

In the case of CSR this involves top teams communicating how the firm can implement CSR related principles such as PRB (UNEP, 2018), and professional standards (Bogan, 2018). This clarifies the firm's response to intergovernmental CSR pressures (EU, 2011; UNEP, 2018) and pressures from CSOs. In the case of climate change this involves communicating how the firm intends to make contributions to reductions in GHG consistent with Paris 2015. The case firms are making plans for 1 year ahead, 5-year, 10-year, and 30-year horizons consistent with; Paris COP21 (2015) and Glasgow COP26 (2021), TCFD (2017) demands (Net Zero Finance Conference, 2021), and with membership of Net Zero alliances (GFANZ, 2021).

Adapt Intangibles to Be CSR and Net Zero Oriented

Internal intangibles in the "socio-technical" system include social factors such as organization and Culture, as well as Knowledge factors.

Knowledge resources include intellectual capital (IC) (Meritum, 2002) about knowledge and capabilities of teams and individuals. They involve knowledge of ethical and responsible

Behavior, and avoidance of harm (e.g., PRB, 2019). They involve knowledge of financial needs of customers, of financial transactions, and financial markets. They comprise financial expertise (Preda, 2005) and understanding of social intangibles such as brand, reputation, and customer relations in supporting transactions in markets. They include knowledge of financial intermediation and risk management at financial portfolio (asset, liability) and financial firm level (Lewis and Davies, 1987). Such knowledge resources created employee capability to act in financial firms and in external social contexts concerning customers. There are strong pressures to develop the CSR and Net Zero dimensions to such knowledge resources. For example, BNY Mellon (2017) noted that the Comptroller of The City of New York sent letters to companies,

> "requesting board member skills and attributes laid out in a matrix so they could assess a wide range of issues such as Board gender, racial and ethnic diversity, need for refreshment, and skills needed. Although we did not receive such a letter, we took steps to provide a skills and attributes matrix in our 2018 proxy statement."

Social resources concern social structures such as financial firm organizational structure and control systems as well as relations in external networks. Social resources include agent **knowledge of** organization and external networks (Meritum, 2002). **Culture** or shared social norms is an important attribute of organization (Schein, 2004). External relations arise with customers, shareholders, and stakeholders and other financial firms concerned about CSR and climate change issues.

The history of financial firm development during major external change has shown how firms adapted to survive. This required **strategic re-organization and redesign of functions** in financial firms, around new customer needs, financial products, transactions, and services (Holland, 2010). In a world of CSR change pressures and climate change, major commercial banks such as RBS and ProCredit Bank are now learning how to re-organize firm structure, control systems, and other functions around new CSR and Net Zero oriented customers, financial markets, and products (RBS, 2014, 2018; ProCredit Bank Group, 2016). They are re-organizing around ideas of climate change risk, CSR change pressures and demands to avoid harm to people and environment. This involves re-organizing risk management, control systems, team structures and decision routines, around CSR and Net Zero change issues. It involves using these control mechanisms and structures to influence employee Behavior to be CSR and Net Zero oriented. These include using communications and storytelling, top team Behavior, training, incentives ("soft" and "hard"), as means of influencing.

Technology is a key change enabler and driver. Technology based control systems such as Schroders "SustainEx" (Howard, 2019) are designed to measure costs and benefits of social and environmental action. These bring CSR and Net Zero issues and information to bear on decisions about, individual financial transactions by front line teams, specialist financial portfolio decisions by middle management, and in firm wide financial decisions by top teams.

These connected social, knowledge, and technology resources and their mobilization contribute to social forces which drive agent and team action in the financial firm relative to financial, CSR and climate change aims. This reflect Silverman's (1970) view that social reality is socially constructed, socially sustained, and socially changed. CSR and Net Zero oriented changes to socio-technical context: as organizational and culture change, control system change, knowledge change and technology change; act as frames to interpret organizational meanings and actions by top teams and employees. Perrini and Vurro (2010) argue that new ideas of corporate sustainability and responsibility have,

> "an impact on organizational capital accumulation, being an important source of fundamental changes in business philosophy, decision-making criteria, and ways of working together" and by "....addressing internal organization may have an impact on symbolic capital accumulation, aligning organizational member Behavior with stakeholder expectations and enhancing corporate reputation as a reliable partner."

The above strategic choices about socio-technical context are designed to create a sustainable competitive advantage (SCA) unique to each financial firm (Barney, 1991; Teece et al., 1997). These are the basis to create power and influence, knowledge, and transactional advantages over customers. They create means to use these advantages to influence employee financial transacting Behavior with customers to reflect complementary CSR, Net Zero and financial aims in way that is expected to reduce harm to people and environment. These are expected to be the basis for financial winners and losers to emerge in banks and other financial firms concerning the achievement of combined CSR, Net Zero, and financial aims.

Changes in "Community"

This section use the *"Community" metaphor* to outline the 3rd *part of change narrative*. This discusses how individuals and teams experienced CSR and Net Zero change. They seek to avoid harms and create social sustainability in internal and external communities and enhance the occupational health and safety of employees and stakeholders.

This includes change on issues such as employee lived experience, workload, working conditions and contracts, pay gaps, inequality, and diversity. It creates a way to think how to deliver the desired financial products, and risk management, in a way that produces outcomes consistent with CSR, Net Zero and technology outcomes and experiences desired by stakeholders.

Case firms such as NatWest and Schroders use the above dynamics to enhance employee confidence in new CSR and Net Zero aims, structures, and capabilities. They seek to enhance employee states such as—trust and belief in top teams, commitment to financial firm aims, and motivation to act in the desired ways to achieve CSR, Net Zero and financial aims (Harrison, 2020; Rose, 2020a,b) and avoid potential harms. They use these changes in employee Behavior to build trust with customers and develop a CSR and Net Zero orientation to intangibles such as relations, brand, reputation with customers and other external stakeholders. They create a learning, behaving, and harm reduction cycle between employees, customers, and stakeholders in which there was no end (Vaccoro, 2019).

These changes are expected to improve individual and team performance, customer relations, and firm performance. In this regard, Esteban-Sanchez et al. (2017) found that during and after the financial crisis (2005–2010) banks with better employee relations and corporate governance had better corporate financial performance. During the crisis, better relations between employees and the external community were valued positively by investors, which, in turn, increased corporate financial performance.

The use of a "Community" metaphor (Morgan, 1997) provides insights into "lived experience" or "life" of employees, customers and stakeholders involved in CSR and Net Zero change in Behavior in internal and external "communities" or social organizations. It highlights main factors at play and connections to change in the "community."

From a theory perspective the connected contextual resources, interactions, and CSR and Net Zero awareness activities collectively contribute to social forces which drive agent and team financial decision action in the financial firm and networks relative to financial, CSR and climate change aims. This reflects Silverman's (1970) view that social reality is socially constructed, socially sustained, and socially changed. In Bourdieu's (1990) terms the awareness activities and interactions, within field context, are combined means to structure habitus, expertise, and social and symbolic capitals in new ways. They structure "Head," "House" and "Community" and their impact on decisions in the financial "Machine."

Community Activities to Raise Awareness and Avoid Harms

The COVID-19 experience in 2020-22 created opportunities for top teams to renegotiate employee contracts and customer conditions, work conditions and potentially take all benefits of productivity gains for top teams and shareholders. The response of financial firms to this new situation, especially the creation of new physical and mental health issues, diversity problems and inequality, will be a major test of whether their CSR and Net Zero change policies have substance or are forms of "CSRwashing" and "Greenwashing" (Mattis, 2008; Pope and Wæraas, 2016).

However, the case firms employ a range of activities to avoid harms and raise awareness about *CSR and Net Zero,* changes. The activities for awareness, harm avoidance, and social sustainability, include *Engagement, Learning, Good practice, Culture, Self-monitoring, Communication and Reporting*. The activities provide a fruitful standpoint to develop insights into the wider interactions and complex changes in the "Community." The activities illustrate changes in "lived experience" and Behavior of employees, customers and stakeholders facing CSR and Net Zero change. These form part of the *community means* to develop social sustainability in internal and external communities and avoid harms.

In case financial firms, ***continuous engagement*** about CSR and Net Zero changes, occurred throughout internal and external communities. Practitioners such as Rice (2019) and Cuthbert (2019) note that boards and executive teams have extensive discussions on how to develop such engagement in all teams, financial decision activities and levels. This ranges from: top executive teams dealing with financial risk management across the whole firm, middle management dealing with specialist financial asset and liability portfolios, to front line teams dealing with individual financial transactions with customers. CSR and Net Zero values and aims are directly discussed and debated with financial values and decisions at the point of decisions being made by specialist teams, with a view to creating complementary CSR, Net Zero and financial outcomes, and avoiding harmful impacts on people and environment.

Hayhoe (2021) argues that such awareness raising activities, are best done by working from existing culture, values, norms, and experiences of employees in firms and their customers and stakeholders. It is best done from their experience of harm and gains. This reflects Levy's (2014) idea or "Working with the grain." Engagement that emphasizes fairness in change is more likely to lead to acceptance of new working practices. These include working from ***existing culture*** in the firm (ACCA, 2014; Harrison, 2020; Schein, 2004). It involves working from new CSR norms (Dashwood, 2020) and climate change norms (Falkner, 2021) in society, secular belief systems; faith-based beliefs (Haresnape, 2018), and principles of responsible Behavior (e.g., PRB, 2019).

However, the experience of COVID-19 in 2020–2022 has created a new point of departure or "moment of change" (Whitmarsh, 2022) for Net Zero and CSR change. As the COVID-19 pandemic struck in March 2020, top teams at NatWest (RBS) (Rose, 2020a,b) and Schroders (Harrison, 2019) were able to exploit prior strategic changes to "House" and "Community." These concerned prior changes to CSR ad Net Zero purpose, technology, work life balance of employees, and Behavior with customer. They used these to make very rapid decisions, often in 24-to-48-hour periods, about firm wide working conditions, and use of technology, for team working from home, and for customer interactions.

Thus, COVID-19 has changed individual life circumstances in a short time. Issues of experience of work, workload, and physical and mental health during change have become important. This sudden change is a basis to understand dynamics of pro-environmental and pro-social change in financial firms and their cultures, and in the individual life "journeys" and lifestyles of employees and stakeholders. This "moment of change" is an opportunity for top teams, employees and stakeholders to think collaboratively how to encourage robust habit-disrupting interventions to promote change in everyday life and Behavior (Whitmarsh, 2022).

Key cases provide insights into how such change can be managed. For example, Harrison (2019) argued that the formula for culture was not obvious, but if people were happy, engaged, innovating, and moving quickly, that became a place they wanted to come to work in. Harrison and Schroders used various means to *maintain culture* in the firm as a platform for change. Pre-COVID these included investment in substantial resources (technology and social) to support a flexible mix of office working and home working. This involved prior investment in mental and physical health and wellbeing of employees and avoiding harm caused by change. It included promoting a collegiate atmosphere in teams and the firm. These decisions were critical to their response to COVID-19. Harrison and the rest of the top team recognize this approach is required to deal with Net Zero and CSR change. They understand their internal role and Behavior is critical to ensure all Schroders employees play a serious role on Net Zero and CSR (or ESG) change issues as well as financial issues. Employee contribution to this debate and active discussion within teams is a basis to promote employees wellbeing and mental health and get employee "buy-in" to CSR and Net Zero policies adopted in the firm. Incentives, and performance assessment schemes were important influences on buy-in, mental health, Behavior, and action.

The approach of banks such as Gatehouse and Chief executive Charles Haresnape (2018), involved using faith-based values and culture, incentives, to develop employee commitment and motivation. They create a working environment for all staff to build culture, mindsets, values, and desired behaviors in financial decision activities. Gatehouse concentrated on the ethics of lending to achieve CSR outcomes and avoid harms when employees transacted with customers. The aim was to make a difference to customers in terms of, delivery of financial services, and transactions that were priced in socially responsible ways. They aimed to make difference to employees in terms of good working conditions, workloads, stable work contracts with competitive pay, and in terms of job satisfaction.

Priest (2019) provided more insight into ***self-regulation and self-discipline*** activities within NatWest bank. Top teams and middle management and other employees were engaged in discussing and agreeing ethical standards and responses to climate change. They discussed and agreed on how this changed incentives, expected Behavior, and avoidance of harm, with each other and with customers. This high awareness and understanding by NatWest employees about CSR and Net Zero aims meant there was a natural social control in the firm and with customers. Employees shared and discussed their mindsets and feelings, when operating in teams, and in connected hierarchical levels. Employees observed each other through a lens of desired ethical Behavior such as PRB (2019). They related to each other through shared understanding of problems of working conditions, workload and mental health arising from work. They discussed and voted on actual and proposed decisions made by teams and individuals. It was in their own interest to discipline each other and exercise control over Behavior between employees and with customers. It was in their interests to address work problems together. There was an explicit attempt to monitor change in ethical environment (Bobek et al., 2015) for all employees, and their CSR and Net Zero awareness, feelings, and motivation.

As noted in previous sections, ***continuous learning*** arose in interactions in internal and external communities (Pedler et al., 1997) during CSR and Net Zero change process. Learning in peer groups and top teams creates new context to influence Behavior during interactions. These are means to create information, enhance employee financial decisions (Chen et al., 2014; Holland, 2016). They are means to avoid harm by developing more CSR sensitive customer policies by maintaining bank branches and ATMs with vulnerable customers. For examples banks learnt they must avoid transfer of "digital" risk to customer (error, fraud, tech failure etc) to customers by continuous complex product and technology change. This contradicts the core function of financial firms to manage risk for customers. Reducing digital and knowledge risk for customers reduces financial risk for financial firms. This reduces social sustainability risks by ensuring all customers can access the same banking services.

CSR and Net Zero change also required a ***regular exchange of good practice*** and ***active training.*** Case such as Triodos, sector guidance such as the PRB, COPs at Paris 2015 and Glasgow 2021, and various practitioner events (Ethical and Green Finance), provide examples, tested knowledge and ideas for less sophisticated banks to develop their response to CSR change pressures and climate change. Vaccoro (2019) argued that learning about CSR and climate change in Triodos bank and by customers and stakeholders was enhanced by various means. Triodos put all their loans on their web site for public viewing. In 2019 they implemented a 21-factor analysis of lending which contained many CSR and climate change criteria to reflect UNEP SDGs and Paris (2015). They used these approaches to create new conversations with customers on CSR, climate change, potential harms, and desirable outcomes. This helped them to find new areas where CSR and Net Zero oriented finance could flow. They discovered new financing opportunities: in say, company supply chains, production, and sale activities; by discussing alternative CSR and Climate change ways of doing these activities. This two-way learning and interactions with customers were the basis to codify internal practice and create new knowledge with, and for, employees. Dissemination of this knowledge through employee training ensured consistency throughout Triodos and when dealing with customers.

The Triodos, Natwest, and Gatehouse cases demonstrate how improved internal and external communication and reporting, build "community," and create accountability mechanism with employees (Jones, 2021) and stakeholders. Case firms such as Triodos, Natwest, and Gatehouse also recognize they must develop coherent external reports to stakeholders, such as shareholders, CSOs, and regulators. They must show how their internal and external actions correspond with agreed Net Zero policies (reducing funding for GHG emission, increase for green energy) and agreed CSR policies (on pay and gender equality, diversity, work conditions, mental health, and contracts). They must show how their actions are authentic and evidence-based and advance CSR and Net Zero change agendas of substance rather than hinder them. They must explain how these actions avoid harm for people and environment. The case firms recognize this reporting is central to effective accountability by informed external stakeholders and adds momentum to the internal change process. The BTFF offers a means to think in an integrated way how such internal and external reporting and communications can be structured.

Changing the Financial "Machine"

This section focuses on the *collective impact of* "Head" and "House," and "Community" on financial decisions in the financial

"Machine," They influence the social *structure,* purpose, values, and "atmosphere" of the financial "Machine." They influence a hierarchy of decisions in the firm (single, portfolio, firm wide), as well as decision routines used in all these hierarchy levels. This collective system change is means to ensure there are many internal firm CSR and Net Zero pressure points—policy, culture, teams etc—at the point of financial decision making. This prevents falling back into traditional finance logic alone and reduces harms to people and environment.

Case Examples How Non-financial Contexts Effects Decision Phases in Financial Decision Routines

Financial firm cases, and practitioner debate (Ethical Finance Conference, 2018, 2019, 2020, 2021; COP26, 2021), illustrate how CSR and Net Zero changes occur in non-financial contexts, and how they influence decisions in the financial "Machine." Financial decision activities occur in specialist financial decision routines at top team, middle management, and front-line teams. The routines include various *phases* such as "Search, Analyse, Value, Transact/not transact, Monitor, Complete or exit from single or portfolio transactions" (Holland et al., 2012; Chen et al., 2018). Teams in CSR and Net Zero "believer" case firms, experience "Head," "House," *and "Community"* influences in all phases, at all decision levels. They discuss how the relative priorities of CSR, Net Zero, sales growth, and financial aims are reflected in all phases of financial decision routines. In each phase they seek to avoid harms to people and environment. The aim is to bring to bear these values and information about CSR and Net Zero change, and their costs and benefits, and potential harms, into each decision phase, and hence influence all aspects of financial decisions.

Rice (2019) of BSB argued that *engagement* between employees on CSR and climate change concerns was vital during such decision-making phases. This involves exchange of views between employees about desired new behavior and information required in decisions about individual transactions, specialist portfolios, and the whole financial firm. This requires continuous discussion and analysis on how financial decision-making activities are oriented to CSR and Net Zero change concerns and financial aims. The use of technology to develop and communicate information about costs, benefits and harms of CSR and Net Zero change, plays a central role in all phases of decision routines from initial search to final decision (Harrison, 2020).

The case firms provided many examples how CSR and Net Zero oriented non-financial contexts effects decisions and potential harms. in the financial "Machine." For example, case banks used their "House," and "Community" resources and contexts to acquire information about problematic loans to customers involved in say food production and retailing which contribute to conditions such as obesity and ill-health. Insurance firms require information financial risks faced by a customer leasing fleets of heavily polluting diesel cars. They focus on avoiding harms caused by unethical insurance firm Behavior of delay, deny, and explain when settling claims with customers (Feinman, 2010). Fund managers require insights into CSR risks faced by investee companies when misusing social media data about their customers. All financial firms require information about CSR and net Zero issues faced by customer companies with employees and their supply chains. Front line teams in case financial firms actively engage with customers explaining policies such as withdrawal of financing or services when faced with negative CSR or Net Zero Behavior. They make it clear to corporate clients they will only provide finance or services for positive CSR or Net Zero oriented purpose concerning client employees or customers in say supply chain, production, marketing and selling (Ethical Finance Conference, 2018, 2019, 2020). They explain how they design financial contracts (say debt, or insurance) for these customers, by adding terms whereby customers must achieve CSR and/or Net Zero performance metrics by set times or the contract fails (eg debt defaults, insurance is invalid).

The large case financial firms are increasingly seeking to influence corporate customer Behavior so they will *only* require finance for acceptable CSR and Net Zero purposes in their supply chain, production, and marketing. "Acceptable" means being consistent with responsibility principles (PRB, PRI, PSI) and Glasgow COP26 (2021) aims. They can then design transaction contracts for these customers, by adding contract terms for say CSR metric achievement or GHG reduction by set times or the financing is withdrawn. Financial firms can ensure that each transaction with customers is viewed within their chosen CSR and Net Zero context such their combined CSR and Net Zero policies, "soft" incentives (culture and narrative), "hard" finance incentives, the human harm or carbon cost of the deal, and the importance of relations with established customers.

Theory Analysis

The case firms illustrate how CSR, and Net Zero oriented "Head, House, and Community" context and resources are used to overcome major Behavioral and informational problems in the financial "Machine." This approach is a means to provide a collective sector and firm specific means to reduce harms for people and environment. From a ***Behavioral finance theory*** perspective (Statman, 1999) the case financial firms seek to use their new CSR and Net Zero context, process, and capabilities to reduce Behavioral biases (say optimism, confirmation) in firm employees and their teams when making decisions with customers in markets. These biases can subvert and undermine Behavior (Holland, 2016) consistent with CSR and Net Zero aims, and financial value aims. Given CSR and Net Zero change pressures, the case firms use "*Head, House and Community"* to exercise control over their tendencies to exploit Behavioral biases in others that lead to increasingly negative CSR and Net Zero outcomes and harms for the firm and stakeholders. This BTFF based analysis reflects Hirshleifer's (2015) argument that there is a need to move from Behavioral finance to social finance, including social norms in the study of financial Behaviors. He notes this requires "social finance, which studies the structure of social interactions, how financial ideas spread and evolve, and how social processes affect financial outcomes." From a ***theory*** of the firm perspective, the changes to "soft" or non-financial infrastructure (as "Head, House, and Community"), are means to develop firm specific competitive advantages (Barney, 1991) within the agreed sector Co-operative activities are means to create shared capabilities to achieve CSR and Net Zero aims and avoid harms. From a ***finance theory*** perspective, they reduce problems of information asymmetry, moral hazard, adverse selection in the firm, and transaction costs, between firm and customers, and with other stakeholders (Heffernan, 2005). These lead to decisions to avoid transactions with problematic CSR and Net Zero dimensions and significant harms to people and environment.

SUMMARY

This paper explores issues of Corporate Social Responsibility (CSR) and Net Zero change in financial firms and harms to people and environment. These created problems of financial firm management of CSR and Net Zero change, financial value creation, and the exercise of accountability by stakeholders. The paper addresses these concerns by adapting a new conceptual framework about financial firms in the form of "Behavioral theory of the financial firm" (BTFF) (Holland, 2017, 2019a,b,c) to reflect CSR and Net Zero change.

The contribution of the paper is focused on firms, practitioners, and academics by closing knowledge and values gaps in fields of practice and academia. They are means to make financial firms more comprehensible, visible, manageable and accountable. They are means to enhance the role of financial firms in achieving CSR and Net Zero aims as well as their conventional financial functions. They are means to develop research and literature in these areas. These are means to think holistically how to avoid harm to people and environment and contribute to development of social sustainability in internal and external communities (Sachs, 2012; Schönborn et al., 2019). They were used to think how to enhance occupational health and safety of employees and stakeholders.

The Limitations of the Study

The paper further develops a conceptual frame in the form of a "Behavioral theory of the financial firm" or BTFF (Holland, 2016, 2019a). This Net Zero and CSR oriented BTFF is an embryonic theory based on a limited set of case and event-based data. Its interdisciplinary analysis is constrained by major problems in the literature concerning financial firms. It reflects the emerging "social finance" turn in the literature and the increased focus on social sustainability when facing climate change and new CSR change pressures. These place the research at the frontier of sustainability research, with all of the problems associated with innovation and new ways of thinking. Despite these limitations, the paper reveals new means for academics, practitioners, and regulators to understand, communicate and act on rapid and complex change such as climate change and new CSR change pressures in financial firms.

How Does the Paper Advance Practitioners' Knowledge?

The BTFF contributes to employees and stakeholder specialist and unique firm "knowledge of practice." It indicates how the financial firm and its "Head," "House," "Community" and financial "Machine," can be configured as an integrated system. It reveals how firms can develop capabilities to exploit connections, interaction and resources in these metaphor areas to support financial decision activities, to achieve financial, CSR and Net Zero change aims, and avoid harms.

The BTTF also has many potential uses "to make a difference" in interactions between individual financial firms, and with co-operating agents in the finance system and wider society. The agents include "top teams," the rest of financial firm, advisory policy bodies, legislators, and regulators. They include civil society organizations (CSOs), customers, employees, citizens, activists, and other stakeholders. The BTFF is means for external stakeholders to learn and develop their demands for change, avoidance of harms, and development of social sustainability. It is a means for managers and stakeholders to enhance engagement and inclusion at multiple levels in the firm and in external networks.

This is a means to deepen stakeholder involvement in change, in financial firms' business model for corporate social responsibility and climate sustainability. It promotes their contributions to discussions about working conditions, management of change, delivery of products, and avoidance of harms to people and environment.

This approach opens the "black box" by illustrating CSR and Net Zero changes in human and social resources inside financial firms (in the socio-technical context) and their relationships to change in working environment and practice. It explores top team, employee, and stakeholder experiences of such change and how they sought to avoid harms.

The above can be further advanced by improved corporate reporting. The CSR and Green BTFF narratives, and ideas from the Integrated reporting framework (IIRC, 2013; VRF, 2021) form a complementary basis for *integrated thinking* to develop reporting content for integrated reports or <IRs> in financial firms (Torre et al., 2018). Information content concerns value creation, CSR, and Net Zero outcomes, as well as explanation of harm avoidance and development of social sustainability. The above reveals that the BTTF provides a means to think what "Relevant" or "Material information" (IIRC, 2013, p. 5) may mean in financial firms in terms of the "non-financial information directive" (EU, 2014; Baumuller, 2018). This can enhance integrated reporting or <IR> (Torre et al., 2018; VRF, 2021) by showing connections between information on intangibles and financial resources. It can clarify how non-financial information about CSR and Net Zero change is linked with financial information (Baumuller, 2018). These are means to inform a consensus in markets and society on whether the financial firm has delivered complementary CSR, Net Zero and financial outcomes, and is not engaging in "CSRwash" and "Greenwash." Such improvement in disclosure is crucial to improving legitimacy of the financial firm (DiMaggio and Powell, 1991) with stakeholders (Guthrie and Parker, 1990). This information is critical to add power and momentum to stakeholders when holding financial firms to account.

How Does This Study Advance the Research Community's Knowledge?

This study potentially advances the research community's knowledge in literature development, theory construction, and hypothesis testing. These reveal suggestions for further research.

For example, the use of the BTFF in managing CSR and Net Zero change in financial firms, adds to a growing literature on how firms contribute to social sustainability and avoidance of harm (Schönborn et al., 2019). This reflects a wider change where the corporate role in social sustainability to meet the needs of both present and future generations, has become highly significant in politics, society, and the economy, and is a core component of response to global challenges of the future (Sachs, 2012). This paper shows how top teams seek to align collaboratively defined ideas of CSR and net Zero change, and of social sustainability (PRB, 2019; GFANZ, 2021), with ideas of competitiveness. It shows how financial firms seeks to adapt culture and other organizational aspects of "Head," "House," "Community" and "Machine," thus showing consistency with literature on social sustainability (Schönborn et al., 2019). It provides a novel example of such developments in the emerging field of "social finance" (Hirshleifer, 2015).

The Net Zero and CSR oriented BTFF creates new ways of thinking about hypothesis testing. A key empirical question in academic research is, will the systemic CSR and Net Zero change, and development of social sustainability, work for all types of financial firm? It seems likely from the case data and experience of change (Holland, 2010) that three factors will drive the chances of success. These include: *the history of firms,* their dominant social/economic context, plus the *degree of achievement of CSR and Net Zero change aims* in *the four metaphor areas* in firms. Financial firms differ in these respects.

Triodos bank started with a socially responsible and sustainable purpose to their banking function. NatWest had a financial "dominant logic" (Engelmann and Kump, 2020) from the 1980s onwards, experienced major problems in the GFC and contributed to major harms. Both banks seek to systematically incorporate CSR and Net Zero change ideas throughout the firm in the *four metaphor areas in the* BTFF. Both banks make money by managing financial risk and providing financial services. At times pressures in the world of finance may dominate their thinking and logic.

The BTFF can be used to test for such success in systemic CSR and Net Zero change, and development of social sustainability, and how it differs between firms such as Triodos and NatWest. The positive *or* negative role of quantifiable factors in history, dominant context, and in *each* metaphor area—on both CSR and Net Zero "success," is a way to test for "CSRwash" (Pope and Wæraas, 2016) and "Greenwash" (Mattis, 2008), in firms such as Triodos and NatWest. Positive impact of quantifiable factors in all metaphor areas indicates systemic change in the whole firm when seeking to avoid harms and indicate holistic attempts to develop social sustainability (Schönborn et al., 2019).

Making a Difference

The above indicates that the BTFF is a part of the means to answer the question, "What is going on here?" and focusses attention on critical change factors (Kay and King, 2020). This holistic narrative and metaphor approach is a means for individuals and teams to "stand back" and comprehend the bigger picture and strategic issues when responding to uncertainty (Kay and King, 2020). The conceptual framework, four-part metaphors and narrative, aid comprehension of the whole financial firm system, connections, and interactions, and outcomes. Each metaphor provides insights into each key area and focusses attention on critical change factors. As noted above this has potential "to make a difference" in, researching, learning, thinking, and believing about desirable responses to CSR and Net Zero change problems and harms, by financial firms and wider systems (Shiller, 2019). This offers many opportunities for stakeholders to respond to change.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because many insights from private discussion as well as public debate with practitioners—former was private. Requests to access the datasets should be directed to JH, john.holland@glasgow.ac.uk.

AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

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Conflict of Interest: The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.