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CORPORATE REPORTING IN THE GOVERNANCE OF CLIMATE TRANSITION

FRAMING AGENCY IN A FINANCIALIZED WORLD

Department of Accounting

PhD Series 02.2024
Corporate Reporting in the Governance of Climate Transition Framing agency in a financialized world

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Acknowledgements

The past five years have been the most inspiring, rewarding and challenging of my life. I embarked on this project with beginner's confidence, only to learn along the way the magnitude of the challenges it entails. It has been truly transformative and life-affirming, where it is difficult to separate the personal from this output. This present work is only a partial materialization of all the learnings and inspiration that doing a PhD has enabled me to gather along the way. In navigating this path filled with a spectrum of emotions, detours, and side-adventures, I wish to express my gratitude to those whose support enabled me to successfully traverse this journey.

Firstly, I am thankful to the Department of Accounting for giving me the opportunity to pursue this path and for believing in my capabilities when I was still unsure where I was stepping into. My primary supervisor, Peter Skærbæk, deserves special acknowledgment for his support and patience despite the many detours taken along the way. I am grateful for his comments, introducing me to Actor-network theory, and for allowing me to get lost in my empirics until I eventually found the story that this PhD was meant to tell.

I also extend these thanks to my second supervisor, Tim Neerup Themsen, and thank him for showing curiosity toward the many proliferating ideas I have had along the way while offering help and encouragement.

In 2021, I was fortunate to spend a semester at the Centre de Sociologie de l'Innovation at Mines Paris. I want to express my sincerest thanks to Fabian Muniesa and the other fellow people at CSI for accepting my request for a visit and for the inspiring, insightful and encouraging discussions during the stay. It was a truly invigorating experience and a privilege to spend time in such a unique research environment.

My heartfelt thank you to Eija Vinnari for inviting me to Tampere University for a year to be part of a project funded by the Research Council of Finland. It not only provided me with the financial means to finalize this project but also a supportive space during a challenging period. Eija’s mentorship is something to wish for in the academic path. Thank you also to the wonderful Research Group on Sustainability and Critical Accounting - especially to Hannele Mäkelä, Matias Laine, and Oana Apostol - for the insightful comments and discussions before and during my visit.

I also wish to thank Eija, together with Lise Justesen, for the encouraging and useful critique during my final work-in-progress seminar. It truly energized me to do the final edits to bring this project to its end. In addition, I would like to extend my gratitude to Cristiana Parisi, Hendrik Vollmer and Eija Vinnari for agreeing to be part of my assessment committee.

Thank you also for the fellow PhD students I had the pleasure to engage with during my journey. With them, it was always easy to talk, seek help, and offer mutual support and inspiring conversations. To my fellow colleagues at ACC, thank you for the many friendly talks, discussions, and encounters along the way. In particular, I want to thank Fatma Jemaa for her
undying faith and support in my capacities, and for providing advice whenever needed during the many times I felt lost and overwhelmed.

Finally, I want to express my gratitude to my loved ones by acknowledging how, at times, maintaining work-life balance was challenging, prompting serious introspection. Thank you for your understanding and support along the way: to my new extended family from Fuglebakkevej – Eleonora, Giulia, and Marilena; to Laura and Liina for your patience, understanding, and the love I always feel even when afar; to my family, for always supporting whatever crazy project and idea I come up with; and to my mom, who would have deserved the biggest thank you of all but whose passing away, and into, another mode of being will always be entangled with this journey. Finally, to Răzvan, for joining me as a co-traveler in this absurd journey of life – you have taught me forms of love, patience and partnership I did not know existed.
English abstract

This thesis explores the role of external corporate reporting in the governance of climate transition to a low-carbon world as committed in the Paris Climate Agreement. It does so by examining the work of the Task Force on Climate-Related Financial Disclosures (TCFD Task Force) and their disclosure framework - TCFD recommendations – which introduced a new accounting concept: transition risk. By focusing on the concept of transition risk, and conceptualizing TCFD framework as a constitutive accounting technology, the study describes the framework’s role in enabling a novel problematization around the governance transition while bringing into being a setting around its management through materializing new accounting objects and subjects.

Specifically, the TCFD framework is conceptualized as a financialized technology, aligning with accounting scholarship that emphasizes the growing dominance of financialized reasoning in reporting rules and formats. However, while previous studies have primarily focused on demonstrating how financial logic infiltrates spaces and practices that were previously considered free from its influence, this present study delves into the socio-material processes involved in assigning financial meaning to things and how this process evolves over time. It does so by posing the question: How does the TCFD framework shape the financial signification within the context of climate transition? In doing so, the study shifts its attention from the existing literature's emphasis on documenting the increasing impact of financial logic on reporting practices to examining the role of reporting in framing financialized agency, understood as the capacity to act and assign meaning to action. Consequently, the thesis theorizes financial signification as a practical achievement that requires socio-material organizing to facilitate the creation and expression of knowledge claims from a financialized perspective.

Theoretically, to study financial signification as a process, the thesis draws upon constructivist market studies from where the key analytical concepts are derived: financialized agencement and valuation device. Specifically, by using an Actor-Network Theory-informed issue-centric method, it traces the gradual evolution of financialized arrangements devised as a solution for managing financial risks arising from transition, and the role of the TCFD in such assembling. This exploration includes examining historical events that contributed to the TCFD framework's influential status and its subsequent impact on the governance of transition, with a specific focus on reporting rulemaking.

The primary conclusion of this thesis is that the TCFD has played a pivotal role in the formation of what this study names as the agencement of transition stewardship. Through such an agencement, a new type of market actor is constructed and brought into life in the context of climate transition – an investor figure made concerned of and equipped to evaluate the financial value effects of transition. Furthermore, the thesis describes how the recommendations format the ontological making of markets in transition as envisioned amid the Paris Climate Agreement.
Consequently, the thesis argues that the TCFD has constituted a powerful engine in the climate governance-markets nexus, where it is no longer possible to disentangle previously distanced issues of financial reporting, accounting standards, climate negotiations, transition policies, and various financial market actors with their respective market devices. By engaging with these findings and the distributed, relational, and performative qualities of the agencement of transition stewardship, the study challenges common critiques of the financialization of reporting as an enclosing, progressively forward-moving force, where emancipatory possibilities are seen to lie outside the financialized gaze. Instead, the study illuminates the various nodes within financialized arrangements through which transformative change can be evoked in a financialized and climate-changed world.
Dansk abstract


Specifikt er TCFD-rammen konceptualiseret som en finansialiseret teknologi, i overensstemmelse med den regnskabsteknologisk, der fremhæver den stigende dominans af finansialiserede rationaler i rapporteringsregler og -former. Imidlertid, mens tidligere studier primært har fokuseret på at demonstrere, hvordan finansiel logik trænger ind i praksis, der tidligere blev betragtet som fri for dens indflydelse, dykker denne nuværende undersøgelse ned i de socio-materielle processer, der er involveret i at tildele økonomisk betydning til ting, og hvordan denne proces udvikler sig over tid. Den gør dette ved at stille spørgsmålet: Hvordan kommer TCFD-rammen til at ændre de økonomiske betegnelser i forbindelse med klimaomstillingen? Ved at gøre det skifter studiet fokus fra den eksisterende litteraturs vægt på at dokumentere den øgede indflydelse af finansiel logik på rapporteringspraksis til at undersøge rapporteringens rolle i indramningen af finansialiserer agentur (agency) forstået som evnen til at handle og give mening fra finansperspektivet. Som følge heraf opfatter afhandlingen økonomisk betegnelse som en praktisk præstation, der kræver socio-materielle betingelser for at muliggøre dannelse og udtryk af videnskrav fra en finansialiseret perspektiv.


Hovedkonklusionen i denne afhandling er, at TCFD har spillet en afgørende rolle i dannelsen af det, denne undersøgelse betegner som agencement of transition stewardship. Gennem en sådan socio-teknisk arrangement skabes en ny type markedsaktør og bringes til live i sammenhængen med klimaovergangen - en investorfigur, der er bekymret og udstyret til at vurdere de økonomiske værdieeffekter af overgangen. Derudover beskriver afhandlingen, hvordan
anbefalingerne former den ontologiske dannelse af markeder i overgang, som det er forestillet i Paris-klimaftalen. Derfor argumenterer afhandlingen for, at TCFD har udgjort en kraftfuld motor i forbindelsen mellem klimastyring og markederne, hvor det ikke længere er muligt at adskille tidligere distancerede spørgsmål om finansiell rapportering, regnskabsstandarder, klimaforhandlinger, omstillingspolitikker og de forskellige finansielle spillere på markederne og deres respektive markedsinstrumenter. Ved at engagere sig i disse resultater og de distribuerede, relationelle og performative kvaliteter ved det socio-tekniske arrangement af transition stewardship ønsker dette studie at undersøge den udbredte kritik af finansialiseringen af rapportering, når den forstås som en indkapslende, progressivt fremadskridende kraft. I stedet kaster studiet lys over de forskellige knudepunkter inden for de finansialiserede ordninger, gennem hvilke transformationsændring kan fremprovokes i en finansialiseret og klimaændret verden.
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1. Introduction

1.1. Locating the object of inquiry: corporate reporting at the financial markets – climate governance nexus

In the case under study here, the issue is climate change and particularly one of its components, global warming. I propose to reserve the term issue for such situations of initial shock, where there is still no indisputable formatting enabling us, for example, to say with any certainty that it is a strictly (or primarily) political, economic or scientific issue. We will therefore talk of an issue when the available codes, irrespective of what they are, fail to answer the questions raised by this issue.

This is indeed the case of global warming which defies all attempts to reduce it to a problem that is either strictly economic or political or scientific/technical. Of course, those who try to perform such reductions are not discouraged by such polymorphism, but they all come up against overwhelming difficulties. Whoever accuses capitalism or the market of being the source of all our problems, and claims that global warming is above all a political problem requiring political solutions, is suddenly confronted with economic issues that strike back. Whoever thinks that the issue is at last scientifically and technologically under control is soon faced with political demands that point out the persistence of glaring injustices and the resulting economic waste.

Global warming in its current state is an issue that is unqualifiable, not in theory but in practice, for no framing is able to embrace it in its entirety. As the roots of the word indicate, an issue always finds an exit enabling it to overflow. It is protean, constantly changing as it spreads, irrespective of the frame into which we try to fit and enclose it.

Michel Callon 2009, p.542

There is a pattern here: when ecology insists of the existence of limits, economic sciences find a way to invent a limitless future.

Bruno Latour 2018, p.120

In December 2015, the now famous Paris Climate Agreement was established; the first legally binding international treaty on climate change in history. The Agreement, adopted by 197 Parties at the United Nations Climate Conference (COP 21), marked a historic moment, with nearly all nations making a formal commitment to address climate change and the issue of global warming. Based on climate science, the agreement established a key goal: to keep the global temperature rise below 2 degrees Celsius compared to pre-industrial levels and pursue efforts to limit warming to 1.5 degrees Celsius (Article 2, Paris Agreement 2015). In doing so,
the treaty marked a historic signpost in climate change governance by materializing a formal consensus over the shared goal of navigating back to safe climatic planetary boundaries.

Yet, it is one thing to set a target for the needed transition than agree on how to achieve it. As the collective agreement has materialized over the goal to limit the global temperature rise, the focus of the debate has shifted in the governance of the transition.¹ In such context, financial markets have been foregrounded as the source of hope to enact the desired transition. In fact, while more famous for its set target to limit global warming well below 2 degrees Celsius the Paris Climate Agreement also set an ambitious goal for the finance sector "to redirect finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" as its main objective. (Article 2c, Paris Agreement 2015) As a result, much of the policymaking in the post-Paris world has centered around the goal of aligning the financial markets and global capital flows with the targets set in the Paris Climate Agreement.²

In the efforts to align the markets with the climate targets, accounting technologies have once again been placed at the center of providing solutions for the identified problems. As the commitments towards transitioning the capital markets have materialized, much hope has been put on accounting devices, such as corporate disclosures, to facilitate the desired change. In the aftermath of the Paris Agreement, the idea that corporations should disclose climate-related financial information has received support that has surprised many. Or maybe it is the surprising origin of such support. Today's advocates for more climate-related corporate disclosure are markedly different from early day activists, including some of the world's largest financial institutions, corporations, banks, and regulators, climate disclosures now being a critical tool in the policy toolbox established for the governance of the transition.³

In such context, one actor has come to stand out: an industry-led Task Force on Climate-related Financial Disclosures (TCFD Task Force) and their disclosure framework: the TCFD recommendations on financially relevant climate disclosures published in 2017. Established amid the Paris climate conference under the auspices of the Financial Stability Board and the G20, the 32-member Task Force was tasked to translate the market needs for financially relevant climate information into a disclosure framework. As the argument went, this was considered critical in allowing the markets to address the financial risks and opportunities arising from the transition to the low carbon world while ensuring optimal capital allocation in the climate changed world.

In the summer of 2017, what became known as the TCFD recommendations were made public. This 66-page document was designed to both inform and guide the understanding of climate

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¹ By the notion of governance, the present study refers broadly “to the structures, processes, rules, and traditions that determine how people in societies make decisions and share power, exercise responsibility and ensure accountability” (Patterson et al. 2017, p.3).
² See, for instance, the Finance Agenda for the COP 26 (2021) or the EU Agenda for Sustainable Finance with purpose to reorient capital markets towards climate resilient development (2018).
³ See, for instance, the recent work of the EFRAG under the European Commission in developing European sustainability reporting standards (2022), IFRS Foundation’s exposure draft on disclosure standard for Climate (2022), and the US Securities Exchange Commissions (2022) proposed rule to require companies to disclosure climate-related information.
related risks, outlining the essential information that financial market actors would require to effectively assess and manage them. However, rather than suggesting clear standards, metrics, or indicators to be measured and disclosed, the recommendations provided a more conceptual mapping of how, when, and why climate change might result in financial effects. In doing so, the purpose was to delineate how climate-related risks and opportunities are "likely to impact an organization’s future financial position, as reflected in its income statement, cash flow statement, and balance sheet" (TCFD 2017, p.6). By opting for these descriptive recommendations rather than demanding specific metrics and standards, the aim was to make it easier for organizations, both in the corporate and financial sectors, to adopt these guidelines across various sectors and jurisdictions.

Interestingly, in providing novel tools and vocabulary to think about the potential financial risks posed by climate change, the recommendations introduced a new risk category: transition risk. While prior to the advent of the TCFD, the more general concept of climate risk had already gained some legitimacy as part of financial parlance, the specific emphasis on transition risk was new. By establishing transition risk as a distinct category of risk, the recommendations emphasized the necessity for markets to assess the financial implications arising from the shift to a lower-carbon world making the issue of transition as prominent new concern for the financial market actors. Consequently, by recognizing transition risk as a new category of financial concern, the Task Force formulated its recommendations on the basis that, considering the Paris Climate Agreement, the debate should evolve from whether the transition will occur to thinking the necessary financial organizing this inevitable shift will require.

However, recommending disclosures regarding transition risk was not devoid of controversy. After all, the TCFD Task Force was operating under the authority of a financial regulator, who had until then remained largely distanced from the issue of climate change, a matter largely considered to fall under the purview of other regulatory domains. As frequently emphasized, the TCFD was envisioned as a market solution for the markets, carefully distanced from the complex realm of politics pertaining to environmental concerns. Consequently, during the drafting of the recommendations, it was vital to avoid establishing any formal ties to climate politics. At the time, even making an explicit connection to the Paris Climate Agreement was seen as controversial. It was explicitly articulated that the Task Force should remain "highly policy neutral" and not assume "any position in terms of the needed transition or take on an advocacy role" (TCFD secretariat 2016). Seemingly, the Task Force had a straightforward

4 For instance, the recommendations were structured around four thematic areas: governance, strategy, risk management, and metrics and targets. Under each theme, 2-3 more specific, descriptive recommendations were suggested such as “Describe board’s oversight of” and “management’s role in assessing and managing climate-related risks and opportunities”; Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term” and “resilience of the organization’s strategy, taking into consideration different climate-related scenarios including a 2C or lower scenario”; “Describe organization’s process for identifying and assessing” and the “metrics used by the organization to assess” climate-related risks and opportunities.

5 In this regard, financial institutions had a dual role as both imagined report users and preparers. Specifically, in addition to non-financial corporate actors, banks, insurance companies, asset managers, and asset owners from the financial sector were also identified as a preparer group that should adopt the TCFD disclosure recommendations.
technical mandate: to develop disclosure recommendations that could "promote more informed investment, credit, and insurance underwriting decisions," which, in turn, "would enable stakeholders to better understand the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks" (FSB 2015, p.4).

But the attempt to distance the TCFD recommendations from climate politics and policymaking surrounding transition was quickly complicated following their publication. In just a few years, the TCFD recommendations witnessed an unprecedented uptake and endorsement by policymakers, a wide array of market and civil society actors, and regulators alike. What was initially seen as a mere market solution quickly became the reference point for transition-related policy initiatives globally, forming the foundation for several regulatory endeavors spearheaded by various entities, from central banks and financial regulators to national governments and private standard-setters. For instance, the TCFD framework has established the basic structure for rapidly emerging calculative and disclosure regimes, including the European Sustainability Reporting standards (2023), the IFRS Foundation’s climate standard (2023), and comparable national initiatives from Japan to the US. To emphasize its impact even more, the process used to draft the TCFD recommendations is now considered the blueprint for developing frameworks for the governance of transition, serving as an inspiration for several initiatives currently in progress.6 By 2021, it had cemented its role as the cornerstone of the finance agenda at the COP Climate Negotiations, serving as a tool to ensure that “every financial decision takes climate change into account” as part of a “whole economy transition” now in the making.7 Consequently, under the maxim “what gets measured gets managed”, the widespread uptake of TCFD disclosures is now celebrated as an evidence that the markets indeed are in transition moving toward the climate-resilient future envisioned in the Paris Agreement.

However, accounting scholars would be the first to point out that governance solutions centered around corporate reporting, in the name of efficiency, transparency, and better decision-making, are not without concerns. Since the seminal works of Hopwood (1983) and Burchell et al. (1980, 1985), scholars have elucidated the complex ways in which accounting information interacts with broader governance issues within a wider socio-political context. In these instances, corporate reporting has been theorized as a constitutive technology (Chapman et al. 2009; Miller & Power 2013), critically shaping the broader governance arrangements of social and economic life. As Miller and Power (2013, p.559) note, while “regulators may be concerned with issues of efficiency or value for money, it is accounting practices that enable such ideas to be operationalized and brought to reality” creating a sense of facticity by rendering things visible and calculable.

For a long time, accounting scholars have cautioned against viewing reporting practices as purely disinterested technical tools providing objective transparency. Instead, it has been widely

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6 See, for instance, the UK transition plan Task Force TPT, the Task Force on nature-related Financial Disclosures, or the United Nation’s High-Level Expert Group on the Net Zero emission commitments by non-state entities all using work of the TCFD as their blueprint.
argued that any accounting practice will always serve particular interests over others, establishing specific patterns and realities at the expense of others. In practice, by rendering certain things and representations visible reporting will always enable one way of seeing things while exclude others, possessing the power to both empower and silence different voices, relations and perspectives (Hines 1991, p.988). As Cooper and Morgan (2013, p.422) have articulated, through accounting representations and narratives, “we can construct an infinite number of maps, stories, or representations of organizational performance”. However, just as maps are about space and distances, they are also about power, money, territorial domination, and discoveries (Ibid). In this regard, the criteria for what is deemed worthy of account giving and reporting should be subject to meticulous scrutiny and analyzed within a broader socio-political context.

Against this backdrop, this study posits that the TCFD framework offers a rich empirical case for probing the role of accounting in the governance of transition. Despite the framework’s far-reaching impacts, it has not yet been placed upon detailed scholarly scrutiny. This might be largely due to its novelty. However, O’Dwyer and Unerman (2020) have highlighted this lack, expressing concerns about the slow academic interest with TCFD in contrast with its swift adoption in policy circles. As Tregidga and Laine (2021, p.119) have noted, reporting frameworks remain influential “as they affect which environmental aspects are discussed in the reports and how, which stakeholders are prioritised or alternatively considered secondary, which type of accountability is being promoted and, on a broader level, which environmental issues are framed as primary and perhaps governable”. Hence, I argue that by understanding how the TCFD framework has influenced wider governance dynamics related to transition, we can better understand, evaluate, and anticipate similar endeavors likely on the horizon. As Unerman, Bebbington and O’Dwyer (2018, p.515) have noted, ”as societies become more aware of the urgency for meaningful action in many areas of sustainable development, it is possible, and perhaps even likely, that governments will intervene in ways that rapidly transform through regulation many current externalities into financial internalities”. The case TCFD, and its emphasis on transition risk, serves as a pivotal study of these dynamics.

Consequently, several questions arise to motivate this study: If conceptualized as a constitutive accounting technology, how does the TCFD framework, and its focus on transition risks, render the issue of transition both calculable and visible? Moreover, how does it enable and position various actors and delineate responsibilities over the management of these risks? And finally, what are the subsequent effects of such organizing on the governance of transition? From such concerns, the central empirical question this thesis sets to explore is formulated as:

*How does the TCFD framework, and its focus on transition risk, come to shape the governance of climate transition in the post-Paris world?*
1.2. Situating the study within accounting scholarship: corporate reporting in a financialized world

To begin answering such a question, it is imperative to first explore how existing accounting literature has conceptualized corporate reporting within the complex nexus of market society governance. This body of literature underscores that corporate reporting is far more than a mere tool for bookkeeping, one "that neutrally records the facts of economic life" (Chapman, Cooper, and Miller 2009, p.3). Rather, it is a social and constitutive practice with the potency to shape organizations, markets, and broader societies as the very foundation and operation of these entities are framed, managed, and assessed by diverse accounting presentations. (Burchell et al. 1980; Miller & Power 2013)

Building on this understanding, I contend that the TCFD framework represents a clear example of financialized reporting, a concept that reflects the profound integration of corporate reporting with the prevalent phenomenon of our time: financialization. While the notion of financialization is ambiguous, in general, it refers to the growing influence and centrality of financial markets, institutions, and logics in the economy and society at large. (Mader, Mertens, and Zwan 2020) As such, the term does not merely signify the expansion of traditional financial service sector (e.g., the move from industrial to financial capitalism) but represents a deeper transformation in the way economies operate and societies are organized often understood as penetration of financial logics into previously non-financial spheres.⁸

The phenomenon of financialization has certainly not been overlooked by accounting scholars. Rather, number of scholars have been active noting how corporate reporting has become increasingly entangled with the processes of financialization marked by the rising role of capital markets in global governance arrangements and the increased emphasis on shareholder value logic in organizing contemporary politics, society, and economy. A rich body of work exists, documenting this intricate entanglement between existing reporting practices and the broader dynamics of 21st-century financialized societies. In this literature, reporting is frequently viewed as a pivotal tool facilitating the expansion of financialized practices, theories, and instruments, rendering all things visible and calculable in financialized sense.

However, while financialization has gained traction among critical and interpretive accounting scholars, the literature does not converge into a singular, coherent whole. Rather, it branches out into multiple sub-streams. For example, some strands of research delve into the effects of financialization on the novel corporate reporting forms, aiming to address concerns that extend beyond mere economic and financial factors, as underscored by the rise in sustainability and corporate social responsibility disclosures. Others scrutinize the increasing role of financial

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⁸ This thesis adopts a socio-technical understanding of the process of financialization as defined by Chiapello (2020), considered a phenomenon through which the financialized modes of valuing and engaging with the world are "transforming the world, objects, organizations, and the problems we encounter, by the introduction of financialized practices, theories, and instruments" (Chiapello 2020, p.81,2015; Chiapello and Walter 2016). In chapter 2, I discuss in more detail this process in relation to accounting literature.
markets and the episteme of financial economics on the more established practices of financial reporting as a symptom of financialization. However, despite these diverse focuses, there is a consensus that reporting has become increasingly financialized, progressively aligning with the principles and interests of financial markets, and related ideals of market transparency and efficiency. Consequently, this heightened level of financialization is often used to interpret and explain contemporary changes in reporting conventions, formats, and rules.

For instance, a distinct subset of literature within the domain of social and environmental accounting research (SEA) persistently highlights the disproportionate emphasis placed on financial considerations in various social and environmental reporting formats. As central to this literature is the aspiration to expand the scope of disclosed topics to encompass non-financial aspects such as social and environmental concerns, the prevailing bias towards financial concerns is largely attributed to the dominant hegemony of financial capitalism. (Bebbington & Larrinaga 2014; Spence 2009) Furthermore, this body of work frequently critiques the way reporting enables the translation of environmental concerns into business-friendly notions, viewing this as a form of appropriation that dilutes the core essence of these non-financial issues reducing reporting to mere impression management tool. (Buhr 2002; Cho et al. 2015; Laine 2009; Tregidga et al. 2014) In practice, the analytical interest in this domain centers on the assertion that financialization is palpably evident in the reports, especially at the level of the discursive choices, as the disclosures remain expressed in the language of business-as-usual failing to challenge the capitalist hegemony.

An alternative strand within SEA accounting literature interprets financialization through the prism of shared meaning systems, examining how specific norms, rationales, and logics influence the development of new reporting frameworks and standards. (Bebbington et al. 2012; Chelli et al. 2018; Clune & O’Dwyer 2020; Etzion & Ferraro 2010; Humphrey et al. 2017; Larrinaga et al. 2018) These studies often implicitly suggest that reporting could serve as a catalyst for emancipatory change if it were grounded in more sustainable norms, logics, and rationales often analyzing the emergence and institutionalization of major reporting innovations preceding the TCFD (e.g., Global Reporting Initiative, Integrated Reporting; CDP, Climate Disclosure Standards Board). However, these studies, more often than not, expresses disappointment over the development of these new reporting forms due to their observed failure to incorporate perspectives that would lie outside the confines of financial logic and meaning systems. (Flower 2015; Milne & Gray 2013; Vinnari & Dillard 2016) Consequently, studies continue to affirm how the governing logic behind many new reporting practices seeking to be institutionalized remain firmly rooted in financialized meaning systems.

But financialization of reporting does not only signify the capture of the so-called non-financial issues into the language of finance. Instead, the phenomenon of financialization is seen to impact the more established and standardized procedures of financial reporting as well. For example, scholars mobilizing the literature on political economy have conceptualized financial reporting as a critical tool reinforcing highly financialized ethos of shareholder value-driven capitalism, which prioritizes the expansion of financial markets. (Arnold 2009b, 2012; Djelic & Sahlin 2009; Mehrpouya & Salles-Djelic 2019) In this context, financial reporting rulemaking
has become site for power and control over the rules of transnational economic governance increasingly seen to advance the interests of financial capital. Notably, these studies have highlighted how discussions around accounting rulemaking are often relegated to technical debates, a tendency that has been criticized for depoliticizing economic governance discussions and obscuring their inherent socio-political dimensions. (Botzem & Quack 2006; Perry & Nölke 2006; Young 2014) In a financialized world, perspectives focusing on more than just financial concerns are often pushed aside, seen as political or irrelevant in key regulatory discussions concerning accounting rules.

Finally, another sub-stream interested in the effects of financialization on financial reporting rulemaking has delved into its epistemic underpinnings, highlighting the persistent ascendancy of financial economics in shaping the intellectual grammar of reporting. These studies document the transformation of the core concepts and conventions that underpin standard-setting, demonstrating their increasing alignment with the episteme of financial economics. (Erb & Pelger 2015; Mennicken & Power 2015; Power 2010; Zhang & Andrew 2014, 2022) This trend is manifested in the way reporting has increasingly tailored its focus to cater primarily to the capital markets and the valuation needs of investors, sidelining broader societal interests. Within this domain, the epistemic capture of finance is seen to reshape everything in the likeness of financialized markets, further elevating capital markets as the arbitrary authority for the common good.

Drawing together such sub-streams, it is evident that financialization of corporate reporting has become a well-documented empirical phenomenon across diverse branches of accounting scholarship, highlighting an escalating dominance of financial rationale in both the language and logic of reporting. This dominance is often theorized to occur at the expense of alternative rationales, stakeholder interests, or epistemes, prioritizing accounting objects and subjects that predominantly favor the interests of global capital and financialized modes of knowing. Although each stream illuminates distinct facets of this phenomenon, a unifying theme emerges: a pervasive sentiment that reporting is undergoing a process of financialization.

Given these insights, how do they inform our understanding of the TCFD framework in the context of climate governance? As previously indicated, the TCFD framework stands as a textbook case of financialized reporting due to its focus on financial risks to capital markets only. In fact, TCFD quite literally began with the explicit exclusion of other than financial concerns, revolving explicitly around financialized frameworks and systems of meaning. To make things worse, the initiative was placed explicitly outside politics and inside the markets and justified in the name of protecting the value of financial capital. Overall, the influence of financial economics is evident as all considerations are framed in favor of investors and financialized markets. Given such setting, we are prompted to ask: Is the establishment of the TCFD merely another example of the unavoidable Capitalist capture in its Financialized form, with limited potential for transformative change in addressing global warming? And if indeed we have yet another example of financialized reporting innovations, what implications does it hold for the governance of the transition?
To contemplate such emerging sense, this thesis builds upon the insights of existing research concerning financialization of reporting. Yet it then importantly diverges from them by positing that the current literature's reliance on financialization as an explanatory category risk diminishing its analytical power in explaining contemporary developments. Specifically, in chapter two, I argue that the tendency within this body of literature to attribute all developments in accounting rulemaking to financialization potentially overlooks other dynamics present under this more generalized finding. Accordingly, I argue that existing research runs the risk of oversimplifying financialization as a totalizing logic through which all contemporary developments can be explained, perpetuating the narrative of finance as an all-conquering, all-knowing, and undefeatable systemic force. In chapter two, I discuss in more detail how this sense is being produced within each stream of research. However, my contention is that by depicting financialization in this manner — as a somewhat unified regime and episteme — these studies inadvertently foster a sense of closure and capture by all things financial, thereby constraining the potential for any kind of transformative, let alone emancipatory, change that could be achieved through reporting.

Puzzled by this imaginary of closure of what is seen to lead to reduced field of possibilities, I suggest there is a need to explore what might unfold within finance’s own imagination. Therefore, to paraphrase Donna Haraway (2016), I propose that the critical inquiry must stay with the trouble of financialization, to better understand and mobilize the ambiguities, paradoxes, and the struggles within its own limits. In other words, as the existing studies tend to locate the field of possibilities primarily outside the financial signification, this thesis is interested in the possibilities that might unfold within. To advance this effort, in chapter two, I have deliberately problematized the current literature to establish an opening, a generative path forward for my own theoretical take on this prevalent issue. Thus, rather than solely examining how the financialized meaning making and logic continues to suppress other modes of engaging with the world, I suggest it is essential to scrutinize the underlying arrangements that enable constituting things financial. This stance is not intended to champion an overly optimistic view of finance's limitless potential, as sometimes depicted by its most ardent proponents. Rather, it aims to delve into the very socio-material conditions that endow it with its power. As noted by Komporozos-Athansiou (2022, p.1-2): if in the evermore financialized world, "the social struggles are increasingly [fought] within the financial imagination" critical inquiry needs to attune to the socio-material conditions constituting and equipping such imagination, and from which it gains its force and capacity to act.

1.3. Theoretically framing the study: From financialized capture towards the study of financialized agencing

To study the socio-material arrangements that enable constituting things financial, this thesis draws upon constructivist market studies (Çalişkan and Callon 2010; Çalişkan and Callon 2009; Callon 1998b, 2016; Callon, Millo, and Muniesa 2007; MacKenzie, Muniesa, and Siu 2007a) as well as recent research on the qualitative frames that shape financial signification. (Birch and
As will be detailed in Chapter 3, this approach shifts the focus from coherent structures and totalizing logics to the socio-material arrangements—practices, processes, and technologies—that frame financial signification, understood as a dynamic process and activity. Building on the insights of this literature, this study aims not to analyze whether the developments elucidated by the TCFD framework result in more or less financialization. Instead, it sets to explore the kind of financialized signification the recommendations participate in shaping in the context of climate transition.

Consequently, the thesis perceives financial signification as a practical achievement that requires socio-material organizing to facilitate the creation and expression of knowledge claims from a financialized perspective. Hence, rather than trying to identify some fundamental principles, normative frameworks, or epistemes that underpin and drive the observed developments, the study seeks to describe the organizing that facilitates thinking the governance of transition as a financial concern. Specifically, my interest is in exploring the role of corporate reporting facilitating the commensurability and evaluation of things in a financialized sense in the context of transition. Therefore, by remaining within the ontological plane of finance, the thesis describes the various narratives, imaginaries, devices, and calculations required to frame the issue of climate transition as an appropriate object of concern for the financialized gaze and the subsequent effects this process might entail for the governance of transition.

Theoretically, I derive my primary analytical concepts—financialized agencement and valuation device—from constructivist market studies to examine the ongoing framing of financial signification. In doing so, I focus on the distributed and relational nature of financial signification, viewing it as a process and activity, along with the enduring frames that facilitate it. By utilizing agencement as my methodological tool (Çalişkan and Callon 2010; Callon 2007, 2016), I delve into the socio-technical arrangements that grant the “capacity to act and give meaning to action” (Callon 2007, p.160) from a financial perspective. This involves identifying how specific subjects and objects of investment (e.g., investor-asset complex) come into existence, understanding the transformation of investor’s methods of knowledge, and attuning to the narrative structures that script financialized modes of acting and knowing. Hence, as agencement refers to the active process of framing agency, the thesis elucidates how a particular mode of financialized agency is gradually established around the issue of climate transition.

This brings us to the second analytical concept: valuation device, which is employed to scrutinize how a specific type of agencement is gradually framed and formatted. In particular, I conceptualize the TCFD framework as a valuation device (Doganova 2019; Kornberger et al. 2015; Muniesa & Doganova 2015) influencing the way through which talking transition, and its

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9 Throughout my work I use the expression “financialized gaze” and “investor gaze” rather interchangeably with “financial signification”. This in line with the pragmatist understanding of signification, which is viewed both as a process and an action, which in turn requires a focal point - a gaze – from which the activity is enacted and composed. As I will discuss in chapter 3, in financial signification, this process heavily relies on the figure of “virtual investor” interested in financial value creation and management, and whose gaze in an evidently financialized world is theorized as an effective “technology for the production of society” with “institutive capacity” (Muniesa et al. 2017, p.131).
governance, as a financial issue becomes perceived and realized. Regarded as a *formatting device* (Doganova 2019), the TCFD framework itself does not stand as the primary object of analysis; instead, it serves as an entry point for exploring the broader agencement it instigates and requalifies. (Çalişkan and Callon 2010; Callon, Méadel, and Rabeharisoa 2002) Consequently, the study delves into the expansive network of elements formatted around and through the TCFD framework, highlighting its capacity to reconfigure the existing arrangements framing financialized gaze.\(^\text{10}\)

The choice of this analytical framework is based on the assertion that the TCFD framework, with its explicit emphasis on the financial risks emerging from the transition, marked a pivotal turning point in how the governance of transition is problematized. By bringing transition risk to the fore as a novel issue, it aided in questioning the existing market governance arrangements, now deemed insufficient to address this new concern. As this seemingly mundane object formed the basis of such problematization, the thesis focuses on describing and analyzing the kind of socio-technical arrangements and agencing that have formed around it. This, I argue, is vital since the pivotal debates surrounding the governance of transition increasingly unfold within the sphere of financial signification, where adjustments are not guided by a pursuit of "better values" but rather by a concerted effort to assemble elements that are poised to determine the “right” value of things. (Çalişkan & Callon 2010, 2009)

Accordingly, the thesis is motivated by the simple question of: if we indeed find ourselves amid financialized world to which reporting is arguably entangled with, what would it mean to attend to these seemingly solid frames that seem to structure our collective life while simultaneously paying attention to the possibilities that might unfold from within them? This, as a critical strategy, is a different from calling for a better set of values to be inscribed in accounting practices and instead focuses on exploring the malleability of financial signification in order to foreground new spaces for their contestations. Consequently, the conceptually informed research question this thesis explores reads as:

*How does the TCFD framework come to format financial signification in the context of climate transition?*

\(^{10}\) In chapter 3 I discuss how, in alignment with constructivist market studies, a valuation device is considered a type of “socio-technical device”—“the material and discursive assemblages that intervene and enable the articulation of the right value of things, addressing political dilemmas such as: Is it financially valuable to enact climate mitigation policies? What is the value of carbon-intensive assets today? What financial assets are at risk and how would we know it? Recognized as socio-technical agencements, these devices come to afford certain modes of action, framing the capacity to act and give meaning to action, actively shaping the very realm that constitutes the action itself as a possibility. (Doganova 2019; Muniesa, Millo, and Callon 2007, p.2; Çalişkan & Callon 2009)
1.4. Methodological considerations

In carrying out the research, Actor-Network theory (ANT) has been critical in providing me with the methodological sensitivity to trace the formatting of financial signification.\(^{11}\) Specifically, I have been guided by the works of Bruno Latour (1996, 1999, 2005) and Michel Callon (1986; Callon et al. 2009; Callon and Latour 1981), but critical insights have been drawn also from various other thinking companions, like Barbara Czarniawska (2004b, 2004a, 2014b, 2014a, 2017) and John Law (1999, 2009). Consequently, it is the ontological and epistemological assumptions associated with the ANT, as a constructivist and relational mode of social inquiry rooted in pragmatist philosophy, that have mediated both the form of engagement with, and the constitution of, the selected research object.

I have chosen to follow ANT for several reasons. First, consistent with my analytical framework, ANT is a constructivist approach to social inquiry that is interested in understanding how things become formatted in a relational sense. Hence, it provided me with a method that has allowed me to venture beyond pre-defined boundaries and follow a diverse group of actors, all of whom became increasingly concerned about the financial implications of climate transition. This approach was especially relevant given the distributed quality of the TCFD framework, as it did not easily sit within a particular organization, entity, or field. Instead, it drew the attention of a wide array of actors, events, and timescales – ranging from climate negotiations and macro-prudential policymaking to accounting standard-setting and corporate risk management.

Therefore, ANT has been instrumental in allowing me to trace how the evolution of ideas and knowledge about the financial effects of climate change has been translated over time and across spaces. Moreover, it has broadened the scope of analysis to include also seemingly mundane things, like a novel risk category or a report, that can acquire influential role in shaping knowledge claims, ideas and possibility for action by molding agency as part of specific arrangements, rather than just focusing on discursive attributions made by singular human actors with clear intentions and interests. (Latour 2005) For instance, in chapter 5, reports that frame climate change as a systemic market risk spark a significant response, eventually enrolling even the guardians of global financial stability to take climate transition as a serious concern. By chapter 6, these concerns evolve into the more defined concept of transition risk, which begins to shape the understanding of the financial effects of climate transition in new ways. By the concluding chapter, these concerns are encapsulated within the TCFD framework, ultimately influencing the realm of financial accounting standard-setting. Consequently, this relational tracing brings attention to the gradual assembling required to enact distinctive financial signification, highlighting how the production of facticity does not result automatically from the generation, or a mere reflection, of "truer" knowledge. Rather, it depends on the steady

\(^{11}\) As persistently discussed by Latour (2005, 1999), ANT does not account for a theory in the original name of the word but is better thought “as a toolkit for thinking about and charting the heterogeneous practices of association that make up the social” (Law & Singleton 2014, p.380) Specifically, it equips the research with a distinct sensibility to materiality, uncertainty and relationality of practices (Ibid).
accumulation of socio-material foundations shifting the analytical focus towards examining the processes through which the authority to make knowledge claims deemed real, is progressively established.

Second, despite the linearly unfolding progression described above, ANT provides a lens through which one can scrutinize this collective world-building without attributing agency solely to the intentional actions of individuals, interest groups, or organizations. Rather, the relational and distributed quality of ANT emphasizes that actions arise from a specific set of relations, rather than any inherent essence within them. For instance, the power of the TCFD framework in establishing a certain investor imaginary that eventually comes to affect accounting standard-setting (as explored in Chapter 6 and 7) is not solely due to some intrinsic qualities it comes to possess. Neither it is achieved through a backing of a particularly powerful interest group united by shared goals and interests. Rather, it is the confluence of various elements coming together and interacting within the framework that lends it its potency to have material effects. This underscores the distributed nature of agency in ANT, where agency is not rooted in the inherent nature of an object but emerges from the relationships forged within an agencement, creating a dynamic through which agency and agentic forces come to circulate and may emerge.

Consequently, ANT does not merely trace the paths of already dominant actors presupposing their inherent power. Instead, it facilitates an issue-centric inquiry to explore how agency is gradually acquired, shifting the analytical lens from established entities to their formation around distinct issues. In doing so, I mobilize pragmatist understanding of the word issue (Marres 2007; Callon 2009; Latour 2007, 2005) or what Bruno Latour has subsequently translated into matters of concern. (Latour, 2004b, 2005) and use such terms somewhat interchangeably understood as attempts to articulate novel concerns requiring attention and new solutions, eventually affecting and concerning various actors differently. Consequently, both Callon (2009) and Latour (2007) argue that tracing the “trajectory of issues” is essential to understand the emergence of new agencements of authority that are established to solve the things made problematic. According to this perspective, there are no pre-existing issues that would simply move unchanged from one domain (e.g., political) to another (e.g., markets); rather, issues continuously renegotiate new signification to economics, politics, and science provoking new agencements of authority that remain in constant evolution.

This brings us to the final point, which pertains to the pragmatist underpinnings of ANT, emphasizing the experimental quality of reality that can be discerned through observed effects. In practice, this means that inquiries guided by ANT are less concerned evaluating the essential nature of things; rather, they explore how phenomena or entities achieve a level of stability and durability, coming to be perceived as real due to their tangible impacts on the world. For instance, in this study, I examine how the financial effects of climate transition increasingly manifest as tangible realities in the world, influencing actors’ opinions, calculations, and

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12 For instance, in this thesis, the focus is on understanding the various ways climate transition has been framed as a distinct type of financial issue, as each frame eventually shapes the types of actors that are considered affected and enlisted as relevant to devise solutions to address these issues.
eventually even the production of balance sheet figures. These effects, however, do not necessarily stem from actors acquiring a more accurate or truthful knowledge, but rather from reconfigured arrangements that lend credibility to some claims instead of others. As Latour (2005, p.119) has observed, “while previously one might oscillate between reality and fiction as though it were the only path, it's now feasible to discern the processes that give rise to multiple realities from those that foster stability and unity.”

1.5. Research design and data collection

However, defining the philosophical underpinnings behind an inquiry is one step, but creating a research design that turns those principles into a method for collecting, generating, and analyzing data is a different challenge. In alignment with constructivist tenets, this translation does not follow a linear progression that merely unfolds from a strict plan and a predefined, narrow research question. Instead, it is a process of continuous reframing. Thus, the study's final form and structure have emerged from an iterative process, marked by a back-and-forth movement between the field material, theoretical and accounting literature, and the analysis of the collected data. Moreover, it was also influenced by a deliberate intent to contribute to a specific domain of literature and a desire to propose new ways to analyze the observed financialization of corporate reporting and its broader governance implications. Therefore, my method aligns closely with the principles of abduction, characterized by a continuous redesign of the study where the collection of field material, reading, analysis, and theorizing occur concurrently and persist throughout the research process. (Czarniawska 2014b, p.25)

To put it differently, it was only after spending significant time in the field that the issue of transition risk explicitly became central to my analysis and the kind of financialized agencing formatted around such an issue. Therefore, the final research question I have articulated above, was not the initial starting point of my inquiry from where the research process would have straightforwardly unfolded over the past years. In chapter 4, I describe in more detail how this process occurred. Broadly speaking, however, the inquiry can be characterized as a process of gradual crystallization of a research object, which can only be presented chronologically retrospectively.

In rendering the object of analysis knowable, I have employed three formal techniques for data collection and generation: document collection, semi-structured interviews, and non-participatory observation studies. Additionally, my time in the field led me to rely also on more informal techniques like following actors’ social media presence. While these didn't necessarily provide the core material for my analysis, they served as pivotal signposts, guiding and focusing my attention when navigating the field. Given the extensive nature of the documents and data accumulated, providing a detailed breakdown within the text would be too comprehensive and make little sense for the reader. Thus, Appendices 1, 2, 3, 4, and 5 have been added to highlight the primary documents, audio and video materials, and interviews relevant to each chapter.
Throughout my research, textual documents served as my primary data source. However, their role has shifted over time: while a vast array initially aided in orienting me within the field, a focused subset later became pivotal for my analysis, particularly centering on the issue of transition risk. The ANT's issue-centric method guided both the data collection process and the subsequent refinement of this extensive array into a narrower set of primary resources. In practice, the documents’ relevance was determined by its articulation in relation to the issues, I was tracing. For instance, as my primary focus was the TCFD framework, I quite literally began with the "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures" from June 2017—a 66-page report (excluding the implementation guide) that laid out the Task Force's conclusions. I approached this report as an ANT-styled mediator, scrutinizing the various issues articulated through it, which in turn guided me to other reference documents through relational reading.

After an initial analysis of materials related to the TCFD, I found myself gravitating towards the issue of transition risk, which eventually crystallized as the central focus of my study. This newly found focus prompted me to amass a diverse collection of documents discussing the financial implications of transition, ranging from expert reports, climate agreements, and government white papers to commissioned studies and speeches. Once I refined the scope of the study to primarily concentrate on transition risk, I initiated a more cohesive mapping of these documents to the overarching research question, seeking to trace the evolution of discussions surrounding the financial ramifications of climate transition over time. At this point, a more detailed coding took place, where I would explicitly focus in exploring how the more durable frames of financial signification, as will be discussed in chapter 3, have become reframed and contested over time by various actors.

In addition to documentary analysis, I have conducted 34 interviews with various actors from the field. Given the distributed object of my research, and the absence of a single focal site or organization, I used other data sources to determine potential interviewees. Of these interviews, 10 were with members of the TCFD Task Force, 12 with representatives from other reporting entities, and the remaining with individuals I have classified as influencers, recognized as vocal advocates on the issues I have followed. Due to the distributed nature of the subject, I aimed to capture diverse perspectives from actors occupying different spheres—spatially, temporally, institutionally, and geographically through interviewing. In doing so, I was not seeking a unified narrative behind the TCFD or any other group but instead aimed to grasp how issues intersected and influenced one another. These interviews were pivotal in foregrounding the very material reasons why certain frames were only viable and how various alternatives were conceived. This prompted me to focus on the socio-materiality of financial signification, and how proposing different frames was often only achieved because of years of organizing, or through the production of other actions and reports in different time and place to which one could refer to. Consequently, I developed an interest in the gradual social materiality of financial signification where actors were not merely advocating for their interests or promoting a particular frame based on their "values" or "interests", but were largely influenced by the very material conditions they found themselves in.
Finally, to supplement these more static accounts, the study draws on extensive observational studies to produce *thicker descriptions* (Geertz 1973) of the fragile, unexpected, and occasionally experimental nature of the events unfolding. This was particularly crucial in chapters 6 and 7, as I was following contemporary events unfolding. Over the course of the study, I have collected countless hours of video and audio material from webinars, seminars, panel discussions, and recordings of live events. While from the beginning, I deemed such material essential the volume of relevant material surged due to COVID-19, as the field rapidly transformed into number of virtually accessible spaces.

In total, I’ve dedicated hundreds of hours to attending, watching, and re-watching recorded seminars, presentations, interviews, panel discussions and talks. As a result, my time “in the field” began to blur, given the accessibility of these events from my computer screen at almost any time or place. While I systematically listed and documented all materials, it was only after establishing my final research question that I subjected them to a more rigorous analysis. This included transcribing and coding webinars and panel discussions, which proved indispensable for the empirical analysis. For instance, in chapter 6, in addition to documentary and interview material, I had access to 22 recordings from various panel discussions, speeches, and presentations produced by the TCFD secretariat during its two-year drafting period, capturing live discussions and presentations by Task Force members. Similarly, in chapter 7, I utilized multiple audio and video recordings of IASB board meetings, as well as presentations and webinars by its members.

The analysis and narratives presented in each empirical chapter are a result of theorizing understood through the idea of emplotment. As Czarniawska (2014b, p.127) notes, just “like an historian, a social scientist usually confronts a veritable chaos of events already constituted, out of which [s]he must choose the elements of the story [s]he would tell” as it is the researcher’s job to introduce an order, a “structure that allows one to make sense of those selected events”. As I have described earlier, my *emplotment* has been an iterative and a gradually crystallizing process. This evolution is evident in the transformation of my chapter drafts over time, with the final structure emerging through multiple writing attempts, each refining the analysis further.

For instance, my initial writings tended to focus on number of issues, often eliciting feedback about their unclear purpose as it was not clear what these descriptions really about. Though they arguably captured intriguing dynamics for those interested in the field's happenings, I had not successfully distilled the narrative into a coherent whole.

The decision to center the study around the concept of transition risk evolved from an analysis of the collective organizing dynamics surrounding the TCFD framework. This analytical focus emerged as a result of tracing what Czarniawska (2014a, p.22) describes as an *action pattern*, where specific frames repeatedly resurface as collective organizing gravitates around them. Consequently, transition risk crystallized as the pivotal issue as a result of such analysis, now serving as the cohesive element that not only unites each chapter by informing their form and structure but also binds the entire thesis together.
In practice, I have distilled the main research question into three sub-questions, each shaping the focus and structure of individual chapters. Hence, while my main research question underscores an explicit focus in the role of the TCFD framework in the post-Paris Climate Agreement, my empirical exploration is not limited solely to the period following the TCFD's establishment. Rather, to grasp the kind of conditions that empowered it to reshape the financial markets-climate governance nexus, I begin my inquiry from when climate change was first acknowledged as a global governance and economic issue. In other words, to comprehend the potency of the TCFD framework, my thesis delves both into the historical events affording the framework its force to assert influence, and the subsequent effects it has on climate governance with explicit focus on the reporting rulemaking.

In line with ANT’s issue-centric approach, together the chapters chart the trajectory of the issue of transition risk, exploring the type of financialized agency that is gradually emerging in devising solutions for its management. The first empirical chapter delves into how transition risk emerged as a new matter of concern for the capital markets, and its instrumental role in shaping the evolving interplay between climate governance and markets. After, chapter 6 delves into how transition risk was mobilized in making the TCFD recommendations as an organizing category? And with what kind of effects? Finally, the chapter 7 then examines how the TCFD framework, and its focus on transition risk, facilitated the translation of transition as relevant issue for the International Accounting Standards Board (IASB) by reframing transition as a financial concern as understood through accounting standards. Together these chapters bring light how particular mode of financialized agency is being formatted around the issue of transition.
1.6. Contribution of the study: Describing financialized agencing and making markets in transition

In answering the research question of how the TCFD framework shapes financial signification within the context of climate transition, the primary conclusion of this thesis is that the TCFD has been pivotal in the formation of what I name the *agencement of transition stewardship*. Through such an agencement, a new type of market actor is constructed and brought into life in the context of climate transition – an investor figure made concerned of and equipped to evaluate the financial value effects of transition. Specifically, through transition stewardship, a new kind of market imaginary is being materialized made from new types of market subjects and objects now seen to be *in transition* to low-carbon world. Such an imaginary, in turn, gains realness through the emerging calculative infrastructure designed for the governance of transition of which financial reporting and accounting standards come to constitute a critical node. Hence, the thesis posits that the TCFD recommendations are critical in enacting what I call the ontological making of *markets in transition*.

Critically, the concept of transition stewardship, as defined here, serves a dual function: firstly, it represents a unique, issue-centric assembly of elements in the making, facilitating a particular mode of financialized agency in relation to the issue of climate transition; secondly, it stands as a novel subject of financialized capitalism that is steadily emerging as a powerful organizing
idea influencing the governance of transition. As such, the concept seeks to describe distinct financial agencing, gaining durability and convergence by gradually bringing diverse activities into alignment (from accounting standard-setting to the Paris Climate Agreement, and from IPCC scenarios to strategic business planning and risk management), while giving rise to a new archetype of the financialized homo economicus; an investor figure, made concerned of, and equipped to evaluate the financial impacts of climate transition. Consequently, the thesis proposes that TCFD has constituted a powerful engine of the broader climate governance complex where it is no longer possible to disentangle previously distanced issues of financial reporting, accounting standards, climate negotiations, transition policies, and the various financial market actors and their respective market devices.

In practice, the analytical chapters describe the ongoing formatting of the socio-material conditions that come to frame the agencing enacted in the name of transition stewardship. In chapter 5 I argue that by tracing the historicity of transition risks we see how the rudiments of transition stewardship are being established; the socio-material reality from where transition risk was possible to be articulated as a distinct new concern affecting the entire financial market architecture and wide range of actors. In doing so, the notion enabled both making the existing market governance arrangements problematic while suggesting new tools and arrangements for its management for which TCFD Task Force was proposed as a solution. In chapter 6, I argue that the TCFD recommendations come to establish a method knowing about transition risks, as agencement refers to not just to the power to give meaning to action, but also the capacity to act enabled by the right kind of equipment. Through such equipping market actors in transition are brought into existence and subjected to the evaluative gaze of the investor. Finally, in chapter 7, framing of the wider calculative infrastructure of transition stewardship is being explored from the point of view of accounting standard-setting.

In chapter 8, I delve deeper into the effects that transition stewardship has had on the governance of transition. Specifically, I describe how the idea of transition stewardship foregrounds new type of market governance arrangements, enabling modes of action that might have previously been perceived as political, ideological, or irrational from the point of view of the financialized gaze. For instance, throughout the chapters, we witness the process of becoming of a central banker, initially indifferent to climate issues, into a United Nations climate action spokesperson. We also observe the rising demands for systematically significant financial institutions to address transition-related concerns, alongside a growing expectation for companies to begin executing transition plans in line with Paris Climate Agreement. Moreover, within the realm of accounting standards, the issue of transition is gradually being framed as a financially material matter, eventually affecting the accounting standard setter.

By exploring the framing of financial signification around the issue of climate transition, the study contributes to the accounting literature in two critical ways. Firstly, it advances the four sub-streams that have explored the financialization of corporate reporting as discussed in chapter 2. Specifically, I argue that the concept of financialized agencement, as utilized in this study, presents a fertile conceptual opening for each of these streams. As I will elaborate in chapter 2, the existing literature tends to portray financialization as a somewhat enclosing,
progressively forward-moving force, where emancipatory opportunities seemingly always reside outside the realm of financial signification. This study diverges from that narrative, proposing that the distributed, relational, and performative dynamics of the agencement enables reimagining the conceptual limits present in each sub-literature. These openings are discussed in detail in chapter 8. However, my main argument is this: rather than analyzing how and whether reporting conventions and forms become further financialized, the notion of agencement shifts the empirical focus towards tracing issue-centric arrangements established through reporting. Consequently, the study marks a departure from the traditional emphasis on documenting the pervasive influence of financialization, redirecting attention towards the topological articulation of a broader set of relations that frame agency, attainable through reporting.

Second, the study illuminates the history of the present, deepening our understanding of the rapid changes currently unfolding under the urgency to govern the transition to the safe climatic boundaries, a realm where financial markets and financial reporting have assumed a pivotal role. This thesis argues that the establishment of the TCFD stands as a significant historical marker in this context. By studying the organizing that becomes realized through the framework, this thesis offers a rich empirical case study, bearing relevance not only to accounting but also to a broader spectrum of social science disciplines grappling with these swift developments. Importantly, it does this by bridging the gap between granular, detailed changes—like those found within accounting standard-setting— and overarching shifts in long-standing historical trajectories (e.g., phenomena encapsulated by the term "financialization"). In doing so, it neither dismisses nor considers these trajectories immutable. Instead, it foregrounds potential sites and points for intervention where shifts can effect substantial changes, altering the course of things in a financialized world where the urgency to enact rapid and large-scale transformations cannot be overstated.

1.7. Outline of the thesis

This thesis is organized as follows:

In Chapter 2, in alignment with the problematizing literature review, I discuss four sub-streams in accounting scholarship that have analyzed the phenomenon of financialization in corporate reporting. By synthesizing the findings, I argue that existing studies have been instrumental in highlighting how all things financial (e.g., actors, logics, epistemes, stakeholders) have gradually colonized the grammar of reporting at the expense of alternative modes of governing rationales and interest. Yet, from these findings, I problematize the way that the current literature tends reduce finance as a totalizing logic through which any contemporary development can be explained. Consequently, by treating these findings as a generative starting point I propose that staying within the finance’s own matrix provides the critical inquiry with new possibilities to study the critical role of financialized reporting in the governance of transition.
Chapter 3 outlines the theoretical framework the thesis draws upon. First, the underlying approach to the study of markets as socio-technical agencements is discussed and the critical framing operations required to enact market signification. After, I specify how financial significant is underpinned by different framing operations. After, I present the main research question of the study: How does the TCFD framework come to format financial signification in the context of climate transition? Finally, I articulate the two critical methodological notions of financialized agencement and valuation device that will be used to analyze the socio-material constitution of financial signification.

Chapter 4 presents the methodological reflections concerning the choice of study object, the implications of using Actor-Network-Theory as a method theory, and the process of framing and selecting the research question, and the data used. In doing so, I discuss the experience of finding, locating, and being in the field and its implication to acquiring and using the empirical data utilized to construct the present research account.

The analytical part of the thesis embarks with a short Prologue preceding chapter 5, which situates the reader in the narrative scenario around which the empirical chapters unfold introducing the object of transition risk and its relation to the establishment of the TCFD Task Force.

The first analytical chapter 5 traces the historicity of the object of transition risk to analyze how it emerged as a new matter of concern for the capital markets. Specifically, I take interest in the instrumental role the object has in reframing the climate governance – markets nexus. In doing so, I trace the entangled history of climate politics and the markets, and the socio-technical work required to frame transition as a distinct financial concern to emphasize the kind of world-building as part of which the TCFD Task Force was proposed as a solution.

After a brief interlude, chapter 6 continues from where the previous one ends, by exploring the actual making of the TCFD recommendation. Specifically, the chapter explores how the notion of transition risk becomes a critical organizing device in the work of the TCFD enabling the translation of the issue of transition into an investor concern to be addressed with financialized modes of knowing. In doing so, the formatting effects of the recommendation are discussed and their relation to the ontological making of markets in transition.

Finally, after another narrative interlude, the chapter 7 examines how the TCFD framework, and its focus on transition risk, facilitated the translation of transition as relevant issue for the accounting standard-setter (IASB) by reframing the financial effects of transition. Consequently, the chapter explores how the TCFD becomes critical in reconfiguring the relational space through which accounting object(ive)s and subjects emerge by shaping the intellectual ecology of financial reporting as it becomes established a critical technology as part of the evolving calculative infrastructure being formatted around the governance of transition.

After the final epilogue, chapter 8 presents the study’s primary conclusion that the TCFD has been pivotal in the formation of what I name the agencement of transition stewardship while enacting the ontological making of the markets in transition. In doing so, I discuss the main
findings from each chapter considering such an argument and elaborate on the qualities of this distinctive agencing and its observable effects. In the final section, I discuss in detail how the present analysis contributes to the existing studies that have taken interest in the financialization of reporting.

The thesis concludes in chapter 9 where I discuss the relevance and importance of the findings and analysis for practice while teasing out direction for future research along the threads that have overflown form studying transition stewardship in the context of climate transition.
2. Problematizing corporate reporting - governance nexus in a financialized world

This chapter situates the thesis within an accounting scholarship that has conceptualized external corporate reporting as a constitutive technology critically shaping the governance arrangements of contemporary market economies. As I have defined TCFD framework as a financialized reporting, the studies discussed are united by their shared concern on the intricate connections between reporting and the governance dynamics of 21st-century financialized economies. First, financialization of social and environmental reporting is discussed with interest in the evolution of reporting forms devised explicitly to broaden corporate accountability beyond mere economic and financial concerns. After, I delve into the socio-political studies of financial reporting to discuss the financialization of the regulatory space of financial reporting. In the final section, I draw together findings from these sub-literatures to problematize the way they tend to reduce financialization as a totalizing logic through which any contemporary development in reporting can be explained. This discussion takes form of a problematizing review with purpose to identify and critically evaluate the underlying assumptions prevalent in each sub-stream. Through recognizing these constraints, my aim is to propose an alternative method to study the reporting – governance nexus in today’s financialized world.

2.1. Problematizing the financialization of corporate reporting

By examining the TCFD framework in the context of climate governance, this thesis is situated within the long-standing accounting scholarship that conceptualizes external corporate reporting as a distinctive governance technology. In line with such studies, this study adopts a constructivist lens on corporate reporting, framing it as a constitutive technology. This is considered appropriate, as the purpose is to attune to the profoundly socio-political effects of the seemingly technical accounting conventions and practices and their historicity. (Hopwood 1987; Miller & Napier 1993) Therefore, my aim is not to analyze the powers of accounting as merely a tool for enhancing transparency and visibility for better decision-making. Instead, my focus is on the constitutive, rather than mirroring, roles of numbers and calculative devices. (Vollmer, Mennicken, & Preda 2009, p.625). Hence, consistent with the classic definition proposed by Miller and Power (2013, p.581), I, too, regard accounting as a potent technology that "links up different actors with a common narrative and may constitute a network of relations within and beyond the boundaries of the enterprise". This in turn requires the study of the “specific ensemble of relations formed between a complex of actors and agencies, arguments and ideals, calculative devices and mechanisms.” (Miller 1998, p.189-190)

More specifically, this study is nested within the body of research that investigates the role of reporting in facilitating and interacting with the phenomenon of financialization. While the notion of financialization is ambiguous (Mader et al. 2020b) and can be thought in a broad sense to signify the expansion of the financial markets (e.g., the financial market actors' increasing...
influence in economic, financial, and all spheres of regulation nation-states prioritizing the health of the investment landscape and finance instead of other public goals), it is the socio-technical understanding of financialization, as defined by Chiapello (2020), that underpins this thesis. Consequently, in this study, financialization is understood as a phenomenon through which financialized modes of valuing and engaging with the world are "transforming the world, objects, organizations, and the problems we encounter, by the introduction of financialized practices, theories, and instruments". (Chiapello 2020, p.81,2015; Chiapello and Walter 2016)

This financialization process, which is redefining whole sectors of the economy and transforming business operation logics as well as public policies, carries with it conceptions of the world, methods of problem analysis, calculation techniques, and decision-making principles which were originally forged for a limited number of special cases, but are now tending to spread to all questions and human activities. Structures for reasoning, representation and calculation drawn from finance can apparently be applied to and redefine all spheres of existence.

(Chiapello and Walter 2016, p.156)

The phenomenon of financialization has certainly not been overlooked by accounting scholars. A substantial body of work exists, documenting the intricate connections between reporting practices and the broader dynamics of the financialized economies of the 21st century. In this context, reporting is often seen as an instrumental technology that facilitates the expansion of financial markets. However, in doing so, reporting is understood not only contributing to the overarching process of financialization but becomes also shaped by its inherent financial logic. Consequently, the notion of the financialization of corporate reporting is now firmly rooted in accounting scholarship, illustrating the progressive alignment of reporting rules, conventions, and practices with the broader movements of financialization.

To better understand such entanglements and the manner in which existing literature tackles the financialization of reporting and its role as a mediating technology within wider socio-political dynamics, this chapter examines four sub-literatures, each shedding light on the observed financialization of reporting. The primary reason for focusing the literature review on the phenomenon of financialization of reporting stems from the fact that the TCFD framework stands as a textbook example of financialization, with a focus on the financial risks for capital markets and investors only. As this chapter will elaborate, these are considered critical markers for identifying the phenomenon in question.

First, I will discuss two sub-streams grouped under the umbrella of social and environmental reporting. The focus of these studies has predominantly been on the evolution of alternative reporting forms devised explicitly to broaden corporate accountability beyond mere economic and financial concerns. These streams are often categorized as forms of non-financial reporting and historically stand in contrast to their dialectical counterpart: the well-established practice of corporate financial reporting. Consequently, following this, the second section delves into the socio-political studies of financial reporting, examining the repercussions of financialization noted in these studies. While my intention is not to build on such binary distinction (financial vs.
non-financial), the literature discussed here is separated along these lines, owing to the evolution of these topics as somewhat separate academic conversations. Nonetheless, I propose that an integrative analysis of these literatures offers a more nuanced backdrop against which to position the empirical subject of this thesis.

In attuning to such literature, my reading has been oriented by the following guiding questions:

- How is the process of financialization discussed/problematized?
- How is the process of financialization seen to occur (level and means)?
- What is the mediating role of reporting as part of the governance arrangements at the market – society nexus when things become signified in financialized sense?

In this chapter, the primary objective is to establish a foundation for my own theorization, while aiming to contribute to this literature. As emphasized by Patriotta (2020, p.1272), literature reviews are pivotal to the theorizing process as they come to form the foundation for theoretical innovations. Specifically, this chapter adopts the methodology of a problematizing review as discussed by Alvesson and Sandberg (2020). This approach diverges from integrative reviews, which seek to bridge knowledge gaps within established fields through accumulation. Instead, a problematizing review functions as an opening exercise, intended to carve out new avenues of exploration. In essence, it endeavors to re-envision the existing literature in a manner that cultivates novel viewpoints on the subject at hand. (Alvesson and Sandberg 2020, p.1290)

Bearing this in mind, this chapter aims to identify and critically evaluate the underlying assumptions prevalent in the current scholarship regarding the financialization of reporting and its subsequent impacts.

In the concluding section of this chapter, I will synthesize the findings from each stream, with purpose to show how they create a generative foundation for this study. Following Patriotta (2020, p.1273), I will scrutinize and challenge the underlying assumptions and potential analytical boundaries existing in current literature which in turn allows for the carving out of a fresh trajectory for my own theoretical perspective. Through recognizing and understanding the constraints and limitations prevalent in existing approaches, I propose an alternative method to study the financialization of corporate reporting in today’s financialized world.

2.2. Financialization of social and environmental reporting

In the field often referred to as Social and Environmental Accounting (SEA), scholars have explored the development of new reporting forms that would focus on aspects beyond just economic concerns, specifically emphasizing social and environmental matters. These studies often underscore an explicit commitment to the emancipatory potential of reporting to trigger changes towards real sustainability. This approach is supported by the assumption that innovative reporting forms could broaden corporate accountability and visibility beyond economic aspects by introducing new accounting objects and subjects. Consequently, this has led SEA researchers to critically investigate the emancipatory potential of SEA reporting “with an implicit belief that environmental accounting can present new voices, new visibilities and
new discourses, which can disrupt and encourage possibilities for change” (Gray et al. 1995, p.214).

Accordingly, much of the SEA literature is motivated by the curiosity to explore whether new reporting forms, with focus on other than economic concerns only, have succeeded in offering new perspectives, greater visibility, and new dialogues that might challenge the status quo and inspire change. In other words, whether the expected and often promised emancipatory potential has been realized in practice. In pursuing this, the empirical emphasis has largely centered on scrutinizing how specific accounting concepts and categories have been delineated and employed in external reporting practices, especially considering their potential to drive change and promote a more inclusive view of corporate accountability.

The subsequent section is divided into two distinct sub-streams identified in the literature. The first stream adopts a more corporate-centric view, conceptualizing reporting as a “legitimizing tool”. In this context, reporting functions as a governance mechanism that mediates stakeholder relationships among various stakeholder groups, yet often inadvertently reinforcing capitalist hegemony. The second stream adopts a more institutionalized approach, focusing on the processes through which these alternative reporting forms are institutionalized. However, it acknowledges their consistent failure to break free from the constraints of economic rationality, thereby limiting their emancipatory potential. Together, these sub-literatures pave the way for a critical discussion that unveils the current underlying assumptions and theoretical frameworks that anchor critical SEA research.

2.2.1. Reporting for stakeholder management: sociology of preparers and the discursive confines of capitalist hegemony

While social, and later environmental reporting (SEA reporting hereafter) has existed in one form or another for decades (Bebbington 2021; Larrinaga & Bebbington 2021), it was not until the 1990s that a more standardized form of external SEA reporting began to materialize. Consequently, the early 2000s witnessed a proliferation of studies interested in understanding the possibilities of new reporting forms to drive change towards a more socially and environmentally sustainable organizational practices. As for long time, the SEA reporting remained largely a voluntary practice undertaken by reporting organizations, the early literature took interest in examining the motivations for companies to publish these reports, for instance, by identifying various contextual factors (external: industry, company size, country; internal: corporate culture, the identity of managers) that could explain the emergence of the new practice. (see, for instance, Adams 2002; Buhr 2002, 2007; Campbell 2000; Patten 1992).

However, as more SEA reporting gained prominence as an organizational practice, critical accounts emerged as a response.(See, for instance, Bebbington & Gray 2001; Gray, Kouhy, et al. 1995; Neimark & Tinker 1992; Owen et al. 1997; Tinker et al. 1991) These accounts were quick to note how, unlike the aspirations and expected outcomes associated with the novel practice, SEA reporting was failing to fulfill its emancipatory potential by remaining within the existing frames of the business as usual. (Larrinaga-González & Bebbington, 2001) A growing
concern was made visible that instead of driving real change towards sustainability, SEA reporting could be used as a mere management tool for institutional appropriation used by the preparer organizations to maintain their legitimacy in the face of wider society – a way to adapt to the changing external environment without any actual change towards sustainability.

Theoretically, number of stakeholder and legitimacy theory variants were used as the main analytical frameworks to explain the emerging practice of SEA reporting. (Deegan 2002, 2019; O’Dwyer 2021; Unerman & Chapman 2014). For instance, in exploring the relationship between the changing contextual setting and disclosures, Laine (2009, p.1047) analyzed how changing institutional expectations affected company’s disclosures arguing that reporting was used as a mere management tool to maintain the business legitimacy by employing merely rhetorical changes to “conform to the social expectations”. Similarly, Deegan, Rankin and Tobin (2002, p.334) conceptualized reporting as a legitimization tool for “corporate survival” concluding that “managers disclose information to legitimize their organization’s place within society” in response to increased “community expectations”. With a similar focus, Buhr (2002) argued that organizations might use SEA reporting to merely realign their ontological reality with external events outside the organization (regulation, investor demands, and environmental concerns) in order to maintain their legitimacy in the eyes of the wider society.

Hence, seen as a type of legitimacy tool, SEA reporting was seen to enable strategic impression management for the reporting organization to maintain its social contract between the critical stakeholders and wider society (Deegan 2017; Deegan et al. 2002). As noted by Spence (2009 p.211), this line of research made quickly explicit how SEA reporting tends to be biased towards a selection of good news, wildly ignoring more fundamental social and environmental issues. Hence, when understood as a useful tool to manage stakeholder relations SEA reporting is seen at worst, to produce a kind of “simulacrum” that paradoxically, “lack transparency and camouflage genuine sustainability-development problem, presenting an idealized version of the firm’s situation” (Boiral 2013, p.1037).

Alternative stream moved the analytical focus from exploring how transparent and complete accounts the SEA reports would provide, on the system level factors interacting with the business-as-usual discourses observed in the reports. (Milne et al. 2006, 2009; O’Dwyer 2003; Spence 2007; Tregidga et al. 2014)By the use of different forms of discourse analysis, number of critical studies took a more systemic reading into the discourses mobilized in reports and how they would relate to and eventually enable the (re)production of broader asymmetrical structural dynamics and power relations in capitalist societies.

Within such context, notions such as hegemony (Spence 2007) and ideology (Milne et al. 2009) became mobilized, with focus on the constitutive elements of discourses present in SEA reports, that relate to the production of truths and legitimacy. Somewhat unsurprisingly, considering the theoretical apparatuses (e.g., Gramscian discourse theory) mobilized (Spence 2009), reporting is argued to be a form of institutional appropriation in which almost all the attempts of business to translate environmental agenda simply result in the reproduction of the (capitalist) hegemony where the radical environmental and social intents are subverted into the logic of business as
usual. With focus on the discursive choices, and by adopting theoretical reading to the issues of power that is not based on coercive power or domination, but result of “demonstration of moral and intellectual leadership” (Spence 2009, p.212), external SEA reporting becomes a tool to reproduce power and systemic inequalities inherent to capitalist societies through external disclosures.

For instance, Milne, Tregidga, & Walton (2009) analyzed texts produced by early adopters of SEA reporting in New Zealand arguing that SEA reporting enabled organizations to adopt the language of sustainability while remaining within the logic of business as usual. By doing so, SEA reports did not only provide legitimacy for the business, but more importantly, result in positioning private business as a central actor in the wider debates over the governance of sustainable development. Their paper foregrounds how the business oriented discursive takes over sustainable development comes to present a middle ground, a sort of common sense take on the complex topic of sustainability that balances the seemingly extremes take of the conservative business-as-usual lobbyist and the more radical environmentalist takes espousing stronger environmentalist action. As a result, the business framing is placed beyond politics in favor of “real solutions” in contrast to more seemingly ideologically pinned radical choices. At best, the business discourse became viewed progressive, form of sustainable leadership, while simultaneously being confined within the dominant social paradigm of economic status-quo.

Similarly, Tregidga, Milne, and Kearins (2014, p.478) have argued that through SEA reporting, “organizations have been able to resist substantive change to business-as-usual through a process of apparent identity transformation.” As the discursive choices employed in the reports tend to orient around the identity of the organizations, it is not only the concept of sustainable development that transforms into a more business-friendly notion, limiting its frames and potential. Instead, the corporations themselves become viewed as transformed, enabling them to remain legitimate social actors in the wider debate over the governance of the sustainable development. While not suggesting that such identity construction would be a result of simple strategic organizational action, reporting is conceptualized as a “strategic, symbolic and legitimizing device” through which organizations may present themselves as “natural and legitimate actors to take care of society and the environment” (Ibid, p. 491). Consequently, through external SEA reporting, organizations become positioned as the “emancipatory change agent” in the debate over sustainable development even if the “transformative change” observed in the reports remains merely rhetorical (Tregidga et al. 2014, p.491).

A similar line of research took interest in the factors enabling such impression management with emphasis on the political realities and structural inequities that set the contextual setting in which reporting is practiced. (Archel, Husillos, Larrinaga, & Spence 2009; Gray, Kouhy, & Lavers 1995; Tinker, Lehman, & Neimark 1991; Spence, Husillos & Correa- Ruiz 2010). To foreground these “institutional arrangements and structural factors that give rise to the much studied stakeholder management and legitimacy pressures” (Spence, Husillos, & Correa-Ruiz 2010, p.85), calls were made for SEA research that would focus on the broader political issues and system-level conflicts that affect reporting practices. As Spence (2009, p.213) has noted, such studies would not share concern “with accounting per se, but a concern with the extent to
which the form that accounting takes is determined by the economic base and the structural arrangements which emanate from and stabilise that base”. This, as he notes, would make explicit how the existing “win-win” and “business case” discourse prevalent in existing SEA reporting can only serve “a regressive role” as they are “closely tied to the economic base of society” (Ibid, p.206). Such conclusion is justified by the assertion that in the current capitalist societies, corporations are largely constrained by the capital markets - “disposable at the whim of investors” - and hence have only limited discretion to behave responsibly in the first instance and to be transparent about their irresponsibility and partiality in the second” (Ibid, p.213; 207).

Against such background, Spence (2007) and O’Dwyer (2003) explored these structural constraints of capitalist societies affecting reporting. For instance, Spence’s (2007) paper showed how the managers inside the reporting organizations occupy a structural position forcing them to produce the hegemonic business discourse, underpinned by the idea of “business case” which over time becomes equated with the idea of public interest and wider social and environmental concerns. In doing so, the SEA concerns raised by various stakeholders are not ignored or negated but become critically integrated into the “business discourse insofar as they can be made to cohere with the business’s fundamental aims of profit and growth” (p.865). Here, the so-called business case works as a type of discursive technology that places the boundaries within which the SEA reporting is made sense of and where “this discretion is limited by macro power structures that place business case parameters around CSR” (p.874).

Similarly, O’Dwyer (2003, p.548) interviewed business managers on their influence over the organization’s SEA articulation, noting the “structural constraints imposed on them [business managers] which, they claimed, prevented them from conceiving of CSR [SEA reporting] in a broader, more societally concerned vein.” While different nuances of the manager’s articulation were identified, for the most part, they were, in all cases, consistent with the corporate goals of shareholder wealth maximization.

Along such lines, Archel, Husillos, Larrinaga and Spence (2009) considered the wider political economy in which disclosures are produced foregrounding the role of state in the (re)production of hegemonic economic status-quo. In line with the government policies orienting around the objectives of economic growth and indicators such as GDP, the authors note how in “between the State’s dominant public policy objective of increased GDP and the corporate-level objectives of profit maximization”, disclosures become co-constituted with “significant ideological congruence” (p.1288). Against such background, the disclosures are considered as “a disciplinary and control measure that helps to replicate power-based relations existing in the setting in which it is being delivered” (p.1289). In other words, “not only can [disclosures] serve to legitimize firms’ outputs, methods and goals, but it can also serve to legitimize the economic, social and political system as a whole.” (Ibid, p.1288)

To conclude, figuring reporting as a type of governance technology, this line of research did so mainly from the point of view of the reporting organizations. While various studies took an interest in the broader institutional context in which reporting takes place, they nevertheless did so from the point of view of the reporting organization as a somewhat singular actor using reporting for its own needs. Along such lines, reporting is figured as a type of management
technology for the capitalist organizations to manage their social contract to maintain the legitimacy of the business in the society. In doing so, the reporting organization is considered to engage in the somewhat intentional and strategic impression management in the face of the increased accountability pressure stemming from its external environment that is increasingly capitalistic closing the way to real changes. Against such background, Cho, Laine, Roberts, & Rodrigue, (2015, p.78) have argued that “contradictory societal and institutional pressures” in fact “require organizations to engage in hypocrisy and facades, thereby severely limiting the prospects that sustainability reports will ever evolve into substantive disclosure”.

2.2.2. Institutionalizing reporting for other than economic concerns: institutional actors and meaning making

So far, I have characterized SEA reporting as a governance technology from the perspective of the report preparer. In contrast, this sub-section introduces another gazing point to reporting by broadening the analytical lens to include number of actors through which forms of SEA reporting become institutionalized. As external SEA reporting has evolved into a more established practice, increasingly governed by standardized frameworks, scholars have investigated how specific norms, logics, and rationales shape new reporting rules and forms, and their effects on driving change towards sustainability. In other words, reporting is no longer viewed merely as a technology from the preparer's standpoint. Instead, it is seen as an emerging institution whose form, content, and meaning are constructed by various actors, each promoting their norms and values in the ongoing pursuit of getting the accounting “right” in an effort to unlock the full potential of SEA reporting.

First, number of studies have suggested reporting is a result of norm construction. Through this lens, the possibilities to institutionalize particular reporting practices requires establishing a shared norms that in turn become accommodated by different reporting forms (Bebbington, Kirk, & Larrinaga 2012; Chauvey, Giordano-Spring, Cho, & Patten 2015; Chelli, Durocher, & Fortin 2018; Larrinaga & Senn 2021; Senn & Giordano-Spring 2020). Through such analytical lens, norm construction is considered a process that gradually unfolds in time, and in which various actors have critical role in innovating, introducing, diffusing, and finally stabilizing the shared norms and values over what constitutes appropriate reporting. In a sense, reporting becomes a site for contest for actors with different norms and values, all seeking to impose their normative systems. As Bebbington et al. (2012, p.79) note, the “life-cycle of norms” is a process “that starts with the emergence of norms…followed by diffusion leading to a tipping point after which…at the end of the life cycle…norms are internalized an acquire a taken-for-granted quality.” Consequently, the stabilized reporting regimes are seen to result from creating a coherent set of shared values and norms that must be shared by enough actors, whose norms become then accommodated and represented in reporting forms and rules.

For instance, Bebbington et al. (2012, p.79) explain the differences between two reporting regimes (Spain and the UK) by the difference in shared established norms. Whereas the failure to create a comprehensive SEA reporting regime in Spain was attributed to a lack of a “coherent
normative framework, the perceived lack of clarity, and the lack of congruence with previous reporting norms”, in the UK, the success was credited to a somewhat “norm coherent” regime exhibiting “shared values” (Ibid, p.79). In a similar line, Chelli, Durocher and Fortin (2018) compared two reporting regimes with aim to show how particular normative climate in France, coupled with the parliamentary law, was more successful in institutionalizing SEA reporting than the reliance on market mechanism, visible in Canada as a another regime. More so, Larrinaga and Luque-Vilchez (2016) attribute the failure of increasing the quality of the SEA reports in Spain, to the lack of “normative climate necessary to accompany changes in law”, manifested through things like competing views about SEA reporting and its purpose, and absence of existing practices and shared expectations around reporting. Consequently, the studies with focus on the normativity construction tend to generally suggest that normativity around reporting results from the agentic action of state and non-state actors, and their ability to align those actions within the existing “structural elements” (Luque-Vilchez & Larrinaga 2016, p.56).

An alternative theorization has examined the gradual institutionalization of SEA reporting as a field level change with desire to understand whether and how more sustainable institutional logics and meaning systems, with focus on other than economic and financial concerns, become prevalent to a particular field. While the normativity construction often centers around particular regulatory regimes, the field-level change adopts a more nuanced reading of the space through, and within which change in norms or institutional logics, is expected to occur. In SEA literature, the institutionalization as a field-level change has most notably drawn from variants of new institutional theory and its related conceptual figurations of “institutional entrepreneurship”, “institutional logics” and “institutional work” (Alvesson & Spicer 2019; Modell, Vinnari, & Lukka 2017).

In short, the new institutional theory tends to focus the analysis on the agentic capabilities of individuals as a source of change, which, however, is always conditioned by the boundaries of the Bourdesian-like field in which the actor is embedded. Here, the notion of field designates the space inhabited by the actor – the system of social positions determined according to the capitals held (e.g. economic, cultural and social) by the actor conditioning the agentic capabilities (Archer, Husillos, & Spence 2011, p.329). In such context, to change SEA reporting to include other than economic concerns, and to unlock its emancipatory potential, requires changing the taken-for-granted meaning system relevant to a particular field. Accordingly, each field becomes a site for the struggle for the dominant taken-for-granted meaning system, where the dominant actors strive to maintain the existing meaning systems (e.g., dominant knowledge within a particular professional field).

Empirically, these studies foreground how actors engage in strategic work to change the dominant meaning systems of their respective fields. For instance, within the reporting field, the emergence of the Global Reporting Initiative (GRI) is a much-studied case where a change in the meaning system of corporate reporting was said to enable the establishment of this new type of reporting. (Brown, de Jong, & Lessidrenska 2009; Brown, de Jong, & Levy 2009; Etzion & Ferraro 2010) Along such line, the emergence of GRI has been attributed to the “skilful agents”
who were able to create change from within the field from which they operated, making “their project to fit the conditions of the [existing reporting] field” (Etzion & Ferraro 2010, p.1092). Similarly, Levy, Szejnwald Brown, and de Jong (2010) have focused on individual agents' capacity to disrupt existing field practices noting the constraining role of existing field conditions. In doing so, they have shown how new institutions, and their corresponding meaning systems, do not emerge ex nihilo “but are built by weaving together existing economic, discursive, and organizational threads” representing “transformations and reconfigurations rather than creation ex nihilo” (Ibid, p.109).

Similar analyses have evolved around the more recent reporting form - that of Integrated Reporting. (Adams 2015; Gibassier et al. 2018; Humphrey et al. 2017; Rinaldi et al. 2018; Rowbottom & Locke 2016) For instance, Humphrey, O’Dwyer, and Unerman (2017) have explored the “institutional dynamics” underpinning the rise of the International Integrated Reporting Council (IIRC) by describing how actors within the corporate reporting field, reconfigured their field boundaries to create wider change across seemingly separate fields (e.g., corporate reporting field in contrast to the investment field). In analyzing such field-level change, they mobilized the idea of boundary work, where different professionals are viewed as “institutional agents” who engage in boundary work in reconfiguring existing field boundaries. However, such boundary work does not assume simple colonization of one field over another but fleshes out a more collaborative co-evolvement of various fields. Similarly, Clune and O’Dwyer (2020) describe the “institutional work” across different fields that shape the emerging practice of SEA reporting were skillful actors able “to instigate change from within fields using established networks, resources, and power structures” (ibid, p. 3). In doing so, the actors are told to tolerate “dissonance” as they navigate the tension of the prevailing field logic while aspiring to change it into another. (Ibid)

Finally, scholars have engaged in the somewhat unwanted consequences institutionalization of new reporting forms in scale seem to require. (Archel et al. 2011; Brown & Dillard 2014; Flower 2015; van Bommel 2014; Vinnari & Dillard 2016) These studies tend to foreground the question of whose concerns and perspectives are, and are not, centered in the process of institutionalizing new reporting frameworks and standards. The explicit critique here is directed at the apparent value pluralism promised by SEA reporting, which contrasts with the persistent observation of new reporting practices prioritizing economic view over other perspectives.

The case of Integrated Reporting is perhaps the most well-known example of this failure to take pluralism seriously, for failing to include also other than economic concerns in its reporting framework. In the case of IR, this is evident in the framework’s reliance on the concept of the “long-term investor” and his “enlightened shareholder view” through which sustainability concerns are translated into the language of financial value creation only. This, as the critique goes, is done at the expense of incorporating a broader range of user figures and perspectives that would enable considering also non-financial factors. (Flower 2015; Humphrey et al. 2017; Vinnari & Dillard 2016). Brown and Dillard (2014, p.1121, Cf to Milne & Gray, 2013, p.20) have encapsulated this sentiment, noting that when integrated reporting initially emerged, it sparked diverse expectations and perceived purposes. At the time, some viewed it as a potent
instrument to incorporate sustainability considerations into the foundations of capital markets and corporate operations. In contrast, others criticized it as a clever device to sidestep more radical solutions, potentially distancing us further from the genuine adoption of sustainability practices in the realms of market governance.

Accordingly, Flower (2015) has called the development of the IR as the “story of failure”. By undertaking a content analysis on key documents of the IIRC, he concludes that IR has moved from early days sustainability aspirations to weak, business-as-usual reporting confined within the usual capitalist ideology limiting its emancipatory potential. Similarly, Thomson (2015, p.20) notes that the IR’s conceptual framework relies on the much critiqued trickle-down theory, reducing sustainability concerns under economic ones. Furthermore, Vinnari and Dillard (2016, p.38) have noted how the “facts represented by neoclassical economics have come to dominate the solutions proposed” in the Integrated Reporting proposals with focus on the notions such as “value creation” and “multiple capitals,” which ultimately become equated towards the financial capital. Within this setting, “cost-benefit analysis, win-win solutions, markets, profits, and rationality are unquestionably accepted as legitimate, whereas arguments based on less anthropocentric values are not included” (Ibid). Consequently, privileging of financial capital becomes taken for granted and apolitical, while the other perspectives are discounted as ideological or radical.

Similarly, Milne and Gray (2013) have noted how the initial trajectory of GRI reporting has consistently shifted towards perspectives that are more favorable to businesses. This trend appears to escalate with the advent of integrated reporting, marking a step back in the efforts to incorporate the so-called real sustainability concerns into reporting practices. As such, Brown and Dillard (2014) contend that while these business-centric approaches have managed to initiate minor changes within the existing systems, they fall short in posing a real challenge to the established assumptions, structures, processes, and techniques like questioning the prevailing influence of capital market viewpoints in the formulation of mainstream accounting standards.

2.2.3. Discussing the financialization of SEA reporting

In portraying SEA reporting as a governance technology, the first sub-stream does so primarily from the viewpoint of the reporting organizations. Although many studies have considered the wider institutional context in which reporting occurs, they often empirically approach it from the perspective of the preparer organization, depicting it as a somewhat isolated entity embedded in society, co-existing with other atom-like actors. In this light, reporting is seen as a type of management technology, facilitating the management of the social contract for organizations to maintain their legitimacy in the eyes of society at large. Consequently, SEA reporting is theorized to enable reporting organizations to engage in strategic impression management in response to increased accountability pressure from the external environment. By framing SEA reporting as a legitimizing device, this literature suggests that SEA reporting is essentially an instrumental practice, preoccupied solely with the business case, neglecting non-economic concerns and stakeholders. More often than not, reporting is seen as a form of institutional
appropriation where any business attempt to translate environmental agenda almost inevitably result in the reproduction of capitalist hegemony.

This reproduction is understood occurring on two levels. Firstly, the more agency-granting view suggests that organizations engage in strategic business framing, motivated to maintain their legitimacy in the face of critical stakeholders and wider society. This has been evident in number of papers mobilizing various strands of legitimacy and stakeholder theories (Buhr 2002; Cho et al. 2015; Deegan 2002, 2019; Deegan et al. 2002; Laine 2009) Paradoxically, reports seem to shield organizations from accountability and transparency, producing a form of “simulacrum” projecting a misleading and even false accounts of corporate activity at the expense of actual reality as was the case with Boiral (2013) and Cho et al. (2015). More often than not, SEA reports are perceived providing somewhat fictitious accounts, whose power lies in its representational power as the reality depicted becomes accepted and believed by others.

The second level of reproduction is observed at a more systemic level, even when the empirical inquiry remains confined to the reporting organization (Archel, Husillos, Larrinaga, & Spence 2009; Gray, Kouhy, & Lavers 1995; Tinker, Lehman, & Neimark 1991; Spence, Husillos & Correa-Ruiz 2010). Here, the analytical gaze often shifts to a system perspective, where the system and its relations are analyzed by assuming a society made of particular actors, whose relations are then scrutinized through discursive choices employed in the reports as was the case with Milen et al. (2009), Tregidga et al. (2014) and Archel et al. (2009). This approach sometimes positions report preparers as captives of capitalist structures and logics, forcing them to use specific discursive frames. (O’Dwyer 2003; Spence 2007) Under this lens, reports are seen as not only hiding or misrepresenting reality but actively shaping it as a discursive technology with power to reproduce pre-existing power relations.

Despite the differences in levels of analysis, both approaches consistently affirm and conclude that social and environmental unsustainability is largely a consequence of the capitalist system, arguing that the best way to move toward a more sustainable system is to radically reform markets and capitalism (Unerman & Chapman 2014, p.385; Larrinaga-Gonzalez & Bebbington 2001). Hence, reporting within the current system almost invariably subverts radical environmental and social intentions into the institutional appropriation foreclosing opportunities for genuine change towards sustainability and prematurely closing “the debate around the role of the corporation in society” (Spence 2009, p.207). In general, there exists a strong underlying critique asserting that in the present capitalist system, SEA reporting’s attempts to translate the environmental agenda within existing business frames results in the perpetuation of capitalist hegemony and the status quo.

In moving forward, the second sub-stream shows interest in the institutionalization of SEA reporting and the effects of such a process on advancing (or failing to advance) governance of various non-economic issues. Empirically, this is done by zooming out the analytical focus from the reporting organization to a broader set of actors engaged in shaping what is considered the right form of reporting. Through this approach, each actor possesses a conceptual understanding and subjective preferences over what constitutes proper reporting form, always in resonance
with the shared meaning system of their corresponding collectives. The often-implicit aspiration underlying the analysis is the belief that reporting could foster substantial change toward sustainability if it were to embody more sustainable norms, logics, and rationales.

In practice, these studies frequently confine themselves within a particular “regime” (e.g. Bebbington, Kirk, & Larrinaga 2012; Chauvey, Giordano-Spring, Cho, & Patten 2015; Chelli, Durocher, & Fortin 2018; Larrinaga & Senn 2021; Senn & Giordano-Spring 2020) or “field,” (e.g. Clune & O’Dwyer 2020; Etzion & Ferraro 2010; Humphrey et al. 2017) where such spatial notions either enable or constrain various institutional actors seeking to introduce new norms and logics. As these actors are seen to diffuse their ideas and norms to reshape the fundamentals upon which reporting establishes itself, the analytical interest often lies in understanding how actors come to share beliefs, expectations, and even internal morality around what constitutes correct reporting. While there is no essence to what reporting is, the interest is in identifying the principles and logic constituting the fundamentals of the actors' conceptual world.

These studies emphasize the role of skillful, sometimes even heroic actors and organizations in negotiating change within the constraints of existing logics and norms – a storyline that is present in both the evolution stories regarding GRI (Etzion & Ferraro 2010), IR (Humphrey et al. 2017; Rowbottom & Locke 2016), or introduction of SEA reporting as part of other fields (Clune & O’Dwyer 2020). Institutional actors are understood to have a pivotal role in both innovating better ideas, norms, and practices and adeptly navigating social structures in diffusing such innovations and enlisting critical actors around new ideas. Hence, institutionalization is framed as a process where new practices transition from some actors' ideas, innovations, and mental models into reality, from the periphery into the mainstream, where the potential for emancipatory change lies in establishing the right values, norms, and rationales for SEA reporting.

Spatially, the regime or field becomes the unit of analysis in which change (or lack thereof) occurs. Unlocking the potential of SEA reporting, then, requires altering the set of shared beliefs, norms, values, or other relevant meaning systems within a particular regime or field. This transformation can occur within and across fields or regimes, yet there is a hierarchical order, both within and across fields, manifested by the power to impose norms and values around the right form of reporting. If things scale up, change can occur across separate fields that co-constitute one another. As such, the analytical interest often lies in how the dominant set of unified beliefs is maintained or altered over time by actors embedded in such fields and regimes. Although the dynamics of change are complex, the narratives often depict either the success or failure of institutional change, unfolding broadly in a linear way, evaluating whether SEA reporting succeeds or fails to institutionalize itself as a practice embodying more sustainable logics and values.

Finally, studies have highlighted the way the institutionalization of alternative reporting forms have come with trade-offs, where the assertion of anything truly beyond economic norms, logic, and rationales becomes impossible. Studies persistently emphasize the failure of emerging reporting forms to promote other than economic concerns, continually falling within the
constraints of the capitalist logic of business as usual, evident in the evolution of both the GRI and the IR. The explicit critique is directed towards the seeming pluralism promised by various forms of SEA reporting, as innovation after innovation continues to reaffirm the prioritization of economic rationality only at the expense of other perspectives, norms, and logics. (Brown & Dillard 2014; Vinnari & Dillard 2016) Although much of the SEA literature suggests that reporting could bring about real change by integrating multiple perspectives and accommodating values other than economic ones (Gray, Kouhy, et al. 1995), current practices are criticized for lacking diversity in viewpoints, with only the economic perspective considered relevant often framed as "apolitical" and "value-free," rendering alternative viewpoints irrelevant or ideologically biased (Vinnari & Dillard 2016).

In conclusion, much of SEA research takes interest in reporting for its acclaimed ability to make various aspects visible, thus producing information for better decision-making and possibly rearranging the relationship between business and society. The underlying aspiration surrounding reporting is the belief that more sustainable practices can be achieved if the proper accounting objects and frames are utilized, and if the perspectives of various stakeholders are considered. Reporting is thus seen as an institution that is underpinned by particular logics and norms, manifested by specific objects and frames. However, when examining the narratives of institutionalization, critical research accuses SEA reporting of failing to realize its emancipatory potential due to the lack of diverse perspectives. Reporting is recognized ultimately a useful practice, but its evolution and potential to drive change are stifled by the existing institutional norms and logics inherent to the capitalist system, from which there appears to be no escape.

2.3. Financialization of the regulatory space of financial reporting

While the previous section focused on the practice of SEA reporting, this one turns its attention to its dialectical counterpart: the well-established practice of corporate financial reporting. Due to its more regulated and standardized nature, the discussion here is tailored to center on the rule-making aspect of financial reporting. This involves discussing studies that delve into the regulatory space of financial reporting, a concept introduced by Young (1994) in the context of accounting rule-making, to highlight the interconnectedness of various actors who influence accounting rule-making and frame how reporting becomes problematized. Accordingly, the regulatory space is the sphere where multiple actors and events collaborate to identify and interpret accounting issues that are later deemed suitable for standard-setting. (see also, Canning and O’Dwyer 2013)

The overarching theme within these studies revolve around conceptualizing financial reporting as a critical governance technology that plays a vital role in the broader economic governance of market societies. Specifically, all the discussed studies explore the reciprocal dynamics between reporting and financialization suggesting that financial reporting not only mirrors but also actively contributes to the broader financialization of contemporary economic governance. By following the categorization offered by Robson and Young (2009), I examine these studies from two distinct yet interrelated perspectives: the macro-institutional and the micro-epistemic levels.
By exploring the financialization of financial reporting from these perspectives, I aim to furnish a comprehensive understanding of how the phenomenon of financialization has been articulated in critical and interpretive accounting literature, particularly in connection with financial reporting rule-making.

First, I discuss the research with a more macro-institutional lens. This approach is primarily informed by insights from political economy and international relations, as the level of analysis concentrates on the role of reporting as part of political and institutional structures of capital markets. Hence, the examination will center on how financialization has influenced the broader regulatory landscape of financial reporting. This includes an exploration of the evolution of economic governance regimes, the role of critical organizations within these regimes, such as the International Accounting Standards Board, and an overview of the broader economic governance infrastructure.

After, the discussion will shift to a more constructivist examination of reporting rulemaking, focusing on the epistemic qualities of accounting objects and conventions. Drawing on economic sociology, with a post-structural emphasis, these studies focus on the underlying grammar of financial reporting. This more micro-oriented analysis reveals the transformation of the core concepts, demonstrating how the episteme of financial economics has gradually placed financial reporting under its cultural and intellectual authority.

2.3.1. The political economy of the regulatory space: Financial reporting in the web of 21st-century transnational governance

In exploring the dynamics of the regulatory space of financial reporting, the political economy perspective has foregrounded how corporate reporting’s systems of rules are inherently part of the social, political, and economic context in which they come to exist. Consequently, scholars mobilizing the literature on political economy have established an important conceptual strand within the accounting literature by placing corporate reporting as part of the broader institutional landscape of the world economy. (Arnold 2009, 2012; Botzem & Quack 2006, 2009; Cooper & Sherer 1984; Djelic & Sahlin 2009; Mehrpouya & Salles-Djelic 2019; Perry & Nölke 2006)

Within this framework, financial reporting is viewed as a critical part of the wider web of transnational governance, where reporting is shaped by the same long-term historical processes that have shaped the institutional arrangements that ultimately govern capitalist economies, making it a critical site for power in the world economy. (Baudot & Robson 2017; Miller 2008)

Much of this research on financial reporting rulemaking has been driven by the observation that 21st-century transnational economic governance has shifted away from state-led entities to various non-state actors. This trend has argued to have led into a situation where the contemporary field of transnational governance is becoming increasingly populated by numerous non-state actors, each tasked with specific governance roles related to organization, monitoring, and accountability in economic governance. This includes, for instance, functions performed by the professional accountancy and auditing profession, accounting standard-setters, and others. For example, in their analysis of the emergence of the International Accounting
Standards Board, Djelic and Sahlin (2009, p.177; see also, Botzem & Quack 2006) describe its establishment as a "typical illustration of contemporary regulatory dynamics" where regulatory activities are moving away from national states to new forms of global "regulatory constellations that transcend the state/non-state divide." 13

Against such developments, scholars have explored the increasing role of financial reporting and accounting standards within the broader transnational governance landscape. As capital markets have grown in significance, financial reporting has emerged as a crucial organizing device for the governance of the world economy. (Arnold 2012; Djelic & Sahlin 2009; Mehrpouya & Salles-Djelic 2019) For example, Arnold (2012) explored the rise of international accounting standards in the aftermath of the East Asian Financial Crisis in the late 1990s. By describing how the crisis served to catalyze existing efforts to create a global financial governance architecture in the name of systemic financial stability, Arnold places standardized financial reporting at the heart of enabling such changes. As she concludes, when in the wake of the crisis, the G7 finance ministers and central bank governors established the Financial Stability Forum tasked with the responsibility of maintaining the systemic stability of the financial system, financial reporting harmonization "played a constitutive role in the financialization of the world economy and US-led efforts to shape the world economy in the image of Anglo-American, finance-led capitalism" (Arnold 2012, p.377)

Furthermore, studies have argued that the heightened emphasis on standardized reporting as a policy solution has had significant consequences by providing a pretext to avoid more radical policy reforms. (See, for instance, Arnold 2012; Chua & Taylor 2008; Mehrpouya & Salles-Djelic 2019; Perry & Nölke 2006) For instance, Chua and Taylor (2008, p.463) have argued that the emergence of standardized reporting is “more about political and social dimensions of globalization than it is about the alleged economic benefits” derived from the convergence of global standards. Similarly, Arnold (2012) have shown how, rather than attributing the source of the East Asian crisis to early policy developments related to rapid financial liberalization, the Asian financial crisis was framed as a problem of "lack of transparency" positioning standardized reporting as an appropriate and non-controversial policy solution while advancing the interests of the Anglo-Saxon capital market-led financial architecture.

The panacea of transparency, and how its meaning has co-evolved with the complex architecture of transnational governance, has been a subject of detailed study by Mehrpouya and Salles-Djelic (2019). Undertaking a Foucauldian genealogy on the term transparency, the authors argue

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13 However, the case of accounting standard-setting is curious even in the world of increased standardization. Unlike most global standard-setting bodies, often placed under some intra-state monitoring body, the International Accounting Standard Board (IASB), is a privately run and funded organization. The EU was one of the jurisdictions that replaced its previous harmonization attempts between member states by outsourcing its standard-setting to the IASB. While still requiring the formal legal enforcement of its standards, the IASB is an independent technical standard-setter organization, subject to no formal control of political institutions like the EU. As Botzem and Quack (2009, p.933-934) note, while accounting and auditing “stand amongst the 12 key Standards for Sound Financial Systems defined by the Financial Stability Board…accounting constitutes a notable exception: it is the only field where standards are set by a private organization”. In contrast, other standards, “whether macroeconomic policy, data transparency or financial regulation and supervision, are dominated by international organizations in which states or public entities are central actors.”
that it has become an “intellectual technology” (Miller & Rose 1990), yielding significant constitutive effects in contemporary transnational governance. For instance, when the notion of transparency entered the governance space in the 1950s, it was focused on price transparency as part of the EU’s wider policy program for common market creation and integration (Mehrpouya & Salles-Djelic 2019, p.6) oriented around ideals of “fair competition” aimed at improving consumer welfare. In the 1980s, however, it became more aligned with the ideas of neoclassical economics, informing the neoliberal policy agendas unfolding in Western countries at the time. Finally, in the early 1990s, the notion was once again mobilized to actualize the new ideals of “good governance” primarily focused on securing conditions for “market stability and investor confidence.” Consequently, viewing transparency as a universal remedy has driven efforts to fix perceived shortcomings through increased reporting and the provision of “better” information, a trend that continues to shape the discourse around economic governance. 14

Hence, it is now well established that financial reporting rule-making has co-evolved with what is often referred to as “the New Financial Architecture”: a complex transnational architecture of economic governance, encompassing multilateral bodies such as the International Monetary Fund, World Bank, the Basel Committee on Banking Supervision, the Financial Stability Forum (now the Financial Stability Board), the G20 of finance ministers, and various nonofficial bodies, financial firms, and think-tanks from the advanced capitalist states. (Arnold 2009b, 2012; Humphrey et al. 2009; Mehrpouya & Salles-Djelic 2019) Within this intricate system, accounting standards play a quasi-regulatory role, for the governance architecture fundamentally relies on self-regulating capital markets given sufficient financial transparency (Arnold 2009, p.49). Accordingly, financial reporting is perceived to be confined within more durable institutional “background conditions” which set the framework for accounting rulemaking (Djelic & Sahlin 2009). In practice, changes in reporting are suggested to be bounded by stabilized discursive references, acting as stabilized institutional meta-forces such as those related to “efficiency” and “transparency,” reinforcing the taken-for-granted background that guides the development and execution of these standards. (Ibid)

Furthermore, accounting scholars have argued that the quasi-regulatory role of accounting standard-setting has had substantial consequences for the politics of economic governance. As the inherently technical nature of accounting calculations often makes accounting related debates technical, this has been argued to strip economic governance discussions of their political dimensions devoid of consideration for power and interests. (Djelic & Sahlin 2009, p.198; see also, Botzem & Quack 2006; Chiapello & Medjad 2009; Perry & Nölke 2006) For example, Perry and Nölke (2006, p.578) have argued that the isolation of accounting standard setting within a private organization, like is the case with the IASB, tends to displace accounting rulemaking from the public debate as the development of standards is delegated to “independent private expert bodies”. This has been noted to restrict the discussion of accounting standards to the

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14 Such reorientation towards the capital markets is noted to be in line with other changes in accounting rulemaking, notably the change of the assumed “purpose” of financial reporting and its presumed user showing the effective entanglement of financial reporting to the wider financialization of world economy (see, next sub-section).
realm of technical efficiency hiding their political quality. (Chiapello 2016; Perry & Nölke 2006; Young 2014)

As research has observed a tendency to depict accounting rulemaking as a mere technical exercise, this has led scholars to focus on exploring the rule-making processes of international standard-setting bodies like the International Accounting Standards Board (IASB) and its U.S. counterpart, the Financial Accounting Standards Board (FASB). Such studies have often revealed how the establishment of accounting rules relies on the technical-political divide, which assumes the apparent separation of a technical from the political. (Botzem & Quack 2006; Young 2014) For example, the due process—a standardized procedure that standard-setters use to select relevant accounting issues, including full and fair stakeholder consultation and determining specific agenda topics—is seen as a method to delineate this division. For instance, Botzem and Quack (2006, p.282-283) have shown how the due process was a critical “coordination mechanism” facilitating the establishment of the IASB “given the variety and diversity of actors involved, the multiplicity of interest, translations and languages” that could have been seen too challenging to reach consensus in the process of standard-setting. Similarly, Young (2014) has observed that due process strengthens claims of “neutrality” and purifies standard-setting from political issues, emphasizing its claimed “apolitical” nature. Consequently, by aiming for objectivity and market neutrality while claiming political neutrality, accounting standard-setters reinforce the notion of objective accounting making financial reporting a legitimized source of objective knowledge despite its constructed quality (Ibid, p.717).

The technocratic quality of accounting rulemaking has led to concerns over its partial privatization, sparking interest in understanding who are the critical stakeholders involved in setting accounting rules. Along these lines, Pelger & Spieß (2017) provide insight into how the IASB has to maintain its legitimacy as an appropriate standard-setter in the eyes of its “inner circle” of close constituents consisting mainly of critical market actors including institutional investors, financial analysts, global accounting firms, and large multinational firms (Ibid, p. 65). Their findings reveal that the IASB mainly engages with this “inner circle” of stakeholders during its due process, with minimal engagement with civil society and labor organizations. Hence, although the IASB's due process was ostensibly introduced to promote “transparency and inclusiveness,” the findings of Pelger & Spieß reveal that only certain actors seem to have power to shape the standard-setting process. (Ibid, p. 85). Furthermore, they argue that this inner circle of contributors is likely to maintain their dominance, leaving others struggling to identify and influence relevant projects. This reflects a complex struggle over determining “appropriate” accounting issues where conflicts within the regulatory space are tightly interwoven with what issues are deemed relevant and who is considered to have the expertise to define them.

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15 As Young (2014) has explicitly shown how separating the technical from the political negotiates the boundaries between what is considered relevant and irrelevant as “attempts to suppress politics and separate them from technical do not eliminate judgments about values or qualities to be promoted and instead, simply “suppresses politics” submerging the value judgment, “making it more difficult to subject both the judgments and values to critical scrutiny”.

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2.3.2. Epistemic capture of the grammar of financial reporting

While the studies outlined above do investigate the dynamic relationships in accounting rulemaking, their focus predominantly resides in the roles of various actors and how they influence the development of accounting rules. This examination is reflective of the broader discourse on the financialization of the regulatory space of financial reporting, where the influence of market actors and financial interests often takes precedence. However, as Power (2009, p.336) has observed, this focus tends to overshadow a more nuanced and programmatic exploration of accounting’s regulatory space neglecting changes in the more mundane accounting objects, concepts, and conventions. Hence, an alternative domain within accounting scholarship exists, one that foregrounds the constitutive role of financial reporting as an epistemic practice.

Within this domain, accounting literature has often drawn inspiration from Miller and Rose's (1990) reading of Foucault, conceptualizing accounting as one of the technologies of government. (Miller & Power 2013) In this context, accounting becomes a tool that enables the transformation of abstract discourse into a "knowable, calculable, and administrable object." (Miller & Rose 1990, p.5) The scholarly interest thus lies in how financial reporting serves as a critical technology for actualizing broader governance ideals and rationales with focus on both the aspirational programmes and the practical technologies that work in tandem to realize each other. In a sense, programmes are considered the visionary and aspirational aspects of governance, while technologies represent the concrete mechanisms through which those visions become achievable. Through this constructivist lens, financial reporting is seen to constitute the mundane, yet essential mechanisms through which the more abstract governance rationalities and visions became possible to employ in making things governable. 16

Consequently, scholars have been drawn to explore the epistemic qualities of accounting objects, seeking to understand how accounting becomes entwined with specific epistemic frameworks. This is critical for accounting as it in turn is understood to produce objective knowledge for further knowledge processing. As Chiapello (2016, p.80) notes, corporate reporting is not only founded on knowledge but also produces it as it helps to shape what is “considered worthy of exploration and examination, framing our understanding of a company's economic health, profitability, and risks." This understanding contributes to the broader financialization discourse by highlighting how the practice of reporting itself constructs and conveys the reality it seeks to describe, moving attention to the taken-for-granted background conditions that define what is considered legitimate knowledge in a particular time and place. Since accounting lacks an inherent essence or purpose, it is intertwined with various economic,

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16 As Miller and Rose (1990, p.5) have famously noted, “knowing an object is not about speculating it in an abstract sense but making it visible, calculable” and “into a particular conceptual form”, as to ultimately make it “amenable to intervention and regulation”. Consequently, accounting as a seemingly objective and neutral practice is always employed in relation to wider programmes whether linked to ideals of “efficiency, reducing waste, or transforming individuals into calculating selves” (Miller 1994, in Chapman et al 2009, p.19) where accounting becomes entangled to the “assemblage of values and goals that are inscribed in the official programmes that demand and desire it” (Chapman et al 2009, p.19).
social, and specialized bodies of knowledge that both sustain and influence it but which often, however, remain taken-for granted. (Hopwood 1987; Miller & Napier 1993)

Against such a backdrop, there is an overwhelming consensus among scholars that financial reporting has been transformed by the episteme of financial economics, the discipline having inserted its cultural and intellectual authority on accounting rulemaking. This shift is most clearly observed in the way financial reporting has narrowed its focus to serve primarily capital markets rather than broader societal needs, all the while maintaining a purpose of serving “public interests”. (Murphy, O’Connell, & Ó hÓgartaigh 2013; Zhang & Andrew 2014, 2022)

On that account, Ravenscroft and Williams (2015, p.770) even argue that financial reporting has become a sub-discipline of financial economics, “a servant of the imaginary world of neo-classical economics.” Yet, they observe that this change did not result from drastic shifts in knowledge or techniques. Instead, it emerged from a “conceptual shift in the focus, assumptions, and discursive practices used to characterize, explain, and speak about accounting practice” (Ibid).

Consequently, the financialization of the rule-making of reporting can be seen in the gradual alignment of key accounting conventions and concepts with financial valuation and reasoning. (Mennicken & Power 2015; Miller & Power 2013) This shift is often empirically analyzed by examining the conceptual frameworks used by accounting standard-setters, considered as a durable form of “institutional thinking which limits both the definition of, and solutions to, accounting problems” (Erb & Pelger 2015, p.13). Examples of this can be found in the works of Zhang and Andrew (2014, 2022), who describe how changes in key terminology within the conceptual framework have led financial reporting to focus on the needs of capital markets at the expense of wider societal concerns.

Moreover, numerous studies have taken a historical view to explore how accounting conventions have become increasingly aligned with the thinking and assumptions perpetuated by financial economics. For instance, the constructed purpose of financial reporting has been examined in relation to a particular kind of accounting user, and his distinct "information needs" accounting rulemaking centers around. As Young (2006) has famously noted, the figure of a user has generally become an abstract technology in accounting rule-making, a somewhat fictitious construct whose "needs" are shaped by various constituents in the regulatory space. In a similar line, Mennicken and Power (2015, p.214) argue that "presuming and bringing into existence users who value accounting is one of the most powerful accomplishments of accounting infrastructure", making it a significant abstract technology in accounting rule-making. (see also, Ruff 2022)

Along such lines, the IASB, for instance, is said to incorporate only “conventions that are rooted in financial theory and promote the viewpoint and interests of financial actors, who are considered by this theory to be best placed to decide between potential investments for the common good” (Chiapello 2016, p.81-82). As such, studies continue to affirm that the many conceptual changes taking place in accounting rulemaking adhere to the programmes of financialization as accounting increasingly orients around the imaginaries of financial
In doing so, it is seen to serve only the needs of global financial capital and its imagined investors. Consequently, it has been positioned that financial reporting has shifted from being a legal instrument to an economic one. This has led to a gradual prominence of the balance sheet in economic governance with emphasis on the asset-liability logic that moves away from transaction-based thinking that previously governed accounting rulemaking. As Mennicken and Power (2015) note, such a shift enables the construction of accounts more aligned with the valuation logic promoted by financial economics and the assumed information needs of capital markets.

The case of fair value accounting is a common example of this shift, as accounting convention have gradually evolved from historical cost accounting to market valuation-based fair value accounting. Similarly, the notion of reliability - “fundamental qualitative characteristic of accounting” (Power 2010, p.200) has experienced move away from transaction-based reliability, which prioritizes verifiability of past transactions, to a framework more aligned with market valuation, emphasizing a faithful representation of economic phenomena. Similarly, Erb and Pelger (2015) argue that the shift from reliability to faithful representation draws its logic from financial economics. Together, these changes emphasize the progressive shift to code accounting conventions with a focus on balance sheet and financialized valuation issues (Power 2010; Miller & Power 2013; Mennicken & Power 2015) in which the “valuation usefulness” has become considered as the single objective of financial reporting. (Pelger 2016, see also, Mennicken & Power 2015; Miller & Power 2013; Power 2010)

However, the changes in conceptual frameworks don't always lead to a single, fixed meaning. Instead, their interpretations are tied to the broader contexts in which they find relevance. Williams and Ravenscroft (2015, p.781) describe this phenomenon, noting that “standard-setters seem to be operating in a world of mixed metaphors, trying to speak coherently about different, conflicting worlds as if they were one”. Edgley's (2014) work on the concept of materiality illustrates this point. According to her, the meaning of materiality is fluid, influenced by historical conditions, events, and ongoing debates (Ibid, p.267). Depending on the specific context and factors involved, materiality can take on various roles, including a risk management tool, a practical guide for decision-making, a standardizing scientific technique, a technology for auditing, or even a moral obligation to protect investors' capital (Ibid, p. 267-268). Nevertheless, despite this “muddled reality” of the standard-setters, the current realization of various accounting concepts, such as decision-usefulness corresponds to a reality characterized by conventional economics (Williams & Ravenscroft 2015, p.781).

Finally, while financial economics exerts strong cultural influence within accounting, the integration of such ideals into accounting standard-setting and rules is a complex process. Only few studies, however, have ventured to understand the process of how financial economic ideas are woven into the fabric of accounting rulemaking. As an exception, Pucci and Skærbæk

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17 Power has explicitly argued that "fair value enthusiasts" leveraged the "cultural authority" of financial economics to make the case for this new accounting convention.
(2020), have investigated the collective effort required to translate idealized financial theories into practical and “tolerable” solutions in accounting standard-setting. They detailed how a network of actors, shaped by existing socio-material environments, work together to turn theoretical constructs into “impure” and feasible solutions. On a similar line, Himick and Brivot (2018) further observed that the influence of neoclassical economics does not simply colonize accounting rule making in a tyrannical way. Instead, it functions more like a catalyst, fertilizing various fields of expertise sporadically in diverse and unexpected ways through various epistemic groups enacting as “carriers of ideas”. Thus, both of these studies conclude that while financial economics shapes accounting rulemaking, such translation is always partial and dissonant as suggested by Mennicken and Power (2015).

2.3.3. Discussing the financialization of financial reporting rulemaking

The two domain literatures discussed above emphasize that financial reporting has both shaped and been shaped by the highly financialized shareholder value form of capitalism. In both streams, reporting is considered as an enabling mechanism that both normalizes and gives existence to the expansion of financial markets. However, the two streams differ in their levels of analysis.

The first adopts a more actor-centered and institutional approach, focusing on understanding the interests that shape accounting rulemaking as part of the wider arrangements of economic governance. In doing so, it places reporting within the wider transnational governance landscape. Through this institutional-macro-lens, reporting is connected to the broader economic governance infrastructure, which is increasingly seen to orient around and promoting the vested interests of capital markets. In this view, reporting is portrayed as a governance tool to advance the interests of financial capital, driven by an empire-like ambition to gain and maintain economic control as was the case in the study of reporting harmonization in the aftermath of the Asian financial crises (Arnold 2012)

More often than not, these accounts narrate stories of global capital and its defenders, including both nation states (Arnold 2012) and organizations like the World bank and International Monetary Fund (Mehrpouya & Salles-Djelic 2019) successfully molding the transnational regulatory infrastructure to meet their needs. This has resulted in the emergence of the "New Financial Architecture" of which standardized reporting is a critical component. (Arnold 2009b, 2012; Humphrey et al. 2009; Mehrpouya & Salles-Djelic 2019) Within this financialized governance architecture—and in harmony with the neoliberal policy reforms of past decades—financial reporting has become a mechanism for advancing the dominance and expansion of financial markets. This has seen to occur at the expense of other regulatory models, positioning financial markets as a central organizing mechanism for transnational governance.

Against such background, financial reporting rulemaking becomes a critical site for power and control, as it plays a key role in materializing the rules of economic governance. (Baudot & Robson 2017; Miller 2008) For this reason, a number of accounting studies have shifted the level of analysis to the so-called mezzo-level of accounting’s regulatory space, to better
understand how financial reporting becomes problematized and negotiated, and to identify who has the ability to articulate "relevant" accounting problems for standard-setting. In doing so, the interest has been in examining how specific interests become increasingly represented through organizations such as the IASB and FASB, and the implications for reporting rulemaking as it becomes subjected to powerful interest groups. (Pelger & Spieß 2017; Young 2006, 2014, see also, Baudot & Cooper 2022)

Many studies have especially problematized the way accounting is framed as a neutral and merely technical technology that enables technocratic control beyond politics. In fact, Young (2014) showed how the demarcation between technical and political seems to be a persistent feature of accounting standard-setting and is even key for the legitimacy of organizations such as the IASB, as only matters considered “apolitical” and “technical” can fall within their remit. Consequently, when taking an interest in the dynamics of the regulatory space, critical studies tend to tell stories of the suppression of politics and the privatization of governance (Djelic & Sahlin 2009; Mehrpouya & Salles-Djelic 2019; Perry & Nölke 2006).

To conclude, while the macro and mezzo-level descriptions differ in their level of analysis, both approaches are concerned with the ability of various actors to influence the regulatory space of accounting rulemaking. Equally, both streams suggest that the regulatory space is increasingly financialized, as it has become captured by and largely preset to serve the logic of financial capital or its defenders. As such, depending on the scale of analysis, the financialization of this space occurs either through already powerful actors in the transnational governance landscape (e.g., G7, World Bank, the US Government), or by professional groups (such as the Big4, investors, corporations) increasingly operating under the logic of finance, and who now constitute the inner circle of accounting rulemaking. Hence, financialization in the regulatory space is observed by the prioritization of financial interests over other groups, spokespersons, and concerns with non-financial perspectives who are increasingly excluded as irrelevant for the core regulatory space.

In contrast, the second sub-literature literature shifts the focus from actors to the underlying grammar of accounting rulemaking, exploring the forces that shape the epistemic truth-telling of reporting. In doing so, scholars primarily draw on constructivist ontology and the discipline of economic sociology, to show how particular epistemes constitute reporting. Within this line of research, there is an overwhelming consensus that accounting rulemaking has been shaped by the episteme of financial economics gradually being placed under the cultural and intellectual authority of financial economics. (Himick & Brivot 2018; Mennicken & Power 2015; Murphy et al. 2013; Power 2010; Pucci & Skærbæk 2020; Williams & Ravenscroft 2015; Zhang & Andrew 2014, 2022)

In practice, these studies tend to take three forms. First, existing conventions and recent changes in them, are explored to reveal the effective financialization of accounting rules, achieved by observing the chosen objects and subjects employed in accounting rule setting like the ones of Pelger (2016, 2020), Erb and Pelger (2015) and Zhang and Andrew (2014, 2022). Second, the more historical accounts focus on showing how certain accounting conventions became
considered appropriate, linking them to changes in epistemic conditions where financial economics has gained prominence. Here, the case of fair value accounting is a case on point (Power 2010) or the study of Young (2006) on the construction of accounting user. Finally, few studies have explored how the translation from financial economics takes place (Pucci & Skærbæk 2020), investigating the critical actors and tools needed to understand how complete or partial such translation is (Himick & Brivot 2018).

In contrast to the previous stream, the analytical interest here shifts from actors and individuals advocating their interests to the underlying assumptions and epistemes that shape the grammar of accounting rulemaking. The critique in this area tends to show how financial economics has become a constitutive force formatting the rationales that underpin standard setting. However, unlike the institutional analysis, this force is not located within individuals or groups but relates to more unconscious mechanisms that come to govern accounting standard-setting, defining its limits and possibilities. Empirically, the analysis moves from various actors to the more underlying conditions—namely, the taken-for-granted assumptions that critically frame and condition accounting rulemaking and its "truth-telling". Such financialization, which affects the very epistemic foundations that accounting standard-setting relies on, is perceived to progress in an almost colonial manner, closing off possibilities for alternative forms of knowing and legitimate truth-telling.

2.4. Reflections and the way forward

In this chapter, I have discussed four domain literatures that situate corporate reporting within the wider governance frameworks of the 21st-century financialized world. Together, they shed light on the phenomenon of financialization of corporate reporting, affirming its presence as an empirical phenomenon. To synthesize the key findings, the following table 1 presents a summary of the literature, illustrating how each sub-literature depicts the process of financialization and its mediating governance effects.

In undertaking this analysis, I have deliberately interrogated and scrutinized the conceptual limits evident in each sub-stream in the spirit of problematizing review, with purpose to carve out a fresh trajectory for the development for my own theoretical approach. Specifically, table 1 summarizes the observation that, across all sub-streams, financialization is often perceived as the advancing project of our time, increasingly foreclosing opportunities for more radical transformations. This trend is discernible in the manner each sub-stream underscores the escalating influence of all things financial (such as actors, logics, epistemes, and stakeholders) gradually colonizing the grammar of reporting at the expense of alternative modes of governing, rationales, and interest.
<table>
<thead>
<tr>
<th>Domain literature</th>
<th>Level of analysis</th>
<th>Focus of analysis</th>
<th>Evidence of financialization</th>
<th>Source(s) of financialization</th>
<th>Role of reporting</th>
<th>Exemplary references</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financialization of social and environmental reporting form</td>
<td>reporting organizations; SEA reports</td>
<td>discursive frames; objects and subjects employed in SEA reports</td>
<td>translation (and reduction) of non-financial issues into business-friendly frames related to the markets, economy and finance</td>
<td>capitalist structures, hegemonic power and ideology; discursive choices reproduce the systemic forces</td>
<td>reporting used as a form of impression management and legitimizing tool; focus on the representational quality of reporting</td>
<td>Deegan 2002, 2019; O'Dwyer 2003; Spence 2007,2009; Mäne et al. 2009; Laine 2009; Spence et al. 2009; Boiral 2013; Tregidga et al. 2014; Cho et al. 2015</td>
</tr>
<tr>
<td>Institutionalization of SEA reporting forms</td>
<td>reporting regimes, fields and perspectives; actors forming the regimes and fields; reporting frameworks</td>
<td>underlying shared norms and meaning systems relative to a field or a regime; role of institutional actors in maintaining and changing dominant meaning systems</td>
<td>identification of capital market-friendly normative frameworks and institutional logics at the expense of more sustainable meaning systems</td>
<td>prevalent meaning systems rooted in the language of economics, markets, and finance; role of institutional actors reproducing dominant meaning systems</td>
<td>reporting currently hindering rather than enabling emancipatory change; generating at best minor changes while reproducing dominance of financial norms at the expense of other norms, values, and perspectives</td>
<td>On regime-level change: Bebbington et al. 2012; Chauvey et al. 2015; Chelli et al. 2018; Larrinaga &amp; Senn 2021; Senn &amp; Giordano-Spring 2020. On field-level change: Etzion &amp; Ferraro 2010; Levy et al. 2010; Humphrey et al. 2017; Ciane &amp; O'Dwyer 2020. On perspectives: Flower 2015; Brown &amp; Dillard 2014; Thomson 2015; Vinnari &amp; Dillard 2016</td>
</tr>
<tr>
<td>Financialization of financial reporting form</td>
<td>regulatory space of financial reporting (macro &amp; mezzo levels)</td>
<td>influential actors, institutions and macro-level institutional meta-forces; actors and interests affecting accounting rulemaking</td>
<td>evolution of financialized transnational governance architecture; increasing emphasis placed on capital markets (and investor) as a central organizing mechanism for transnational governance</td>
<td>powerful economic actors and interests (e.g. nation states, financial sector actors); institutionalized meta-forces; spokespersons for private capital</td>
<td>reporting instrumental enacting financialized governance; easily achievable policy solution at the expense of more radical policy reforms; reporting rulemaking a critical site for power in economic governance</td>
<td>Perry &amp; Nölke 2006; Botzem &amp; Quack 2006; 2009; Djelic &amp; Sahlin 2009; Arnold 2009; 2012; Chiapello &amp; Medjad 2009; Mynpooya &amp; Salles-Djelic 2019; Young 2014; Pelger &amp; Spieß 2017</td>
</tr>
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</table>

Table 1: Summary of the literature with interest in the financialization of corporate reporting
As the above table shows, financialization of corporate reporting is now firmly rooted phenomenon in accounting scholarship, detailing the progressive alignment of reporting rules, conventions, and practices with the phenomenon of financialization. These accounts narrate stories of co-optation and exclusion of other non-financial norms, rationales, and interests by the more powerful entities. Often, the analysis centers on the extent to which financial paradigms shape and redefine the methodologies and intellectual landscape of accounting rulemaking. As this trend progresses, it increasingly marginalizes alternative voices and perspectives, positioning them away from what's perceived as the core of corporate reporting.

However, with the prevalent interest to study the phenomenon of financialization, there seems to be a predisposition to attribute any evolution occurring in corporate reporting space to elements of financialization, positioning specific findings as empirical evidence of this broader generalized finding. Consequently, financialization has, somewhat inadvertently, become a constant category, generally perceived as an exclusionary force that obscures potential transformations in alternate directions. This perspective persists even when the elements of financialization appear minor, as in all cases, they are continually seen to expand their sphere of influence, albeit incrementally.

Against such background, I argue that the concept of financialization risks losing its analytical potency possibly overlooking the more nuanced dynamics at play in the development of financialized reporting practices. In other words, as long as financialization is conceptualized as, and reduced to, a one-dimensional trajectory, it further solidifies the perception of financialization as a cohesive regime and episteme — a totalizing logic that seems capable of explaining nearly all contemporary developments. In the present study, such observation translates to a distinct concern: by figuring financialization as a systemic behemoth, there is a risk that the critical scholarship risks glossing over and downplaying the critical tension and messiness that are present in the current assembling of solutions in the climate changed and financialized world.

To generate an alternative way forward, I have narrowed my literature review to foreground the limits of the prevailing approaches. I have done this because the current approaches might too quickly conclude that the establishment of the TCFD presents merely another instance of capitalist capture, in its financialized form, marking yet another example of failure to advance more radical changes to address climate governance concerns. To illustrate my point, I propose a brief exploration of how the current case study might unfold within each domain literature, with the goal to foreground the analytical constraints inherent to each.

First, the literature discussing reporting as a type of legitimizing tool (first row in table 1) would arguably provide one with much-needed critical tools to explore the discursive choices mobilized in reports, and how they portray and further materialize a particular kind of business-society relationship and hegemonic ideas of economic governance. Within the context of the TCFD, such elements are easily discernible. We can quickly observe that it is the economic and finance frames that filter out the relevant accounting issues to be discussed. In fact, the TCFD quite literally started with the exclusion of concerns and stakeholders other than economic
entities. Through the lens of this sub-literature, we would quickly recognize the overarching influence of capitalist frameworks and the associated discourses, which are now increasingly employed to contextualize climate change governance. However, should our analysis hasten to conclude that reporting primarily reinforces the existing capitalist hegemony, thereby curtailing prospects for meaningful change in climate governance?

Second, within the SEA literature's second domain (second row in table 1), we would be prompted to question: Is the TCFD just another failed initiative in a series of reporting innovations that eventually end up prioritizing financial factors only? And does this mean the reporting field remains under the normative frameworks and meaning system of financial capitalism? In practice, this literature would make us note that the TCFD indeed revolves around financialized frameworks and systems of meaning. As a result, it might make us conclude that TCFD can afford only minor changes within existing system, closing off the possibility for reporting to accommodate plurality of meaning system and normative framework that would go beyond the financialized concerns.

Moving forward, the third domain literature (Third row in table 1) equips one with the much-needed bigger picture as TCFD quite literally emerges from the world of global economic governance, being a Task Force established in the name of systemic financial stability by the Financial Stability Board and the G20. Empirically, we observe powerful economic players acting in the name of efficient capital allocation. Eventually, even the IASB is enrolled to address these governance challenges, yet their solutions remain singularly focused on the financial consequences for investors. To make things worse, fixing reporting rules is once again placed explicitly outside politics and inside the markets being framed as a technical issue. Yet, even in the light of such signposts, I am unsure how straight cut power story we have at hand. And while we might come across actors emblematic of "global capital" and the "New Financial Architecture", can we keep the window of controversy open a slightly bit longer to perhaps notice new sites for intervention and opening fields of possibilities?

Lastly, the final sub-literature (Fourth row in table 1) prompts us to decenter our focus away from specific actors and towards the interplay between accounting objects, discursive programs, and the epistemic qualities that guide unfolding events. In the empirics, we are undeniably navigating through a realm of epistemic objects—a rich ecology of them—that operate in alignment with certain discursive ideals, often anchored in financial economics. Concepts like "value creation" and "risk" in the context of transition serve as cases in point. But does this mean we are once again merely accounting for another example of the inevitable capture of the episteme of financial economics?

As I have pointed out, the objective of teasing out the analytical confines within each stream is to problematize them in order to establish an opening, a generative starting point for my own theorization. As Alvesson and Sandberg (2020, p.1302) have noted, literature reviews should work towards opening “up the possibility of new framing,” with the purpose of rethinking the targeted domains to “expand the imaginary of how we think about” well-observed phenomena. Therefore, in the present study, the intention is not so much to suggest better ways to study the
phenomenon of financialization of reporting, but to propose new analytical tools that might provoke different openings and facilitate novel connection making prevented by the existing frames mobilized in the literature.

In charting a way forward, I argue that the analytical focus should move from exploring how financial forms are overtaking non-financial domains, and instead concentrate on the ontological making of financial signification. This stance is not intended to champion an overly optimistic view of finance's limitless potential, as sometimes depicted by its most ardent proponents. Rather, it aims to delve into the very socio-material conditions that afford capacity to act and give meaning to action from the perspective of finance. Such an exploration should resist the temptation to prematurely label current developments unfolding as mere symptoms of an inexorable, monolithic march of finance and global capital. Instead, it encourages the inquiry to examine the socio-material foundations that lend finance, and its most prominent spokesperson -- the investor -- its potency, while also probing its vulnerabilities and potential avenues for transformation. As Latour (2014, p.12) has noted:

> There is nothing native, aboriginal, eternal, natural, transcendent in the habits that have been framed during the few centuries “market organizations” have exercised their global reach. No feature of *Homo oeconomicus* is very old: its subjectivity, its calculative skills, its cognitive abilities, its sets of passions and interest are recent historical creations just as much as the goods they are supposed to buy, to sell and to enjoy and as much as the vast urban and industrial infrastructure in which they have learned to survive. What has been made so quickly can be unmade just as quickly. What has been designed may be redesigned.

To explore these dynamics, I propose that recent advancements in constructivist market studies can offer a generative way forward. In the next chapter, I'll delve into the fundamentals of this approach, outlining the analytical tools with which the ontological construction of financial signification will be examined in the empirical sections. In doing so, I suggest that the selected approach offers the critical inquiry new tools to think about the role of financialized reporting in a both financialized and climate-changed world.
3. Theoretical framework: the socio-technical study of markets and financial signification

This chapter serves as an introductory to the theoretical framework that underpins this thesis and guides the inquiry into the socio-material constitution of financial signification within the context of climate transition. Informed by constructivist market studies (Çaliskan and Callon 2010; Çalışkan and Callon 2009; Callon 1998b, 2016; Callon, Millo, and Muniesa 2007; MacKenzie, Muniesa, and Siu 2007a) and recent research on the qualitative frames that shape financial signification (Birch and Muniesa 2020a; Muniesa 2017; Muniesa et al. 2017; Muniesa and Doganova 2015, 2020), I employ two key analytical tools: financialized agencement and valuation device. By drawing on the insights of such literature, the purpose is to elucidate the distributed and relational quality of financial signification and its malleability.

3.1. The socio-technical approach to the study of markets

For the Economy to expand and be kept down in the depths as the bedrock of all possible life on earth, an enormous work of infrastructure-building is required to impose it as obvious fact against the dogged resistance put up by the most common experience in reaction to such violent colonization. The Economy may well end up acting “in depth”, but only in the manner of those enormous cement pillars that have to be driven into ground by being battered by giant pile drivers so they can serve as a foundation.

Donald MacKenzie has never stopped exploring this: Without the schools of commerce, without accountants, lawyers, Excel table, without the endless labor of states aimed at divvying up jobs between public and private sectors, without the novels of Ms Rand, without our being continually broken in by the invention of new algorithms, without the standardization of property rights, without the continual drum-beating of the media, no one would ever have invented "individuals" capable of a selfishness drastic enough, constant enough, consistent enough to "not owe anyone anything" and to see all others as "aliens" and all life forms as "resources". Beneath the evidence of a native, primal Economy lie three centuries of economisation, as Callon would put it.

Bruno Latour 2021, p.60-61

In the field of economic sociology, various paradigms have evolved over time, each seeking to unravel the intricate relationship between markets and the societal context in which they function. Among these, the constructivist market studies emerged as a response to the dominant paradigm of that period, known as the "new economic sociology." (Callon 1998b; Krippner 2001) This predominant approach had focused on studying the embeddedness of markets in various cultural and political contexts, aiming to reveal the social and political qualities of
economic markets that were seen to lay hidden behind the façade of economic rationality. Rooted in the critical works of Karl Polanyi and Mark Granovetter, this embeddedness approach conceptualized markets and economic activity as an outcome of social constructions and institutions, increasingly overtaking space from alternative forms of more socially and politically attuned forms of organizing. In a sense, the underlying assertion of such an approach was that markets were superseding what was inherently a non-economic societal backdrop. (Callon 1998b) Consequently, questions around the markets were often explained by taking an interest in the various non-economic entities, such as values, norms, conventions, or other conceptual constructions, which the individual, markets, and entire societies would be captured by. As Çalışkan and Callon (2009, p.381-383; Callon 1998b) have noted, the objective of such inquiries was to make visible the somewhat unrealistic worldview projected by the economic sciences and markets by exposing the more fundamental non-economic realm behind the façade of market constructions.

In contrast to the embeddedness approach, the constructivist approach was less interested in discovering the markets’ underlying, even fundamental, qualities (e.g., by conceptualizing them as social rather than objective, political rather than value-free). Instead, it directed its analytical interest towards describing the socio-material efforts required to bring market-like phenomena into existence. Michel Callon emerged as a prominent figure in what would later be recognized as constructivist market studies. Drawing explicitly from the field of anthropology, science and technology studies, and the philosophy of pragmatism, Callon was critical in enacting the material turn in economic sociology, foregrounding the "decisive role played by techniques, sciences, standards, calculating instruments, metrology and, more generally, material infrastructure in market formation" (Çalişkan and Callon 2009, p.384).

By shifting focus towards the socio-materiality of things, market activity ceased to be conceptualized as merely artificial representations of inherently social beings who are to be freed from the delusions of economic sciences. Instead, the analytical interest was placed on the creation of market-like realities, including the technical arrangements required to facilitate market activity. In other words, while the embeddedness approach had primarily emphasized the social and conceptual ties of individuals determining market activity, the socio-material perspective highlighted the significance of technical arrangements and equipment in shaping agency. Callon, in specific, took an explicit interest in how diverse forms of calculative agencies constitute the reality of markets, emphasizing that markets are multifaceted, evolving relational arrangements shaped not only by human actors but also by various technical tools and theories of social sciences themselves (Callon 1998b, p.51).

In the early 2000s, the Callonian market program evolved into what became called the marketization program with an interest in studying the process of market signification achieved as a result of socio-technical organizing. (Çalişkan and Callon 2010; Çalışkan and Callon 2009; Callon 2016) This refined focus involved studying the market-making process as practical achievements that emerged from situated practices rather than pre-existing realities that could be acted upon (Çalışkan and Callon 2009, p.370). By viewing market making as a process, the study of marketization processes came to encompass all the operations through which behaviors,
organizations, institutions, and objects were constituted with market-like qualities. (Çalişkan and Callon 2010, p.2). Consequently, this shift in the analytical focus to the process of market making (and maintenance) redirected attention from the concept of the markets to the study of the “assembly and qualification of actions, devices, and analytical/practical descriptions” that format market-like realities (Çalişkan and Callon 2010, p.1).

3.1.1. From agency towards the study of socio-technical agencements and agencing

According to Callon, the study of market making as a socio-technical process necessitates empirical exploration of the collective work involved in co-constructing market signification. To facilitate such inquiry, the concept of socio-technical agencement (Çalişkan and Callon 2010; Callon 2007, 2016) was introduced as a critical tool to think with. Drawing inspiration from Deleuze and Guattari’s notion of assemblage the idea of agencement was developed as a useful methodological term in studying the collective formation of markets with a focus on the distributed quality of agency. (Çalişkan and Callon 2010, p.8). By foregrounding the diversity of forces shaping agency, agencement enabled tuning attention to the relational and distributed quality of agency and agentic capabilities. In doing so, it challenged the attribution of action to well-defined individuals, structures, or social entities, instead calling for an analysis that comprehends the socio-technical diversity of agencies and the complexity of their calculative capacities and power relations. (Çalişkan & Callon 2010) Thus, by decentering the attention from individual-human agents embedded in institutions, conventions, personal relationships, the concept freed the inquiry methodologically from confining agency to closed entities with a new focus on the many forces shaping agency.

In doing so, agencement emphasized arrangements that are simultaneously human and non-human, social and technical, textual, and material, highlighting the various material realities that shape action (MacKenzie et al. 2007b). For example, being qualified as a consumer is the outcome of careful socio-material organizing, involving a wide range of arrangements such as defining what qualifies as a suitable item for consumption, the right and desire to consume, and the ideas of costs, benefits and even freedom associated with such activity. Hence, the act of consuming cannot be attributed solely to the well-bounded individual’s will or capabilities. Instead, any form of action, including reflexive dimensions that produce meaning, occurs within hybrid socio-material collectives. (MacKenzie, Muniesa, and Siu 2007b, p.14)

Consequently, when acting is understood to be enabled through distinct agencement, reconfiguring agency involves reconfiguring the socio-technical agencement that constitutes it, necessitating material, textual, and other investments. (Callon 2005) For instance, to understand a particular kind of consumer behavior, the wider agencement of the consumer should be empirically explored – the relational agencement that shapes this figure and empowers it to act that extends beyond the singular individual. Hence, given its distributed quality, the relations forming agencements—the source of agency—cannot be confined to a particular field, discipline, culture, or institution. Neither are the qualities acquired through particular agencement explained by ideology, norms, or values. Instead, relational inquiry requires attention to a wide range of elements, such as laws, medical standards, metrological standards,
budgetary constraints, and calculative methods, among others, that all take part in framing agency when arranged in relation to one another.

However, it is crucial to note that agencement is not merely a configuration composed of pre-existing, inherently separate entities. Rather, it itself constitutes the capacity for action, offering a more immanent understanding of agency. In this sense, agencements are arrangements endowed with the ability to act in different ways depending on their configuration. (Callon 2007, p.320) As there is no external explanation that attributes meaning or force to action, the notion of agencement has been critical in enabling the empirical analysis to overcome the somewhat common dualism experienced in the social sciences, often locating the agency somewhere in or between the micro/macro, individual/collective, symbolical/material by exploring the situated and practical arrangements needed in constituting agency. As the source of action springs from the relations between heterogeneous elements simultaneously constituted by those very arrangements, no thing holds inherent properties nor a fixed ontology. Instead, the quality of any thing is constituted by the very arrangements they are made up.

3.1.2. Studying market agencing: three critical operations

Suppose we perceive markets as emerging from socio-technical agencements comprised of diverse elements. Then, a key question arises: How can we empirically examine the ongoing process of constructing these relational apparatuses, where their interconnections shape the very nature of things? To gain insights into this intricate process, Callon has offered other methodological tools for the study which revolves around the performative dynamics of framing and overflowing centering around the process of issue formation. (Çalişkan and Callon 2010; Callon 1998a, 2009; Callon, Lascoumes, and Barthe 2009) The following sub-section delves into these critical operations shaping agencements related to market signification.

Anthropology of (dis)entanglement: Framing and overflowing

According to Callon, market agencements result from an ongoing qualification process (Callon 1998b; Callon, Méadel, and Rabeharisoa 2002) through which things became framed into particular kinds of market actors. This includes, for instance, framing of entities into specific kind of beings, such as "consumer," "seller," and "commodity" which together enable market-like activity to occur.¹⁸ Therefore, the investigation into the formation of specific agencements demands a critical analysis of this framing process necessitating an in-depth look into how various entities are qualified as distinctive market actors, shaping, and being shaped by the market dynamics. This entails not only identifying the roles they assume but also understanding the underlying material arrangements through which they are constituted.

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¹⁸ Çalişkan and Callon (2010, see also Callon 2016) explicitly outline five critical framing operations that are required to format collective action towards the establishment of bilateral commercial action which is seen as the core operation with market signification. In the following sub-section, I will discuss in more detail how such frames differ in financial signification. Here, however, the general ontological operations of market making through framing remain central to the present study.
To study this qualification process (Çalişkan & Callon 2010; Callon 1998b; Callon et al. 2002), Callon (1998b, 1998a) has introduced the notions of **framing** and **overflowing** to describe dynamics that give solidity to market-like things. For instance, a commodity must be framed to make it a seemingly separate and passive thing that can be transferred by its previous owner into a new owner's world. Hence, no thing is a commodity by itself but must be constituted and constructed as such. As an example, think of the amount of legal coding, labor rights conventions, medical studies, marketing campaigns, pricing mechanisms, and trade agreements needed for a person to buy an avocado in the local supermarket at a specific price. Consequently, to establish a spatial imaginary of marketplace, within which acting is seen to take place, requires a complex web of factors to qualify something as a market like action.

In practice, framing refers to selectively including and excluding certain elements as part of a particular agencement. This selective framing provides things with temporary stability and solidity, enabling market-like activity to take place. Callon (2005) for instance, has used the example of buying a car to describe the framing operations required for the car dealer and the buyer to engage in such an operation without considering things like climate change, traffic jams, and exploitation of workers. If all such relations were included, the concept of a car as a commodity would be fundamentally different. For a market exchange to occur as it does now, certain elements are excluded from the frame, at least temporarily, so that the seller's and the buyer's worlds remain unaffected by several other things. (Ibid, p.7)

If framing signifies the attempt for temporary closure to enable action, then the notion of overflow signifies the effects created by the enacted frames. However, overflow is not an unfortunate spilling or unintended consequence because of “bad framing”. Nor is it a mere exclusion of previously existing things. Instead, overflows are better thought of as an inherent movement created by framing where "the opposing forces are created in the same movement" (Callon 1998b, p.39). Hence, overflows occur when the things left out of or created by specific frames begin to manifest themselves and make their existence felt, seen, and known. For instance, when buying a car, it is not that the things excluded would disappear by the act of framing. Instead, such effects may continue to make their existence known through other agencements leading to action that might eventually challenge the current frames. In doing so, they may challenge the solidity of established frames highlighting that no framing is fixed nor eternal.

Importantly, overflows can catalyze the creation of new subjects and their respective agencements when the effects are articulated and acknowledged as new pressing issues warranting attention. However, the translation of overflows into specific, recognized issues necessitates a collective endeavor. Only when an issue has been substantiated through means such as studies, first-hand accounts, data accumulation, and media attention, can a discourse regarding its management and responsibility begin. For example, if pollution in a local river culminates in human illnesses or biodiversity loss, it can spur the formation of what Callon refers to as **concerned groups**, manifesting in new forms of agency and actors such as local activist groups, research initiatives, or even identification of newly endangered species. (Callon 1998b; Callon, Lascoumes, and Barthe 2009)
However, the potential for these emerging groups to exert influence hinges heavily on the existing frames. For instance, if the issues, or the actors speaking about them, are initially labeled as "radicals" or deemed "irrelevant" due to the existing frames, these more durable frames must undergo reconfiguration before the actors can gain the power to act (Callon 1998b, 2007, p.326). Thus, while there is not a fundamental or hierarchical discrepancy between various frames from an ontological perspective, some frames attain greater robustness, congruency and durability due to their more deep-rooted entanglements. (Callon 1990) Nevertheless, even the most resilient frames, encompassing well-established constructs like culture, nation-states, institutions, divinity, and gender, can experience a reframing so profound that it comes to challenge their very existence.

For this reason, the same elements that bring solidity to a particular frame are simultaneously the sources and conduits for overflows showing their limits. For example, an argument gains realness through its connections with many other things that lend their weight to it. In this regard, framing requires mobilizing entities to align with the state of affairs suggested by the argument while simultaneously serving as a potential source for new forms of overflow, even if these entities may appear mute or silent at first glance. (Callon 1998b, p.38) To put it differently, an argument advocates for a particular state of affairs, which always affects number of other beings, requiring these others to validate the proposed worldview. Consequently, the "success" of a statement, or its performativity as we will next explore, relies on the solidity of these other things and their willingness (or the force to include them involuntarily) to align with the proposed state of affairs.

Performativity: from representation to intervention

Callon's definition of performativity is closely tied to the notion of agencement, referring to the capacity of agencements to bring about the very realities they describe. In other words, when a statement is considered performative, it not only describes a particular state of affairs but actively contributes to its materialization. Consequently, the performative quality of agencements becomes critical to understand as it is this interweaving of the representation and intervention "that the concept of performativity is designed to capture (MacKenzie, Muniesa, and Siu 2007b, p.5). As such, "performativity is not about creating but about making happen" where what is at stake is "the realization of the socio-technical agencement" elicited (Callon 2007, p.327).

Callon's interest in performativity originated from his observations of how economic sciences have shaped the actual organization of markets. His primary objective was to analyze how economic sciences, through their theories, models, and underlying assumptions, actively bring about the realities they describe, highlighting their role in constituting those realities. (Callon 2007, p.315) In doing so, the purpose was to demonstrate that economics, as a discipline, is not merely a passive observer of existing reality but an active agent in shaping it. As he famously stated, "Economics, in the broad sense of the term, performs, shapes, and formats the economy, rather than observes it" (Callon 1998b, p.2). Hence, economic sciences were now seen as critical study objects, for they did not just provide tools for the detached spectators but constituted an influential force that actively shapes and formats market realities.
Callon's reading on performativity is in line with the pragmatist understanding of signification, which is viewed both as a process and an action. Take market signification related to pricing of economic goods as an example; it is not a fixed individual or a think that but wider socio-technical agencements with the capacity to produce signs. (Muniesa 2007, p.392) Within these agencements, the actor and the action are inseparable, for the act of designating something as market-like is integral to constituting that very entity. For instance, when pricing a company, the market price signification is not derived from distinct values or evaluative principles bestowed by a specific individual. Nor is it a fundamental quality inherent to a company that can be unearthed through the right set of calculative tools and procedures. Instead, assigning value to a business is facilitated because "what interprets the business as a valuable object is itself a relational, active process from which something can emerge as the sign (or perceived value) of something else" (Muniesa 2012, p.32).

Consequently, number of studies took interest in the various mundane market devices, such as economic models, calculative conventions, speeches, or a diagram, and their performative quality as they come to utter a course of action that is always entangled to the agencement it is part of. In practice, this is achieved by both constituting seemingly separate elements while placing them within a shared relational space that can be further inscribed in other tools, such as technical guidelines, textbooks, or accounting standards. Consequently, market devices, understood as framing devices enact material operations that format and orient collective action where "the performativity approach makes it possible to exhibit the struggle between worlds that are trying to prevail" making "the struggle for life between statements visible" (Callon 2007, p.332).

Making and maintaining markets: tracing the trajectory of market issues
The constructivist market approach underscores the necessity of examining how distinct frames shape market signification and in doing so, shape various aspects of markets such as their design, implementation, management, expansion, and maintenance. (Çalişkan and Callon 2010, p.19) This approach suggests that these dynamics are intrinsically linked to the management of unforeseen developments and the consequent issues that arise from prevailing frames. As Çalişkan and Callon (2010) observe, market agencements are becoming increasingly complex and interdependent, resulting in the growing temporal instability of specific frames. This evolution calls for a critical examination of how existing frames influence generation and articulation of new issue and the proposed solutions. 19

To effectively study the dynamics of market signification, it is vital to understand how the existing frames' overflows are progressively identified and problematized into new issues by a diverse group of actors. Both Callon (2009; see also, Callon, Lascoumes, and Barthe 2009) and Latour (2007) suggest that it is then the “trajectory of issues” that needs to be mapped out as “each new issue deserves its own protocol because it has already overflowed the limits of the...
usual entanglements that we know how to care for” (Latour 2007, p.8). This implies that when new issues are brought up, it indicates that the existing frames are deemed insufficient and unable to provide solutions for the newly articulated issues suggesting “that the normal routines of actions have broken down somehow” (Ibid). Hence, in studying the trajectory of issues, Callon (2009, p.543-544) suggests that it is critical to explore both how the existing frames “weigh on current problematization” and “the way in which problems are eventually formulated, the treatment chosen and the solutions proposed and implemented, act on the existing configurations and contribute to changing them”. Since the articulation of issues relies heavily on existing frames but is not dictated by them, articulating issues is perceived as an experimental process to reorganize the relational field anew, possibly proposing a novel problem source, theory, or state of affairs for various matters.

According to Callon (2009), the moment of problematization is critical juncture in the trajectory of any issue, as it marks a moment where number of things are brought together into a singular issue formulation to be tested against the reality it proposes. Hence, moment of problematization serves as an experiment – a risky, uncertain, and contested articulation of various issues in the attempt to situate them under the common narrative of a particular “problem” that simultaneously proposes solutions or at least ways forward. As Latour (1996, p.126; 2007) has stated, “problematization is neither the representation of a pre-existing object, nor the creation of a nonexistent object through discourse; rather it is a process of material-semiotic configuration” the markets should orient around.

Furthermore, as noted earlier, the issue formulation is inherently entangled to the emergence of emergent concerned groups that trigger new identities, concerns, and forms of action and actorhood that do not exist independently of the issue or matter of concern at stake. These groups do not exist in isolation from the issue at hand; rather, their emergence is tied to the articulation of these matters of concern. As a result, the analytical interest shifts from examining how pre-established issues are assimilated or adopted by existing actors, to investigating the emergence, and eventual stabilization of new issues, and how they mold new entities now made affected by such concerns. Therefore, the emphasis is on understanding the crafting of agencements around specific issues.

This brings us to the final point that relates thinking market making as a process of market signification. As we have discerned, entities are not inherently market-like or political; they only assume such characteristics through specific signification processes that endow them with such qualities. Consequently, there are no predefined issues that simply transition from one domain (for example, political) to another (such as markets). Instead, new issues persistently foster renegotiations of significations in economics, politics, and science. This implies that the analytical interest ought to explore not how pre-defined issues become captured by seemingly distinct domains (e.g., Markets) but how the new issues provoke new agencements of authority in the ongoing assembly formations. To elucidate this concept in a real-world context, Callon (2009, p542) cites the example of carbon markets, demonstrating how issues do not adhere to distinct boundaries delineated by signifiers like “markets”, “political” or “scientific”. In doing so, he suggests that it is only after the “process of joint problematization at the end of which the
problems to be treated by either markets or political institutions or scientific institutions will temporarily be distinguished” (Ibid).

3.2. From market signification to financial signification: towards the study of financialized agencing

The term agencement denotes a form of arrangement that acts and at the same time imposes a certain format on the action. Saying that an agencement is a market agencement (as opposed to agencement that can be, e.g., qualified as altruistic, political, or scientific) means specifying that it is structured to direct the collective action towards the establishment of bilateral commercial transactions. This structuring of collective action is achieved through a series of specific framings, which contribute to giving collective action the specific format that it should have.

Michel Callon 2016, p.29

Becoming an asset is not the same as becoming a commodity. There is certainly [...] a family resemblance here. But the rules of entanglement and disentanglement, the calculative manipulations and the qualitative adjudications that characterize the object of the commercial transaction (Callon, Méadel, and Rabeharisoa 2002; Callon and Muniesa 2005) are not the primary ingredients – and often not even ingredients at all – of the act of [assetization]. Sure, when circumstances allow it, something that has become an asset can be sold or purchased in that capacity, in which case a price is assigned. But the nitty-gritty of valuation-qua-[assetization] (earning power, prospective return, continuation of worth, investment logic) is not, as our inquiry shows, that of the spot market, the cash and carry, the preference game, the marketing campaign, the commercial margin, or in other words, valuation-qua-marketization.

Fabian Muniesa et al. 2017 p.129-130

In the framework of the Callonian marketization program, market signification is understood to center around a distinctive social form: the commodity. Consequently, research into market agencements primarily focuses on exploring the arrangements that steer collective actions toward the establishment of bilateral commercial transactions. This includes formatting objects as market commodities, assigning them market prices, and determining spaces for their exchange. Furthermore, it calls for the creation of corresponding market actors such as sellers, buyers, and traders who orient themselves around pivotal market activities, particularly buying and selling taking place in the markets of here and now. (Çalişkan and Callon 2010; Callon 2016)

However, scholars are increasingly arguing that exploring the relational field around the commodity form and how it formats the collective action towards establishing bilateral commercial transactions in the markets of here and now fails to address the more prominent
dynamics of the 21st-century financialized markets. As most explicitly argued by Birch and Muniesa (2020b), due to the increasing importance of capital investment and various financialized techniques (Chiapello 2015, 2020), the main engine of contemporary financialized markets does not evolve around the commodity form. Instead, as part of the financialized markets, prominent market agencements are formatted around the asset form. This in turn requires enacting financial signification that orient around evaluating the financial value of things as objects of investment in difference to commodities to be exchanged in the markets of here and now. Consequently, as financial signification is underpinned by the act of investment, rather than bilateral commercial transaction, it requires qualitatively different spatio-temporal framing operations.

3.2.1. Framing financial signification: four critical framing operations

Like market agencements explored by Çalişkan and Callon, the financialized agencement is also constituted through critical framing operations which enable financial signification in the first place. In the case of market signification, Çalişkan and Callon (2010) have suggested five types of framing operations that the constructivist inquiry should be attentive to when studying it, concerning the qualification of market goods, their respective marketization agencies, forms of market encountering and price setting tools. In difference, financial signification entails different framing operations orienting towards the act of investment and the evaluation of things in terms of their financial value. To paraphrase Çalişkan and Callon, the following are the types of framing operations “to which it seems crucial to be attentive when it comes to examining” the making of financialized market agencing. More so, these framing operations are suggested to draw “attention to areas where it might be possible to exert control over market design” in the 21st century financialized markets.

Hence, by considering financial signification as a practical achievement and a process that is acquired through assembling things (agencement) one way, rather than another.

practical achievement that requires socio-material organizing to facilitate the creation and expression of knowledge claims from a financialized perspective. Throughout my work I use the expression “financialized gaze” and “investor gaze” rather interchangeably with the “financial signification” as the process of signification requires a focal point- a gaze – from which the sense making is enacted. With financial signification, a will be next discussed, this focal point relies on the figure of “virtual investor” whose gaze is theorized as an effective “technology for the production of society” with “institutive capacity” (Muniesa et al. 2017, p.131).

In the remaining part of the chapter, I outline how the framing operations suggested by Çalişkan and Callon are altered when exploring financialized agencing. This encompasses the identification of subjects and objects of investment (e.g., Investor-asset complex), investor’s methods of knowing, and the narrative structures that script financialized modes of acting.

1) qualification of subjects and objects of investment (investor - asset)

2) investor’s methods of knowing
3) narrative scenario of value creation

4) temporality of the investment.

These framing operations are considered to constitute the durable frames through which financial signification is enacted, facilitating the "capacity to act and to give meaning to action" from the perspective of finance. (Callon 2007, p.160) Together, they format the financial signification and the gaze of the imagined investor that is not located is not located within individuals, organizations, or any seemingly fixed or clearly bounded entity. Instead, the focus on agencement decenters attention from a singular entity, as the source of agency, to arrangements that condition and enable the capacity to act of distinctive actorhood. Hence, it is not some singular actor that acts, but as an ANT-like actor that comes to effectuate action for having an effect in the world. Next, I will briefly discuss the importance of each framing operation in shaping financial signification through which much of the collective action is organized in an evidently financialized world.

Qualification of objects and subjects of investment: formatting investor-asset complex

The first type of framing operation involves the simultaneous framing of potential objects of investment and their corresponding market actors, namely the investors and other types of financiers. Just as certain items do not simply become commodities due to some intrinsic quality, similarly, they do not become financially valuable or invaluable assets on their own. Instead, the financial value of any thing, is contingent upon their integration into specific socio-technical arrangements. However, unlike the framing of commodities that cater to the desires of sellers and consumers, objects of investment necessitate being constituted to align with the investor's perspective while ensuring their evaluative and calculative capacity. Consequently, framing gaze of the investor to capture his evaluative attention.

The simultaneous framing of both objects and subjects of investment can be understood through the process of objectification-singularization, as discussed by Callon and Muniesa (2005). Here, the objectification refers to the attribution of qualities through which object gains its qualities as an investment object. To paraphrase Callon et al. (2002, p.197), a thing with financial value is "a thing with well-defined shape, which is used to meet specific needs, and which has an established value in a market context". This qualification, however, is not enacted in isolation; defining something as a possible object of investment "means positioning it in the space of [other objects of investment], in a system of differences and similarities, or distinct yet connected categories". Consequently, all qualities are constituted by the continuous process of requalification where "all quality is obtained at the end of a process" facilitating their temporal stabilization to enable the action and power to act. (ibid)

The process of objectification is closely intertwined with the process of singularization as for some thing to become valuable for an investor, it must be incorporated into their world, becoming an integral part of it (Callon & Muniesa 2005, p.1233). Here, singularization refers to this gradually defining the object’s properties in a way that allows it to enter the investor's world and become attached to it. This mutual qualification occurs between the object of investment
and the investor, establishing a complex web of relationships that constitute the investor's world (Callon & Muniesa 2005, p.1233-4). Consequently, the life of an investment object is bound by these two essential constraints, where objectification necessitates that the investment takes the form of a tangible entity whereas singularization, conversely, demands that the investment's properties be adjusted to align with the investor's world, even requiring transformations if necessary.

Consequently, it is only within certain limits and conditions that a thing may be considered a valuable and worthy investment object. As discussed earlier, the very frames that contribute to their durability are also the source of their fragility. In other words, the qualities that confer value upon objects are inherently precarious as the very act of framing them exposes them to the risk of losing such value. And while the financialized qualification may be about turning new things into assets (e.g., think of nature, labor, and relationship as capital or an asset), for a large part, it is about the continuous requalification over whether the things considered as an asset may remain so, or when and how, or under what condition, they might lose such quality. Hence, maintaining things financially valuable requires constant management of value, that is, ensuring things stay within the conditional limits to be rightfully qualified as something with value (and not, for instance, become liabilities or deemed unworthy under the investor's evaluative gaze).

**In investor's methods of knowing: distributed management of financial value**

Importantly, the financialized gaze is not governed by some external forces or powerful individuals. Rather, various actors play an active role in establishing the cognitive and practical competencies necessary to qualify and evaluate things effectively. Hence, another critical framing layer in financial signification relates to the investor’s methods of knowing. In practice, this encompasses all the operations, devices, and tools that frame things in a manner that might influence the operation of such evaluative gaze. For instance, this could involve strategies that seek to frame things in a way that puts their assumed value at risk or suggests potential value implications pertinent to the investor's evaluative gaze.

Consequently, financial signification cannot be reduced to a subjective speculative logic, characterized by varying "risk appetites". Instead, it should be considered as a collective activity "constituted by specific forms of knowledge and practices that are necessary to make, govern, and manage valuation judgments" (Birch 2017, p.479). As highlighted by Langley (2020, p.386), "these techniques are fundamentally rooted in uncertainties over capital allocation and return on investment, rather than in the vicissitudes of asset pricing on secondary markets". These practices encompass a range of devices, rituals, and techniques including discounting rates, business models, credit ratings, analysts' reports, and rumors, among others. Therefore, financial signification is “constituted by specific forms of knowledge and practice that are necessary to make, govern, and manage valuation judgments." (Birch 2017, p.479)

In this context, the concept of the "device" as discussed by Callon, Millo, and Muniesa (2007; Muniesa, Millo, and Callon 2007) serves as a valuable methodological tool to scrutinize the (re)formation of agencements, especially when perceived as "the material and discursive assemblages that intervene in the construction of markets" (Muniesa, Millo, and Callon 2007,
Regarded as socio-technical agencements in their own right, these devices come to afford certain modes of action, framing the capacity to act as "affordance indicates how owning to their specific characteristics, things can both propose (promise) and permit (permission) some particular courses of action" (Çalışkan & Callon 2009). However, it is critical to note that market devices not only provide the actors with means to meet their pre-defined goals but actively enact the realm that constitutes the action itself as a possibility. As such, devices are seen performative; while not deterministic of action, their very "materiality simply renders certain actualizations or transformations easier or more probable than others" (Çalışkan and Callon 2009, p.389).

However, since the concept of the market device has predominantly focused on framing specific types of market encounters, Doganova (2019, p.256) suggests that the term "valuation device" might be more appropriate for broadening the analysis to encompass the myriad devices "that are mobilized in queries about the value of things and attempts at making things valuable". As she notes, the insistence of market devices tends to narrow the analysis to particular market activities and hence overlooks the contemporary debates "such as those on sustainable development and climate change, which deeply engage the question of what is valuable" (Ibid).

Hence, financial signification necessitates a series of valuation devices (Doganova 2019; Muniesa & Doganova 2015) that articulate and suggest the value effects or qualities of things in their own unique ways. However, the efficacy of such devices is not gauged based on their representational value. Rather, it stems from their capacity to intervene and reconfigure the prevailing agencement and its frames, molding things in their image. In a sense, they make things explicit, that is not “about clarifying what remains obscure or about realizing what is prefigured" but rather signifies a "creative, performative, generative, provocative process" where "an array of possibilities opens up, many unintended, disputable and problematic" (Muniesa and Linhardt 2011, p.551, see also Muniesa 2014).

As financial signification is fundamentally constituted by specific forms of knowledge, devices, and practices, this process is the result of continuous maintenance work, engaging a "multiplicity and diversity of actors to compete to participate in defining [economic objects] and valuing them" (Çalışkan & Callon 2010, p. 8). This makes financial signification as a distributed activity characterized by "heterogeneous constituents" that deploy "rules and conventions; technical devices; metrological systems; logistical infrastructures; texts, discourses and narratives (e.g., on the pros and cons of competition); technical and scientific knowledge (including social scientific methods), as well as the competencies and skills embodied in living beings" (Ibid, p. 3). However, such a collective work is not about “discovering” the “real value” of things, but a creative process through which claims about the “right” value of things is enabled. (Muniesa, 2014) 20 As Birch (2017) posits, this process is ultimately shaped by a multifaceted ecosystem encompassing diverse financial, techno-scientific, political, and social actors as the operation is sculpted and defined by a broad spectrum of socio-technical activities.

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20 Muniesa’s example relates to discovery of market prices, but the dynamics discussed equally apply for the process of creating vs discovering financial value.
This includes, but is not limited to, accounting practices as well as elements such as laws, regulatory agencies, professional and expert bodies, calculative models, and technical standards. These components, in their collective entanglement, mediate the way financial signification can be enacted.

**Narrative scenario: The imaginaries of value creation scenario**

The third critical frame constituting financial signification involves the narrative scenario through which other frames and tropes, such as the subjects and objects of investment and their corresponding technical devices, can be understood. While this scenario can undergo various plot developments, generally, the master narrative shaping financial signification tell stories about the possibilities of financial value creation and its related risks and opportunities. However, such narratives are not deterministic. Instead, they are better conceived as "an outline, a set of indications for a plot rather than a fully determined rulebook" merely scripting and setting a "configuration in which something else unfolds" (Muniesa et al. 2017, p.65). In a sense, they provide the primary "vehicle for meaning" (Ibid), facilitating comprehension and imbuing meaning to the various elements of financial signification, including subjects, objects, and technical devices. Nonetheless, the outcomes remain perpetually uncertain, as actors engaged and mobilized by various narratives continually construct, adapt, and align themselves within it. (Ibid)

Unlike the frames shaping market signification, the narrative scenario framing financial signification isn't centered around favorable buying and selling opportunities crafted through various marketing efforts from the perspective of a seller and buyer. Instead, it is formulated from the vantage point of the investor's gaze and their intuition concerning the possibilities for value creation. This process "typically involves referring to – if not simulating – an encounter between two individual parties (the investor and the entrepreneur; the venture capitalist and the technological scientist; the banker and the manager; the funder and the funded) who engage in mutual stimulation and end up agreeing on the value of whatever it is that is under valuation, and becoming entangled in a series of rules for the appropriation of flows of money, or of wealth more broadly." (Muniesa et al. 2017, p.131)

To illustrate this, consider the scenario where a startup is in pursuit of funding from venture capitalists. In this narrative, the startup's innovative concept, spearheaded by "ambitious entrepreneurs" with a high tolerance for risk, takes center stage, merging with the storyline of "the investors," who possess the expertise to gauge the prospective value generation that the startup presents, adeptly assessing the associated risks and rewards. This narrative develops further as various sub-plots arise, encompassing elements like market competition, technological progress, and regulatory hurdles, all of which have the potential to either obscure or facilitate the optimal and efficient realization of the investment's potential.

Consequently, the narrative scenario possesses an "institutive capacity" (Muniesa et al. 2017, p.131) in a performative sense. As such, the narrative is not about predicting, nor necessarily speculating on the inherently epistemic uncertain future. Rather, its purpose is to engage in material signification, aiming to enact the scenario it portrays. In other words, the power of the
scenario stems from its capacity to provoke the relations on which dynamics it speculates and its ability "to generate constitutive associations, affectively charged relations, and practical investment" that in the instance of financial signification, relates to the production of facticity, no matter how short-lived or temporal. (Konings 2018, p.9). As an example, consider the idea of business model, as explored by Muniesa et al. (2017) and Muniesa and Doganova (2015); the model's usefulness is not based upon how "accurately" it presents or predicts the future (financial) viability of the firm seeking capital here and now. Instead, the business model provides a "calculative space" in which "the coherence between the figures presented in the model, the value proposition, the value network, and the revenue model that counts" are made to fit into the investor's gaze as to bring into existence a worthy object of investment. (Gilbert 2017, p.94)

In conclusion, given the institutive capacity of narratives, a comprehensive study of financial signification requires a detailed investigation into the narratives, devices, and representations that define the investment complex. In this vein, Muniesa et al. (2017) assert that scrutinizing the performative facets of financial signification, including the deployed narratives and settings, is essential. These components constitute the vital mechanism for articulation in the collective endeavor of attributing or negating financial value. (Muniesa 2019)

The temporality of investment: constituting time for value creation scenario
The final framing operation relates to temporal aspect of financial signification, as the value creation scenario in which the financialized evaluative gaze is made sense of, does not only enact a spatial operation by connecting various elements within the "same space". Instead, the constitutive script has a critical temporal quality to it. In the case of financial signification, such quality is inherently future-oriented, as the investment value is always constituted in relation to a distinct scenario of a future.

As previously discussed, framing things with financial value extends beyond immediate assessments of things in the here and now but involves positioning objects as sources of enduring value capable of generating sustained returns. In other words, the framing process evaluates assets based on their potential to maintain a steady and durable revenue stream. Instead of gearing an object solely for transactions of buying and selling, during which a market price is attributed to denote the object's exchange value, framing for capital investment concentrates on evaluating characteristics pertinent to their long-term viability from the perspective of financial value.

For this reason, the temporal framing of financial signification is deeply interconnected with assumptions and projections regarding the future, as well as the anticipated impact of specific events on opportunities for value creation. Through this forward-looking lens, financial signification attains its evaluative force, necessitating an ongoing analysis of future possibilities. This perspective amplifies the significance of practices related to forecasting, risk analysis, and the anticipation of market trends, all aimed at navigating the uncertainties of the future.

Nevertheless, in line with the pragmatist theory of signification, financial signification is not to be judged based on its success or failure in predicting the inherently uncertain future. Instead,
financial signification's constitutive form embraces futurity (Birch and Muniesa 2020b), given that valuing items from a capital investment standpoint, by definition, "requires time" (Muniesa & Doganova 2020). This translates to a temporal process where "value and time are created together" (Tellmann 2020 p.354). This sense of futurity facilitates the reshaping things in the present into sources of future value creation, where the present value is predicated on a distinct type of future horizon.

Curiously, financial value performs a critique of market value accusing it of its obsessive focus on the present moment. In fact, somewhat curiously, financial signification can become a practical way to protect things from "the markets" if they are seen wrongly valuing things deviating from the fundamental value of things by relying on wrong future imaginaries, calculative tools or temporal time horizon. As noted by Muniesa et al. (2017, p.124) "is not, after all, considering something in terms of capital [bearer of financial value] a synonym of caring for it in the long run, as opposed to, say, just throwing it away, dumbing it into the market and cashing profits on the spot?"

The different valuation formats become critically operationalized when the difference between the "market version of value" and the "value for the capital investment" becomes articulated (Muniesa 2017). As Muniesa (2017, p.449) notes, "the contrast between a market version and capital [or asset] version of value is perhaps best epitomized by the idea of natural capital as used in economic responses to the problem of the proper valuation of natural resources: considering an ecosystem as an asset rather than as a commodity would be, precisely, a way to protect it from commercial dilapidation." As such, somewhat paradoxically, financial value embodies a critique of the market, when some market actors are accused for not accounting for the "right" value for things.

In conclusion, when viewed from a pragmatist perspective, financial signification's temporal dimension carries significant implications for its constitutive effects that go beyond economic conduct, extending its influence on questions of existence and guiding the orientation of societal transformation. As Doganova and Muniesa (2020, p.105) highlight, the financial signification, and its corresponding future-oriented valuation methods, are increasingly seen to present itself both "as a technique to identify the true value of things", and as "a method to decide which things should be financed and which should not", ultimately shaping questions of "which things should exist and which things should not". In effect, the financial signification is producing the moral horizon that guides "not only economic conduct but the orientation of the transformation of the world altogether" (Muniesa et al. 2017, p.445). Thus, exploring the temporality of financial signification in a pragmatist sense elucidates its profound implications, increasingly affecting the constitution of our collective future.
3.3. Representing the conceptual toolbox for the study: financial agencement and valuation device

To conclude, this study draws upon the constructivist market studies (Çalişkan & Callon, 2010; Çalişkan & Callon 2009; Callon 1998b; 2009; Callon et al. 2007; Muniesa & Callon 2007a) and their recent focus on the qualitative frames that constitute financial signification (Birch & Muniesa 2020; Langley 2020; Muniesa 2012, 2017; Muniesa et al. 2017; Muniesa & Doganova 2015, 2020). From the nexus of such literature, I draw out the concepts of \textit{agencement} and \textit{valuation device} as my two main analytical tools to study the socio-material constitution of financial signification. Specifically, these methodological tools are foregrounded to help direct the analytical focus towards specific aspects of the empirical context, enabling an examination of how the pressing issue of climate transition comes to reframes financial signification.

**Financialized agencement: framing agency**

First, by taking agencement as my methodological tool to think with, I take an interest in the distributed quality of financial signification and its more durable frames, which enable the signification in the first place. Hence, the four types of performative framing operations outlined above are explored to describe the plasticity of financial signification as it gets framed as part of distributed socio-material organizing. Consequently, I suggest such frames constitute the more robust and durable frames of financial signification without attributing some fundamental qualities to them. Hence, the analysis centers on examining the plasticity of these durable frames that relate to the; 1) qualification of subjects and objects of investment, 2) investor's methods of knowing, 3) scenario for value creation, 4) temporality of the investment - and how they are formatted in thinking of the financial effects of climate transition.

Hence, rather than trying to identify some fundamentals, institutional logics, or evaluative principles that underpin the observed developments, this study seeks to describe the socio-material organizing through which climate transition becomes framed as a distinct issue from the point of view of the investor’s gaze. Through this approach, corporate reporting becomes a crucial node that shapes this financial signification as part of the wider arrangements that enable commensurability and evaluation of objects, and their very constitution, in a financialized sense. Therefore, by remaining within the ontological plane of finance, the thesis describes the various narratives, imaginaries, devices, and calculations required to constitute the issue of climate transition as an appropriate object of concern for the investor’s gaze.

In exploring the process of \textit{agencing} financial signification, I describe the socio-material \textit{process of framing agency}. In doing so, the empirical focus has quite literally been in the \textit{process of agencement} to describe how a particular \textit{mode of agency} is constituted around transition by changing the socio-technical conditions that enable the capacity to act and to give meaning to action. Furthermore, as framing agencement involves investing in materials, texts, and other resources, the analytical chapters have described this type of socio-technical work that frames financial signification in the context of climate transition with focus is on the practices,
devices, and imaginaries through which ideas and knowledge of the financial effects of transition are constituted.

**Valuation device: formatting agencement**

Second, the concept of the valuation device is employed to examine how a particular agencement is being formatted. Specifically, I conceptualize the TCFD framework as a valuation device (Doganova 2019; Kornberger et al. 2015; Muniesa & Doganova 2015) that affects the distributed financialized agencement through which the financial value effects of climate transition are perceived and realized. Viewed as a formatting device (Doganova 2019), the TCFD framework itself does not serve as the primary object of analysis but rather serves as an entry point for exploring the broader agencements it engenders and requalifies (Callon et al. 2002); the more durable frames constituting financial signification (Muniesa et al. 2017; Birch & Muniesa 2020). Consequently, by conceptualizing the TCFD framework as a valuation device, my focus is on understanding its role in shaping the distributed practices that constitute and influence the financialized gaze. This approach allows for exploring broader constellations of factors shaping financial signification increasingly affecting the governance of climate transition.

However, it is important to clarify that my intention is not to argue that, as a valuation device, the TCFD framework should become the source of action. Neither is its role studied to understand how it comes to assign some value claims, over others, to things now affected by the issue of climate transition. Rather, I posit that the framework becomes critical in formatting the evaluative conditions, ideas and calculations framing the financial value effects of climate transition. This includes, but is not limited to, the materialization of new narrative scripts, the introduction of tools, and influencing a wide range of practices framing the financialized gaze. Hence, the purpose is not to theorize the TCFD as a singular device but to understand it as part of a forming and formatted ecology of devices and elements. By doing so, I focus on studying the broader constellation of factors that shape fundamental questions such as "what is valuable, who has the authority to determine value, and who or what is to be valued" (Doganova 2019, p. 260) within the context of climate transition.

By establishing these concepts as central components of the theoretical framework, the initial research question is translated into a theoretical one that guides the investigation. Accordingly, the conceptually informed research question, this thesis answers, reads as:

*How does the TCFD framework come to format financial signification in the context of climate transition?*
4. Methodology

Next, I discuss the methodological aspects of the study as the selected theoretical approach has methodological implication necessitating a research method in line with the chosen theoretical underpinnings. In other words, as the study of socio-technical agencing necessitates constructivist inquiry with focus on the material realities that render reality actionable, I have chosen Actor-Network-Theory (ANT) as my guiding method theory. Therefore, this chapter begins by discussing the methodological implications of devising an ANT-informed inquiry and how its principles have been translated into a design of a field study. Specifically, I seek to elaborate the disorienting experience of finding, locating, and being in the field which has shaped the process of framing and selecting the research question. After, I move on to outline the techniques for data collection and generation used, and how such data has been utilized to construct the present research account. In the final section, the process of theorizing and assembling the research account is discussed.

4.1. Methodological considerations: Actor-network theory

In carrying out the research, Actor-Network theory (ANT) has been critical in providing me with the methodological sensitivity to trace the formatting of financial signification. As persistently discussed by Latour (2005, 1999), ANT does not account for a theory in the original name of the word but is better thought “as a toolkit for thinking about and charting the heterogeneous practices of association that make up the social” (Law & Singleton 2014, p.380). Specifically, it equips the research with a distinct sensibility to materiality, uncertainty and relationality of practices (Ibid). Consequently, the choice of ANT aligns seamlessly with the chosen theoretical framework, given its constructivist foundation rooted in material relationality. (Law 1999)

First, ANT is perceived as constructivist because it regards entities and things as socio-technical assemblies, scrutinizing the ways they gain existence. ANT-guided inquiries frequently highlight the precarity of existence, aiming to trace all the practitioners, knowledge, skills, and tools, both human and non-human, required to forge something into a seemingly coherent and distinct entity. In doing so, they tend to underscore the inherent fragility of any construction site, recognizing that things could have always been constructed differently or, worse, how they may still fail. (Latour 2005, p.88-89) Consequently, the interest is not to unveil some hidden elements (such as culture, belief system, unconscious desires, specific logic) in another "realm of reality" that would explain financial signification. Instead, ANT-driven inquiries are centered on the socio-material arrangements that give form to things so as to be considered real for having effects in the world.

To put it differently, in exploring the formatting of financial signification, my aim is not to identify the underlying principles or logics that would explain this formatting but explore the socio-material arrangements that facilitate distinct financial signification. To do this, ANT
equipped me with a suitable “toolkit for thinking” (Law & Singleton 2014, p.380). In practice, it facilitated tracing how the evolution of ideas and knowledge about the financial effects of climate change has occurred over time and across spaces. This allowed me to transcend predefined boundaries and follow a diverse group of actors, all of whom became increasingly concerned about the financial implications of climate transition. This approach was especially relevant given the distributed quality of the TCFD framework as it did not easily sit within a particular organization, entity, or field. Instead, it drew the attention of a wide array of actors, events, and timescales – ranging from climate negotiations and macro-prudential policymaking to accounting standard-setting and corporate risk management.

Furthermore, the explicit emphasis of ANT on the activity of tracing networks was considered critical for examining financial signification as a distributed and collective endeavor. As Latour consistently highlighted, “ANT is not about traced networks, but about network-tracing activity” wherein “a network is not a thing but the recorded movement of a thing” (Latour 1996, p.378). This process of tracing is performed to highlight the relational and distributed quality of any phenomenon or action, suggesting that they arise from a specific set of relations rather than from any inherent essence within them. For example, the ability of the TCFD framework to influence accounting standard-setting, as discussed in chapter 7, cannot be attributed solely to some intrinsic attributes inherent to the framework itself. Instead, it is the manner in which various components unite and interact within the framework that endows it with potency. This emphasizes the distributed nature of agency in ANT, where agency is not grounded in the inherent characteristics of an object, but evolves from the interrelations established within an assemblage, fostering a dynamic through which agency and agentic potential circulate and may emerge.

What I aim to highlight here is the strong resonance between the concept of socio-technical agencement and what is conceptualized as an ANT-like network. Hence, to describe financialized socio-technical agencement, as is done in this thesis, is akin to tracing an ANT-like network where network is not a thing that would exist out there having “roughly the shape of interconnected points, much like a telephone, a freeway, or a sewage network” (Latour 2005, p.131). Instead, network, in an ANT’s sense, is a “concept, not a thing out there […], a tool to help describe something, not what is being described” (Latour 2005, p.131). When defined this way, “the consequence is that you can provide an actor-network account of topics which have no way the shape of a network – a symphony, a piece of legislation, a rock from the moon, an engraving. Conversely, you may well write about technical networks – television, emails, satellites, salesforce – without at any point providing an actor network account”. (Ibid) In other words, “ANT does not tell anyone the shape that is to be drawn – circles or cubes or lines – but only how to go about systematically recording the world-building abilities of the sites to be documented and registered” (Latour 1999, p.21).

In the process of tracing networks, ANT-informed inquiry commits to delineating and narrating “the procedures which enable actors to navigate through each other's world-building activities” (Latour 1999, p.21). Consequently, ANT provides a distinctive approach to engaging in the study of the ongoing (re)formation of the collective by empirically investigating “the new
institutions, procedures, and concepts that have the capacity to gather and reconnect the social” (Latour 2005, p.11). In tracing how the new procedures and concepts gain importance and force in articulating financial effects of climate change, I have explicitly explored the way knowledge claims and ideas are being translated across time and space.

Here, I use the term translation quite deliberately, intending to spotlight the dynamics of this network-tracing, through which the financial signification is being progressively structured. This term encapsulates the continuous transformation of entities within a relational existence, wherein the “network” is defined as “what is traced by these translations in the scholar’s accounts” (Latour 2005, p.108). In this context, there are no passive entities merely transmitting something (be it knowledge, interest, or ideas) unchanged in a linear progression. Instead, all entities evolve in a non-linear and dynamic fashion, provoking a particular form of relational renderings. As originally outlined by Callon and Latour (1981, p.279) translation can mean “all the negotiations, intrigues, calculations, acts of persuasion and violence, through which an actor or force attains, or has conferred upon itself, the authority to speak or act on behalf of another actor or force”.

In a sense, translation can be thought of as a process qualifying any act or action, always involving the transformation of entities being translated and the entity it is being translated into. Furthermore, it implies that virtually any thing can wield influential force capable of effecting changes. Notably, ANT underscores the role of devices in actively shaping agency within specific configurations, instead of merely focusing on discursive attributions to them as passive objects. Rather, if something appears devoid of agency, it is a result of arranging elements in a manner that allows for the exertion of influence (by the subject) over another entity (the object), and not due to an inherent difference in the quality of their nature as such.

Accordingly, in this study, I have primarily concerned myself not with probing the essential nature or veracity of things, but rather with examining how distinct phenomena (such as markets in transition) or an entity (like transition steward, or investment object in transition) achieve a level of stability to be perceived as real due to their material impacts in the world. Furthermore, I have traced how the distinct financial significations come to progressively manifest as tangible realities in the world, swaying actors' perspectives, calculations, and ultimately even influencing the production of balance sheet figures. Here the critical difference is not drawn between the real and the unreal, nor between reality and fiction, but revolves around the varying “procedures that facilitate the emergence of multiple realities, as opposed to those fostering stability and unity”. As highlighted by Latour (2005, p.119), “the gap between reality and unity becomes noticeable when courts must adjudicate on expert knowledge, when state leaders must make decisions pertaining to natural phenomena, when consensus conferences are convened to settle some geopolitical dispute, when scientists criticize their peers in the press for failing to adhere to appropriate protocols, or when public discussions unfold concerning issues like the fate of the Gulf Stream, and so on.” Consequently, the ANT-informed method prompts one to delve into the gradual assembly necessary to enact distinctive financial significations underscoring that the production of facticity does not merely stem from the creation or simple reflection of "truer" knowledge. Instead, it relies on the steady buildup of socio-material foundations, pivoting the
analysis towards scrutinizing the processes through which the authority to assert knowledge claims, perceived as real, is progressively established across both time and space.

This brings us to the final point regarding the issue-centric inquiry facilitated through ANT (Latour 2004a, 2004b, 2007). Owing to the escalating controversies surrounding the perceived "naturalness" of number of things, the assembly formulation is increasingly seen to orient around issues to highlight “the disputed topic of a virtual assembly” (Latour 2005, p.119). Hence Latour has suggested that ANT facilitates an issue-centric inquiry through which agency is gradually acquired. Rather than focusing only on the influential actors and state of affairs, ANT shifts the analytical lens from well-established entities to the formation of issues and what gathers and is formatted around them (Latour 2005, p.114, 2007; Marres 2007). Therefore, in line with Callon, the ANT-style of network — a distinct socio-technical agencement — can be delineated by "following a trajectory of issues," facilitating an understanding of “the manner in which problems are articulated, the approaches adopted, and the solutions proposed and enacted, influence existing frameworks and aid in their transformation.” (Latour 2005, p.119-120) This has become increasingly contentious, as evidenced by the ongoing controversies surrounding various issues that prove difficult to permanently "cool down" as they are constantly being reopened for debate. (ibid, see also, Callon 1998). However, the controversies that maintain this state of flux are not solely the result of "interpretive differences" or divergent "ideologies” but are shaped by the distributed actions and networks that format particular issues and their corresponding realities.

4.2. Framing the object of inquiry and finding one’s way in the field

But it is one thing to establish the principles and philosophical foundations for an inquiry, and another entirely to translate these principles into a viable research design. The following two subsections aim to illustrate this translation process by detailing the experience of identifying, locating, and immersing oneself in the field, as well as discussing the implications this has for acquiring and utilizing the empirical data featured in this study.

4.2.1. Arriving and getting lost in the field, and the choice of the object of study

How ridiculous it is to claim that inquirers should follow the actors themselves when the actors to be followed swarm in all directions like a bees’ nest disturbed by a wayward child? Which actor should be chosen? Which one should be followed and for how long? And if each actor is made of another bee’s nest swarming in all directions and it goes on indefinitely, then when the hell are we supposed to stop? If there is something especially stupid, it is a method that prides itself in being so meticulous, so radical, so all encompassing, and so object-oriented as to be totally impractical. This is not a sociology any more but a slowciology! Zen masters can puzzle over the many conundrums of their austere discipline, but not the writer of sociology treatise. Either she
proposes a project that is affordable and manageable or we sue her for disinformation.

Bruno Latour 2005, p.121-122

So where do you start? If it is to follow Latour (2005, p.196), you start in the “middle of things, in media res.” That is, you don’t start with something “social”, “context” or a “bigger picture”, but instead, you start with the things themselves, and follow them. Yet, such advice can be a rather daunting and disorienting for a PhD student starting her journey. As everyone knows, the very reason to embark for such a journey is often for the curiosity to understand something that does relate to some bigger picture and wider context one wishes to learn and explore more about.

For me, this broader context was tied to the wider corporate reporting landscape with which I had become acquainted during my prior studies, particularly its evolution amidst various sustainability concerns. I found myself particularly drawn to the ongoing struggle to delineate the boundaries between what is classified as non-financial and financial reporting. This intrigue grew as I immersed myself in the domain literature, noting how the inability of new reporting forms to instigate “positive change” was frequently attributed to their encapsulation within the languages of economics, finance, and markets. Furthermore, my studies revealed there was much going on this space, manifested through the mushrooming of new reporting forms, disclosure frameworks, and standards which were poised to become mandated and regulated. Therefore, the preliminary issue guiding my research was to explore the evolutions in non-financial reporting disclosures to scrutinize the "phenomenon of corporate reporting" and how the observed changes are interlinked “with the broader progression of financial capitalism,” as I had assertively stated in my PhD research plan back in 2019.

But as Latour (2005, p.193-197) has insisted, places do not make good starting point, since every one of them are framed and localized by others. Rather, the ANT principle for an inquiry reads as: “circulation is first; the landscape in which templates and agents of all sorts and colors circulate, is second” (p.196). In other words, you follow the things that circulate and do not stop within the pre-imagined landscape as the circulations does not respect the boundaries of pre-established places already framed. Accordingly, I was faced with first methodological challenge: surely, if one was to make field work in, and about, the corporate reporting landscape, one would need to arrive somewhere in this landscape? More so, as arriving somewhere is not merely a question of place but also requires planning the time of the visit, one needs some kind of indication on whether it was a good time to visit the chosen space.

To immerse myself in the "reporting landscape," I first needed to locate this place. To do so, I did what any sensible traveler would do - I got a map. In fact, I got several, as there appeared to be an ample supply available at that time. Luckily, I was not the first to embark on this journey, as many others had attempted to localize this landscape before, including both academics and so-called practitioners from the field. Eventually, the sheer volume of narratives about this place began to overwhelm me, as there was no shortage of reports, articles and organizations that would offer their account of this place.
In planning my journey, I also consulted with fellow travelers who had visited and were familiar with this place. They suggested sites and organizations to visit, events to attend, readings to undertake, and people to converse with. Many encouraged my travel plans, indicating that there was much happening in this space, a lot to see and learn. I was told that it is a developing construction site without anyone having a clear picture of what the landscape would or should eventually look like. The general tone in all accounts was that, yes, this is a messy, uncoordinated space, here’s a map to try to make sense of it, but know that it is a developing site, in need of organizing - a work in progress.

Such accounts enforced my sense of curiosity and belief that it was a good time to delve into this field where so much seemed to be happening. However, it is worth noting that not all accounts shared such enthusiasm. Quite a few people seemed rather disenchanted with the landscape. They would caution me, advising not to be deceived by the hype, asserting there was nothing novel to observe. What once was a captivating site had now become an overexposed tourist spot with the usual trappings of business-as-usual. They suggested I'd be better off saving my time and resources to explore other destinations. According to them, this place was already well-charted and thoroughly explored, noting how the place was already mapped and explored. Yet, I remained puzzled - surely something was happening. I, for one, was observing all this movement around the issue of reporting. And even if nothing is happening, as somewhat frustratedly stated by some of my fellow travelers, surely it must be worth exploring how so much seems to be happening, if only to reveal that nothing is indeed happening. And as any experienced traveler would tell you, ultimately, you need to follow your curiosity. You take a risk and follow some signs rather than others. In trying to orient myself, I was inspired by what Donna Haraway (2016, p.131) has called a curious practice, as “curiosity always leads its practitioners a bit too far off the path, and that way lie stories”.

So, there I was, equipped with travel recommendations, maps, and a curiosity to visit this place about which people seemed to have conflicting feelings. However, as I quickly realized, studying maps doesn't truly allow you to get lost in and experience the places depicted on them. To do that, I needed to enter the field, which required selecting the relevant sites to visit. Hence, I encountered yet another methodological challenge, one that is familiar to the study of contemporary organizing: that of multisited engagement, an approach that “never achieves a whole that would allow us to label some phenomena as parts”(O’Doherty & Neyland 2019, p.458; 462; see also Marcus, 1995) The books from Czarniawska helped me orient myself, letting me recognize that I was engaging in what she (2014b) refers to as a “window study”: a method that starts with the selection of a site and aims to describe, if not all, at least many phenomena observed by the researcher. As she notes, “a window study can evolve into a case study if the researcher decides to follow a train of events”, a path that often stems from an imprecise research question, sparked by a sense that “something interesting is happening at a specific site” (ibid, p.23). Yet, I still had
Latour’s advice echoing in my mind: circulation of issues first, defining of the landscape second.

To make informed decisions about the selection of field sites, I returned to my maps and began identifying specific issues I could follow. After all, if there is one takeaway from Latour’s travel book (2005, p.17), as he refers to it, it is to encourage the researcher to follow the issues through which the social, in this case, the reporting landscape, gets continuously (re)assembled. To my luck (and somewhat to my overwhelm), there were many issues to follow. First, there was the issue of naming. At times, the same actors were placed under the label of “sustainability reporting” or “non-financial reporting,” whereas at other times, they were explicitly excluded from such categories, connecting their existence to entirely different concepts, such as ESG (Environmental, Social, Governance) and financial risk reporting. It was unclear if these were separate categories, whether they existed inside of, or next to, one another, and how their boundaries were defined. Consequently, there were questions about boundaries and authority – specifically, who had the authority to police such boundaries and who was considered legitimate in providing solutions to the many other issues within this space. Furthermore, numerous concerns arose about the primary beneficiaries of this landscape and the anticipated outcomes guiding its ongoing development.

It soon became clear that this messy landscape, with no clear boundaries and rules, was an issue for many. As a result, I was able to locate a particular gathering centered around this issue – something called the “Corporate Reporting Dialogue” (CRD). The CRD, as I came to learn, was an umbrella for an assembly of projects, established in 2014 by organizations considered "the most relevant ones" in the landscape with the "combined power to shape the future of the corporate reporting landscape, creating a cohesive, meaningful, and durable roadmap that builds business and investor confidence" (CRD 2014). Surely, if I wanted to study the reassembling of the reporting landscape, this was the place and site to be.

And what followed was something one might call being in the right place at the right time. As I had just decided to narrow my analytical focus to the Corporate Reporting Dialogue, I learned that it had just announced a new project - “the Better Alignment Project”, described as “a groundbreaking two-year project focused on driving better alignment in the corporate reporting landscape”, with the purpose of making it easier for companies to prepare “effective and coherent disclosures that meet the information needs of capital markets and society”. (CRD 2018) Again, I adjusted my course accordingly to focus specifically on this project, aiming to narrow down my research.

But it was only after “narrowing down” my analysis within this seemingly smaller space that a somewhat disorienting movement occurred, altering my sense of space - I discovered an even wider space! As I familiarized myself with the Better Alignment project, it soon became clear that the work carried out by this “groundbreaking project” was itself mediated in a very specific way. It was mediated by something I came to know as the TCFD framework – the Task Force on Climate-related Financial Disclosures (TCFD), as the starting point of the Better Alignment Project was to map the existing reporting frameworks against this TCFD framework.
The TCFD, as people would often note, was another kind of animal, finally bringing some structure and legitimacy to this messy space of reporting. I was told it originated outside the reporting space, spearheaded by high-profile individuals, comprised of those who seemed to matter. As many would say, the TCFD was not just another framework, but a gathering with real force - a Task Force convened by the Financial Stability Board (FSB) made out of members representing "the markets", tasked with translating "the market needs" for financially relevant climate-related information.

And as it so often happens, once you see something, you cannot (without heavy investment, at least) easily unsee it. Suddenly, the TCFD framework seemed to be everywhere. Not so much an issue, but a solution. Although it was published only in the summer of 2017, in just a few years, it garnered support from the world's biggest banks, top global asset managers, the world's leading pension funds, insurers, major credit rating agencies, stock exchanges, the Big Four accounting firms, and even some governments. In addition, over 800 organizations, including many of the world's largest multinational corporations, have endorsed the TCFD recommendations and claim to report according to them. Now it seemed that even the existing reporting organizations were increasingly conforming to its structure.

The TCFD seemed like an ANT kind of circulating entity, moving across the well-established boundaries of what I had confined within the limits of the “reporting space”. Initially, I was resistant to follow such traces. The more I followed them, the more I found myself venturing into somewhat unknown territories, reading about climate treaties, the history of responsible investing, central banks, financial governance, and green transition. If this was a space, it certainly felt too vast and devoid of clear boundaries. As I delved deeper, I found myself accumulating an ever-growing collection of documents and data, each offering insights or arguments regarding the financial ramifications of transition. This collection encompassed a wide array of resources including expert reports, climate agreements, government white papers, commissioned studies, and notable speeches, among others. Suddenly it seemed that TCFD was a solution not for the issue of messy reporting landscape, but to ensure optimal financial value management in the face of transition, to incorporate the objectives of climate agreements to financial decision making, and a tool for systemic financial stability risk management – in short, whole lot of other issues that I had thought resided elsewhere, far from where I had started. It was almost like, here, in this new space I found myself in, the reporting itself was not the real issue. To my surprise, I often heard the sentiment that TCFD was not about accounting. Yet, I was aware that the so-called reporting landscape was under my eyes becoming reorganized as an effect of what was happening here, seemingly elsewhere.

In a sense, just when I had learned to orient myself within the so-called reporting space, I was asked to lose myself again. This made me slightly anxious. As any researcher would tell you, the key to a good research design is the ability to narrow it down sufficiently. This is especially the case when pursuing a PhD where your journey is strictly framed by a time limit. You can wander and wonder, but you are expected to find your way back, somewhere, ideally in time. In the next section, I attempt to make explicit how finding my way back to a somewhat confined space took place.
4.2.2. Finding one’s way back: (Re)framing the research question

Ethnographic research has characteristics funnel structure, being progressively focused over its course. Progressive focusing has two analytically distinct components. First, over time the research problem is developed or transformed, and eventually its scope is clarified and delimited and its internal structure explored. In this sense, it is frequently only over the course of the research that one discovers what the research is really “about”, and it is not uncommon for it to turn out to be about something quite remote from the initially foreshadowed problems.

Martyn Hammersley and Paul Atkinson 1983 p.175

As every book about conducting research will tell you, the key to a successful research project is the clear articulation of the research question. However, at what stage should this articulation occur? At what point does a window study transform into a focused case study of something, finally delineating what the study is really about? A case study, yes, but pertaining to what? Inquiry into what or where?

To address such questions, one needs to remember that ANT is an outcome-oriented approach. In other words, my final research question emerged as a result of the inquiry, not as a predefined starting point from which the research process unfolded neatly over the past years. Certainly, I was guided through the inquiry by various elements, including conceptual tools, accounting literature, and a sense of curiosity and wonder, which at different times translated into guiding research questions. Consequently, a significant portion of the research process was navigated by more loosely articulated question(s), undergoing constant reframing throughout the process. Hence, the inquiry can be characterized as a process of gradual crystallization of a research object, which can only be presented chronologically retrospectively.

To put it differently, it was only after spending significant time in the field that the issue of the TCFD and transition risk became explicitly central to my analysis and the kind of financial signification that is being formed and formatted around them. As such, my method is in most resonance with the precepts of abduction, as I have engaged in a continuous redesign of the study, through the simultaneous collection of field material, reading, analyzing, and theorizing (Czarniawska 2014b, p.25). This is an iterative approach, where developments don't arise from the selection of pre-established theories that are then tested. Moreover, it wasn't exactly what grounded theorists would call a “bottom-up” analysis, as there were no clear shifts when moving to, from, and between the field material and literature; I engaged with both in a continuous fashion. Hence, it isn't a linear process unfolding over time towards a pre-set destination, but a process characterized by continuous back-and-forth movement between literature, fieldwork, and the (re)formulation of the research question.

The point I am trying to make is to explicitly highlight the gradual (re)frameing of the research question and describe the back-and-forth movement that characterizes my study method. For instance, based on my initial literature review, I chose to conduct an inquiry into the reporting landscape and its resonance with the phenomenon of financialization. Following my
methodological commitment to ANT, I was particularly interested in the boundaries of such a space, and how this landscape is continuously formatted through collective organizing. After having chosen the Corporate Reporting Dialogue as my initial entry point, my guiding research question was initially phrased as follows:

*How does the regulatory space reporting landscape become (re)assembled in 2014-2021.*

Here, the use of the word “how” illustrates my interest in the collective organization of such a space. The years 2014-2021 served as an initial temporal window for exploring this organizing, marking the beginning and end of significant events in the field relating to the reorganization of that space. The concept of “regulatory space” is also noteworthy, as I borrowed it from accounting literature to equip myself with a tool to conceptualize the spatial imaginary of the reporting landscape. This, in turn, guided me more towards regulatory discussions pertaining to non-financial reporting.

However, as detailed in the arrival story I recounted earlier, when I delved into this space and examined the organizing that was taking place, it quickly became clear that the TCFD framework was a pivotal organizing device shaping the landscape. Consequently, I shifted my analytical focus to prioritize the TCFD framework as my primary object of analysis. This adjustment prompted a modification of my research question to:

*How does the TCFD framework mediate the (re)assembling of the reporting landscape?*

Here, I recognized that my study was about the story of collective organizing that is mediated and framed by this new acronym in the field: the TCFD framework. It is worth noting that I equipped myself with new conceptual imaginaries, such as "mediating instrument" or "boundary object", concepts mobilized in accounting literature to examine such "mediation". Concerning the temporal boundaries of the inquiry, I realized I needed to relax them to facilitate the exploration of phenomenon enacted with and through the TCFD. In essence, my interest grew to encompass both the historical context of the TCFD and its organizing effects.

But the more I delved into the historicity of the TCFD framework, the less feasible it seemed to examine the observed events within the somewhat confined boundaries of the so-called “reporting landscape.” As I deepened my study of the TCFD — initially perceived as a simple and narrow disclosure framework — I gradually began to discern a whole cosmos of elements gravitating around the grand issue of climate transition, its governance, and the role of financial markets in facilitating such a transition. Paradoxically, while I was still looking at the same object of TCFD, it was gradually transforming into a different kind of thing mediating the way that financial markets are discussed in relation to the issue of transition. After an initial analysis of materials related to the TCFD, I was drawn to the issue of transition risk, which eventually became central to my study.

Consequently, I revised my research question to align with the topics of climate governance and the aspired transition more explicitly. In this modification, the temporal frame ceased to be defined by specific years, instead being delineated by particular events that appeared to be critical catalysts in facilitating the observed developments. Notably, it became clear that the
Paris Climate Agreement, which was reached in 2015, stood as a significant milestone in this organizing process as there was this explicit focus around a distinct issue of transition risk. Accordingly, I reformulated the research question:

*How does the TCFD framework, and its focus on transition risk, come to shape the governance of climate transition in the post-Paris world?*

The translation of the more empirically motivated research question into the theoretically informed one, took gradually shape as the theorization, analytical frame, and chosen conceptual tools discussed in the previous chapter emerged from an iterative process. This process was characterized by a continuous dialogue between field materials and a range of theoretical literature, including ANT-related works, constructivist market studies, and accounting literature addressing the phenomenon of financialization. Moreover, it was fueled by a deliberate intent to contribute to a specific domain of literature and an ambition to unveil new avenues for contemplating the observed financialization of corporate reporting and its broader governance implications. Accordingly, the conceptually informed research question this thesis was formulated:

*How does the TCFD framework come to format financial signification in the context of climate transition?*

While I have explicitly used *how* guiding questions in each example, there is a kind of *why* question lurking as the guiding questions become readjusted over time. As the last example shows, we have moved from the “reporting landscape” as a *site*, to think about the studied *events* in relation to the *phenomenon* of climate transition. Such process, can be discussed what Silverman (2006, p.391-392) calls for the move from the *how*, to the *why* question. Here, the point is not to choose either/or, where the latter kind of questions would remain strictly in some descriptive realm, while the latter kind would simply identify and explain intentions, motivations or causes of things. Instead, the difference is qualified by the *timing* in articulating the research question. As he notes, researcher should focus on answering first well assembled *how* question from where, with time, one can “fruitfully move onto why questions”, which “mean delaying what I have called why questions until we have asked the appropriate how questions” (Silverman 2006, p.391-392). Hence, “there is nothing wrong with the search for explanations, providing that this search is grounded in a close understanding of how the phenomena being explained are put together in an interactional level” (ibid).

4.3. Research design, data collection and assembling the research account

The critical task in qualitative research is not to accumulate all the data you can, but to can [get rid of] most of the data you accumulate. This requires winnowing.

Harry Wolcott 1990, p.35 in Silverman 2006, p.88
4.3.1. Making the object of research knowable: Data collection and analysis

In rendering the object of research knowable, I have employed three formal techniques for data collection and generation: document collection, semi-structured interviews, and non-participatory observation studies. Additionally, my time in the field led me to rely on more informal techniques. These more informal observations included things like following people’s social media accounts, mainly on Twitter and LinkedIn, informal conversations with actors, and reading other people’s accounts of the events unfolding in the form of opinion pieces, news articles, etc. While these didn’t necessarily provide the core material for my analysis, they played a pivotal role as signposts, guiding and focusing my attention. Given the extensive nature of the documents and data accumulated, providing a detailed breakdown within the text would be too comprehensive and make little sense to the reader. Thus, Appendices 1, 2, 3, 4, and 5 have been added to highlight the primary documents, audio and video materials, and interviews pertinent to each chapter.

Textual documents

Throughout my research, textual documents have constituted my primary data source. In total, I have collected countless documents pertaining to the TCFD within the context of the reporting landscape and eventually the issue of transition. This includes materials from organizations involved in the CRD and subsequent developments, as well as documents addressing climate and transition risk issues. Over time, the role of these documents evolved: initially, a broad range of documents helped orient me in the field and offered background information for the events under study. Later, a more concentrated subset became central to my analysis, particularly focusing on the issue of transition risk.

My issue-centric approach not only guided the collection of documents but also their subsequent funneling. To be considered relevant, each document collected had to address or shed light on the issues I was focusing, which, as mentioned earlier, evolved over time. For instance, first, there was the issue the messy reporting landscape which made me narrow my object of interest to the Better Alignment Project of the CRD. Only after some time in the field, I adjusted my course to focus on the TCFD. Once I had established TCFD as my main unit of analysis, this would orient my collection of documents to include everything written and said about the TCFD. Hence, the material acquired would not only involve documents produced by the TCFD Secretariat, but also documents produced by others as they would engage, take up, and in various ways translate its work. I quite literally started from the TCFD framework, that is, the final report published in June 2017 “the Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures” – a 66-page report (excluding the implementation guide) that presented the conclusion and recommendations of the work of the Task Force. In practice, I approached this report as an ANT-styled mediator, probing for the various issues that became articulated through it leading me to other reference documents as a result of such relational reading.

In practice, this involved systematically monitoring publications from the TCFD Secretariat, subscribing to newsletters, and researching articles and commentary about it. I conducted
regular searches to locate any documents or events associated with or referencing the TCFD. It's important to note that during my investigation, there was an exponential growth in the amount of talk and documents relating to TCFD. As it was frequently pointed out, within just a few years, what was once yet another unknown acronym in the reporting landscape rapidly became a hot topic of discussion in corporate boardrooms, climate conferences, and policy debates from Washington to Brussels.

The initial coding of the material was somewhat rudimentary, primarily concentrating on identifying general themes and issues that I planned to scrutinize more closely in my analytical focus later on. At this stage, prominent themes included conflicts between addressing climate versus other sustainability issues, debates surrounding the issue of materiality, contrasts between the TCFD's emphasis on risk as opposed to impact, as well as organizational conflicts within various entities. Consequently, in the initial stages, there were numerous narratives and issues that could potentially have been the focus of my further analysis.

It was only when I began composing the first comprehensive chapter on the development of the TCFD recommendations—a draft that would later evolve into chapter 6, with portions integrated into chapter 5—that my focus sharpened on the climate transition and the specific object of transition risk. Upon obtaining access to a variety of audio and video materials created during the formulation of the recommendations (detailed in the next section), I was presented with a rich amount of material that allowed me to truly delve into debates held when the recommendations were being drafted. During the initial analysis, I was captivated by the variety of issues that sprouted during the drafting stage of the recommendations. I undertook the task of listing themes and concerns surfacing from the data, under labels such as "metrics", "disclosure location", "Paris Climate Agreement", "risk management", “physical/transition risk”, "governance", "engagement", "time horizon", "language", and "mandatory versus voluntary disclosures". Furthermore, a significant portion of my focus gravitated towards dissecting the underlying issues steering the inclusion and exclusion decisions made during the making of the recommendations.

From this process, the central theme of climate transition began to emerge, challenging me to dissect whether the TCFD truly became pivotal around such an issue, and if yes, to what extent. From there, transition risk and financial effects of transition emerged as the issues my study would focus on recentering my attention to study the historicity of transition risk as an object of concern and its organizing effects. As I delved deeper, I became increasingly captivated by the concept, to the point where I couldn't turn away from it, despite it being relatively unknown thing. In my quest to trace the origins of this notion, I discovered it was widely regarded as a "conceptual innovation" birthed by the TCFD. When I sought to pinpoint its genesis, many paths led me to Mark Carney and his pivotal Tragedy of the Horizon speech. The impact and influence of this address were undeniable; it seemed to have afforded the framework for understanding the financial effects of climate transition—a narrative that was now placing the TCFD also in a new light.
This finding significantly shifted the direction of my research. For a period, I diverged from the “reporting landscape” to compile materials to enhance my understanding of the intricacies of transition risk. This effort culminated in the development of what is presently known as chapter 5: a detailed exploration of the historical evolution of transition risk. Suddenly, by taking Carney’s speech as the focal point to scrutinize the historical trajectory of this object, a distinct past unfolded. In brief, I came to learn about the long and ongoing entanglements of the markets and financial sector to the climate politics eventually concluding that such relationship became reframed through Carney’s speech and to which TCFD was proposed a solution - a development often overlooked even by the actors in the field.

The reason I am describing all this is to try to account for the process by which both my gathering of field material and its interpretation have been influenced by the methodological choice of following the trajectory of issues. Furthermore, it is to highlight the effects of adhering to the ANT’s narrative program, which led me to explore the various scripts presented by these documents, considering them as a type of “structuring templates” (Latour 2005, 193-199). In a sense, they serve as narrative vehicles, proposing a specific plot with characters, where some act and others are acted upon, leaving some others excluded from the script altogether.

Once the final research question and the focus of the study were established, I could align the documents with the overarching research question, which was centered on understanding how the financial implications of climate transition have been framed over time. This facilitated a detailed depiction of the varied collective and organizing efforts through which climate change has been portrayed differently, utilizing distinct arguments, tools, calculations, and imaginaries as a specific type of financial risk and opportunity. At this juncture, more detailed coding was conducted, where I concentrated specifically on the framing of the financial signification (as discussed in the previous chapter) and how they have been framed, enacted, and challenged over time.

However, it is critical to note that documents have substantial limitations as they "black box" the entire process of decision-making and the creation of the documents, obscuring what gets included, how particular frames were selected, and what was excluded and for what reasons. In other words, while the documents were crucial in facilitating understanding of the roles of different actors and the prevailing narratives, they do not reveal the controversies and issues that preceded them. For this reason, they cannot serve as the sole data collection technique when attempting to observe the evolution of framing the financial implications of transition.

Finally, it is important to emphasize that while reading and analyzing a multitude of documents has shaped the writing of each chapter and the overall analysis, the role of documentary analysis as a primary method and the function of documents as primary sources vary across different analytical chapters. For instance, in studying the historicity of transition risk, I naturally rely on documentary material to a large extent. As time progressed, I managed to identify critical documents that grew in significance through numerous reinterpretations by others. In contrast, chapters 6 and 7, while utilizing documentary analysis, also significantly rely on other forms of material. Notably, observational studies and interviews have played a crucial role, especially as I
have concurrently tracked unfolding contemporary events. In the subsequent section, I will briefly discuss the importance of utilizing such materials as the cornerstone of my analysis.

Interviews

In addition to documentary analysis, I have conducted 34 interviews with various actors from the field. Considering the distributed nature of my research object, and the absence of a single site, organization, or group to limit my inquiry, I used other data to identify people to converse with. Additionally, the list of "relevant" and interesting people evolved over time, as the focus of the research gradually crystallized. For instance, as the Better Alignment project from the Corporate Reporting Dialogue and the TCFD framework were my entry points to the field study, my initial selection of people to interview included actors involved in both projects.

However, as I spent more time in the field and engaged with individuals who were actively involved with the pertinent issues, the scope of potential interviewees broadened. This expansion encompassed a variety of professionals who might not typically be confined to specific fields such as reporting, given their extensive careers addressing the topic in various roles. The selection process became somewhat organic, with suggestions coming from other interviewees or names mentioned during initial interviews as essential contacts in the field. Furthermore, I noted that certain individuals recurrently appeared in influential reports or were regular guests at webinars, panel discussions, and conferences, marking their relevance around the followed issues. Despite their lack of direct affiliation with the TCFD Task Force or any of the organizations involved in the Better Alignment Project, I recognized these individuals as "general influencers".

Out of the 34 interviews (see Appendix 1 for the full list), 10 were conducted with members of the TCFD Task Force, 12 with members of the CRD organizations, and the rest with "general influencers" who were identified as active figures in the field surrounding the selected issues. However, I want to highlight that many individuals I wished to interview were inaccessible. For instance, accessing members of the TCFD, which can be considered a highly elite group, often required persistent efforts to find and establish contact points, a task not always successful. Furthermore, even when I managed to establish contact, my requests were sometimes politely declined. Therefore, I am immensely grateful to all the participants who generously offered some of their limited time to share their stories with me.

Following the narrative quality prescribed by ANT, I viewed the interviewing process as an opportunity to hear various stories from the field. Specifically, I sought to understand how participants have engaged with the issue of reporting and whether their work had been influenced by the emergence of the TCFD. For each interview, I prepared an interview guide containing open-ended questions, which varied as I tailored them to suit each participant's background and position within the field. For instance, when interviewing members of the TCFD, I inquired about the process of drafting the TCFD recommendations. Meanwhile, for individuals associated with the Better Alignment Project, I focused on understanding the processes surrounding that project and how it might have been affected by the TCFD.
However, all interviews followed a similar structure. I would begin by asking the interviewees to narrate their experiences about how they became associated with the TCFD or the topic of disclosures. I would inquire about their initial encounters with the TCFD, and if their work had been affected by its emergence. If the person had been involved in a document or project related to the TCFD, I would ask about the execution of such projects (like TCFD recommendations or other widely circulated documents). More specifically, I would probe whether there were particular issues that sparked debates and if so, how these were resolved. In some interviews, time permitting, I would conclude by asking the individuals about how they feel about the discussed developments. This approach often encouraged more reflective responses compared to simply asking if they had anything to add. These questions sometimes elicited interesting insights and highlighted issues that were not commonly discussed in publicly made presentations, talks and documents.

Due to the distributed nature of the subject, I aimed to capture diverse perspectives from actors occupying different spheres—spatially, temporally, institutionally, and geographically through interviewing. I wasn't seeking a unified narrative behind TCFD or any other group but instead aimed to grasp how issues intersected and influenced one another. In practice, this meant that when approaching TCFD members, it was crucial to hear from individuals across a broad spectrum of industries and professions. Since the Task Force was explicitly established to represent "the markets," this entailed engaging with at least one representative from sectors such as asset management, pension funds, credit ratings, market analysts, industry representatives, and partners from the Big Four accounting firms. Regarding the CRD and the reporting landscape, I interacted with representatives from all participating organizations. When it came to general influencers, my focus was on spokespersons for influential entities, often associated with investor interests, the accounting profession, or NGOs, even if the individuals themselves had a more diverse background. In this regard, I considered all the interviewees in their professional capacities, thereby revealing more about the socio-materiality involved. Hence, the interviews were instrumental in foregrounding the tangible reasons why certain frames became prevalent directing my attention to the socio-materiality of financial signification.

My approach to interviewing resonates with what Kreiner and Mouritsen (2005) describe as analytical interviewing designed to provoke reflection in the interviewee. At times, I attempted to steer the interviewees to reflect upon the specific issues I was investigating. For instance, since I was initially interested in exploring the demarcation between financial and non-financial, or climate versus other sustainability issues, or materiality versus double materiality issues, I would encourage the person being interviewed to openly discuss and reflect upon how such inherently problematic distinctions were navigated. This often revealed very material reasons why certain frames were only viable and how various alternatives were conceived. This prompted me to focus on the socio-materiality of these significations, and how proposing a different approach was often only achieved as a result of years of organizing, or through the production of other actions and reports in different contexts to which one could refer to. Consequently, I developed an interest in the gradual social materiality of financial signification where actors were not merely advocating for their interests or promoting a particular frame
based on their "values" or "interests", but were largely influenced by the very material conditions they found themselves in.

My ability to produce interesting follow-up questions increased over time, as my capacity to connect and see wider patterns of connection naturally developed. Hence, while coding and analyzing the material, I often felt there were several questions I wished I had asked differently. As the study progressed, I became more knowledgeable about the field which in turn facilitated more fluid conversations, allowing me to pose more descriptive and detailed questions. Therefore, the strategy behind the interviews was not simply to get "good answers" to pre-defined questions, but to maintain a generative conversation. With some participants, this was easier than with others, and the conversation would sometimes continue longer than planned, sometimes even with an invitation to continue at another time and place. With others, establishing such a conversational flow was difficult, but often provided interesting insights into the tight material conditions within which discussions could be framed. Hence, my goal is not to expose the "true intentions" of these practitioners, or to gain some superior knowledge they might not already possess. I have no illusion of knowing better than my informants about what "is really going on". My purpose was not so much to discover "what really happened" or to coax them into sharing as much as possible, as if the "right" information were concealed within the individual whom I merely needed to persuade to share a true account of events.

Like other materials, I analyzed the interviews with the aim to understand the kinds of frames and scripting regarding the financial effects of transition. In practice, I recorded, transcribed, and coded all the interviews. The coding was conducted in three phases, where the first round consisted of somewhat rudimentary labels, like the ones discussed in the case of documentary analysis. Once I had narrowed the study focus to financial signification, a more elaborate coding was performed, concentrating on the kind of ideas, imaginaries, actors, and scripts that seemed to define and set boundaries. Finally, as I began explicitly thinking with the conceptual tools of valuation device and financialized agencement, the more detailed crafting of chapters and analysis took place.

But similar to the documentary analysis, interviews also have their limitations, as they often recount events that happened elsewhere, at different times. In other words, while both types of materials are crucial because they facilitate the understanding of how certain events are narrated, and how things become associated and justified, they lack the messiness encountered when things are debated and discussed in present, or presented as part of wider performances (e.g. panel discussions, meetings etc.) where a rigid script can't always hold (or holds suspiciously well, which again tells us something important).

Therefore, to supplement this data collection, my study draws on substantial observational studies to produce thicker descriptions of the fragile, unexpected, and even experimental quality of the events unfolding. Studying the discussions held by several concerned groups in real time (even if accessed at a later stage through recordings of live events) has allowed me to immerse myself in the messiness and uncertainty that often pervades these situations, instead of simply analyzing accounts of events in retrospect, which are often given a somewhat coherent account.
This approach was especially critical in chapters 6 and 7, where I was tracing contemporary events as they unfolded. Next, I will discuss my observational studies of a number of audio-visual materials, the prevalence of which skyrocketed as a result of COVID-19.

Observation studies of video and audio recordings
Over the course of the study, I have collected countless hours of video and audio material from webinars, seminars, panel discussions, and recordings of live events. While from the beginning, I deemed such material essential the volume of relevant material surged due to COVID-19, as the field rapidly transformed into number of virtually accessible spaces. While in the beginning of my inquiry, I was able to attend physically some seminars and roundtable discussion as a nonparticipant observer, most of such observational studies became inaccessible or disappeared altogether due to the pandemic. Suddenly the sites I wanted to visit were gone as the connections and the critical attachments to establish access, were cut off.

But as it often goes, closed doors only redirect you to new ones. And in this case, the closure of these sometimes quite inaccessible sites marked the beginning of the formation of completely new sites. After the initial shock of pandemic lockdowns, the number of virtual sites to visit proliferated. The number of webinars, online panels, and discussions skyrocketed around the topic of TCFD. Consequently, I was granted access to observe discussions that were previously located in often rather exclusive buildings in the city of London, Brussels, or other similar venues, to which access required significant funds, personal connections, carbon emissions, and a considerable amount of effort and time.

Like the collection of textual documents, my issue-centric approach not only guided the collection of audio and video material but also their subsequent filtering. I focused both on materials that pre-dated the TCFD, and those created during the development of the recommendations and their aftermath, a period in which TCFD-related virtual events organized by various entities soared between the years 2018 and 2022. Video and audio materials dated before the formation of the TCFD are substantially fewer compared to those generated during and particularly after its inception. This surge is arguably not only a result of the pandemic but also due to a broader trend of publishing recorded material from live events in platforms like YouTube, and the organization of webinars, conferences, podcasts, lectures in virtual settings. However, the data also includes some archival video and audio materials, for instance, related to the issue of climate risk, that have been instrumental in immersing me in the more historical events such as those detailed in Chapter 5 and 7.

In total, I’ve dedicated hundreds of hours to attending, watching, and re-watching recorded seminars, presentations, interviews, panel discussions and talks. Much of this material helped me orient without necessarily consisting of the backbone of the analysis presented in the chapters. At some point, my time “in the field” became extremely blurry, as it had become possible to access all this talk and performance from my small computer and phone screen, often regardless of time and place. As COVID-19 hit, I was able to observe in real time how this collective organizing moved into the virtual space, making new connections between sites and actors more visible. The amount of accessible material was initially overwhelming – there was
so much of it. In one sense, I was filled with a feeling akin to “aimless wandering” or “getting lost”, which, however, as O’Doherty and Neyland suggest (2019, p.454), is a crucial “trope in ethnographic method” as “how to get lost is becoming more widely recognized as an important strategy in ethnographic research, the paradox being that is only when you are lost that you have any sense of knowing what it means to be here”.

Arguably, the transformation of the field into a virtual space increased substantially the number of events and sites I could visit. The ease of access allowed me time to reflect and funnel out the critical material - a process which would have arguably been different if the initial access to them would have required a greater level of investment (e.g., traveling to seminars in other countries), as the pressure to make them pay off could have affected the trajectory of the analysis. Eventually, the significant events, identified as such only in retrospect, were transcribed and underwent more detailed analysis and constitute the primary data used in writing the empirical chapters.

In other words, over the course of the research, I systematically listed and documented all the materials. Based on the state of the inquiry, I subjected some events to more detailed analysis. Once the research question was established, I undertook a more systematic analysis, at times even transcribing webinars and panel discussions that proved to be critical for examining empirical events. For instance, while writing chapter 6, I gained access to a total of 22 recordings from various panel discussions, speeches, and presentations produced and recorded by the TCFD secretariat during the two-year drafting period, showcasing live discussions and presentations made by the Task Force members (see Appendices for the list of main primary sources used in the chapters). As this comprised the most critical data, I transcribed and coded such material in greater detail.

Similarly, in Chapter 7, I utilized a substantial amount of audio material from the recordings of the IASB Board meetings and other video material. By this point in the study, the focus had shifted to examining the influence of TCFD within the domain of the accounting standard-setter, a development influenced by insights gathered from previous materials. Hence, in practice, the analyses centered analyzing the ways and moments where TCFD and the issue of transition became a focal point of the Board's discussions (e.g., when, how, and in relation to what elements did the TCFD discussed or transition as a concern). Furthermore, I analyzed a number of other webinars and seminars in greater detail, in which the accounting standard-setter became actively involved. This material underwent detailed scrutiny through a more focused theoretical lens regarding financial signification and its socio-materiality.

Again, I have not utilized the gathered material with the intention of "getting behind the scenes" or treating them as "mere presentations" of what is supposedly actually happening behind the scenes. Instead, I analyze the events for what they are: performances, unfolding according to a particular script directed towards an imagined audience (e.g., specific webinars, briefings of published reports, etc.). In other words, I consider them as scripted performances, narratives that attempt to articulate specific frames, and in doing so, aim to establish forms of association. Arguably, some performances are more tightly scripted (e.g., speeches, presentations), while
others allow more room for experimentation (such as debates or panel discussions). However, I have considered all these events equally material when it comes to examining the particular articulations of the issues at stake. Therefore, I am not concerned with evaluating the degree of intentional staging present in each event, as doing so would force one to assume singular intentions behind actors, or even entire organizations. Instead, I am interested in the ways things are formatted and shaped in attempts to forge connections, which in turn affect how topics are discussed and arguments presented.

As such, when watching and listening the various performances, I have been guided by the questions; what are the actors doing? How do they position in relation to one another? What are they trying to accomplish? And how do they do this? This, eventually, might flesh out the question of why, but not in the sense of discovering some hidden beliefs or intention of actors, but because framing things in one way or another is often about matter of existence for the actors enrolled. Such performances would tell what gets through, that is, how and what is required to make something travel, taken up by others, ultimately shaping of that what can exist and in what form. In the next section I discuss how the result of the analysis was assembled into a particular kind of research account.

4.3.2. Writing it up: Assembling the research account

So, as one returns from the field and sits at her desk with folders full of documents, texts, videos, and transcriptions describing a multiplicity of events, one might ask: How is one to represent all this anew? As Czarniawska (2004, p.776) has noted, "in the beginning, researchers tend to panic and try to chase all the action, but in time they learn that important events become such in accounts. Nobody is aware that an important event is happening when it takes place, although, in most cases, people are aware of the time of the day and the day of the month. Events must be made important or unimportant." This is, quite frankly, an accurate description of my own experience in the field. The more I familiarized myself with the field, the more I began to see traces of many types of cases. This, to be quite honest, made me slightly nervous - wasn't the phenomenon I was observing going to manifest itself, to speak to me? Would I need to make the choice about what story to tell? If one is to provide a description, as ANT so strongly insists, how does one choose what to describe from all the messy material one has collected?

Emplotting and re-presenting the field material anew

The resulting analysis and descriptions provided in each empirical chapter are a result of theorizing understood through the concept of emplotment. (Czarniawska 2004a, 2014b, 2014a) As Czarniawska (2014b, p.125) notes, quoting historian Hayden White, just as historians "do not find plot in history but put it in themselves," social scientists too are actors responsible for assembling the description that constitutes their research account. In doing this, the researcher utilizes both the material gathered from the field and the tools she has equipped herself with throughout the inquiry. The methods chosen, along with the research journey taken - inclusive of all its intentional and unintentional detours, decisions, and choices - tightly co-constitute the form and order of the ultimate description. Consequently, recognizing that even the seemingly
simple act of recording (not to mention writing things down) is already a significant transformation, I have endeavored to approach it with due respect.

In a sense, the study itself becomes an actor within the network it describes as the research account is not created by a distant spectator, nor is it an unmediated description, but "always part of an artificial experiment to replicate and emphasize the traces generated" (Latour 2005, p.136). Eventually, like any framing operation, the research account, and its selection of frames, is reality tested against the reality it proposes while simultaneously performing argument presentation. Since the research cannot be distanced from the associations it partakes in, the narrative presented here about the agencement of transition stewardship contributes further to its materialization.

As such, the critical role of the researcher to plot—to organize and structure the events from the field in particular way, must be acknowledged. As Czarniawska (2014b, p.127) noted, “like an historian […], a social scientist usually confronts a veritable chaos of events already constituted, out of which [s]he must choose the elements of the story [s]he would tell”. In other words, it is the researcher's task to establish an order and a structure that allows reader to make sense of the selected events. Consequently, a distinction exists between emplotment and description, as "each description must be arranged" through emplotment (Czarniawska 2014, p. 125). Therefore, there are no "mere descriptions" of all that was observed; rather, the choice of description itself forms a narrative, constituted by particular frames, plots, and actors, scripted in a specific form. As such, even if Latour seemingly insists on a method that consists of description only, instead of explanations, to be able to describe some thing, the description must already have a plot in place for the desired thing to emerge.

As I have noted earlier, my emplotment has been an iterative process – a gradually crystallizing process as a result of continuously reading and analyzing the field material. This has been evident in the way my chapter drafts have evolved over time, as the final structure of the empirical chapters has been shaped by various attempts at writing drafts to flesh out the things this study is really about. In other words, my early writing consisted of describing various issues, for which I often received feedback that the purpose of these descriptions was unclear. While I was arguably describing interesting dynamics for anyone interested in happenings in the field, I had not managed to narrow down the narrative to create a more coherent whole – a plot.

In the process of emplotment, the issue-centric method has been critical, as frames that enable storytelling tend to emerge at the time of controversy. In other words, without issues, frames that enable action, remain taken for granted. They might even seem invisible and not real if one’s own movement is not hindered but perhaps enabled by them. You might not pay attention frames holding things together if your movement is enabled in a seemingly limitless way. In other words, frames are often only perceived when you encounter them at the boundaries of things, which are always precarious and require collective work and investment to maintain. If the frames and their limits are not questioned, they become less visible and eventually taken for granted - phrases like "we have always done this," "this is what markets need," or "there is no other way" become common. If the frames "work" (at least for those who matter), there are no
issues, or at least, such issues might not gather enough momentum to become real. Hence, it is only by following the issues (e.g., what qualifies as one, under what terms, what gathers around them) that we can observe how things are continuously (re)assembled, making visible the forms that enable and set limits to things, allowing them to emerge and gain realness.

To construct the emplotment around the notion of transition risk as a particular kind of issue now gathering attention of many, eventually resulted from analyzing the dynamics of collective organizing around the TCFD framework, visible in my field material. In a sense, the chosen plot was an outcome of tracing what Czarniawska has called an action pattern, around which the collective organizing orients, as particular frames become repeated. For me, this first meant noticing the need to signify things financially to enable action, after which a particular financialized gaze was observed having powerful effects in shaping various distributed activities across different sites. In other words, over time it became clear that the increasingly material life of this novel object of transition risk, and its expected management, became inherently entangled to specific kind of financial signification, constituted through particular frames. For this reason, in the empirical chapters, I tell the story of assembling of what I have decided to call the agencement of transition stewardship.

In providing an account of the assembly of this agencement, my goal is not to offer undisputed facts or reductive explanations aimed at concluding the events I have followed. In other words, I have not been in pursuit of some kind of infallible certainty and truth that would settle matters once and for all. Instead, the objective is to offer a solid and coherent account, one that can temporarily satisfy the ever-present curiosity encapsulated in the question "how come?" – a point from which, invariably, new questions emerge. As Muniesa et al. (2017, p.99) have noted, "pragmatist inquiry is not about replacing existing knowledge with a better truth, but about recognizing the arrangements that make reality happen as it happens."

Chapter narration: Describing the making of the agencement of transition stewardship

Departing from above, I will conclude with few notes about the structuring of the empirical chapters. First, even though the chapters present a somewhat chronological story that unfolds from the past to the present, it is not meant to argue for an account based on some idea of universal and totalizing history. Instead, the chapters explicitly trace the historicity of a particular kind of agencement that now has increasing organizing effects in the world. Hence, while the story might read as “too clean,” excluding numerous controversies and other ways of framing things, such an outcome stems from the present framing of the thesis and does not exclude the fact that alternative forces and trajectories have been co-formatted aside and through the discussed developments.

Moreover, such historicity is crafted by adopting specific temporal frames that facilitate its articulation. In other words, it is composed from a particular moment in time, from where the preceding events are interconnected to constitute a coherent narrative. For instance, the decision to start with Carney's Tragedy of the Horizon speech, and end with his later speech and the announcement of the climate standard, establishes a specific trajectory for the account that could have appeared differently if initiated from another gazing point.
Second, while the chapters together describe the collective organizing around the notion of transition risk, the notion serves as a critical organizing device also within each chapter, shaping their content and form. For instance, the first chapter revolves around addressing the sub-question: How did transition risk emerge as a new issue for the markets, and what effects has it had on framing climate governance? Subsequently, the second chapter focuses on the organizing effects of the new objects, with the second sub-question being, how is transition risk mobilized in the creation of the TCFD recommendation as a framing tool, and what are the constitutive effects it has? Finally, the third chapter explores the broader effects of the TCFD recommendations and its engagement with the issue of transition in shaping accounting standard-setting with purpose to answer the question, how did the TCFD and its focus on transition risk make the transition a relevant issue for the accounting standard-setter (IASB)?

Third, it is worthwhile to note that the practice and act of writing have been critical tools in shaping the outcome of the study. The writing of each chapter did not unfold in a chronological order. In other words, I did not begin with the first chapter to establish the history first, which would have subsequently enabled me to write the following chapters. In fact, I commenced with what now resembles chapter 7, describing the changes and movements within the reporting landscape. It was only after I hit a wall feeling that I am merely describing trees without understanding of the actual ecosystem of the forest giving life for one type of trajectories rather than others. I realized I needed to go back in time to understand the present shifting my focus explicitly to the TCFD. And once I had completed the first full draft of chapter 6 (which at that point largely comprised of descriptions without a central plot), I recognized that the notion of transition risk and the issue of transition were critical to the story. This led me to examine the history of TCFD in a new light, eventually narrating the historicity of transition risks as a pivotal story to comprehend the history of TCFD and its far-reaching effects on the governance of transition. When contemporary events unfolded in such a way that the TCFD was explicitly brought into discussions as part of climate negotiations (something that was forbidden during the drafting of the recommendation), it provided affirmation that this was a story worth telling. Hence, each of the three chapters has simultaneously affected each other in multiple ways that do not adhere to some pre-defined story, as that story emerged through various attempts to write, rewrite and frame the narrative, necessitating further writing. Therefore, the chapters have undergone multiple revisions, and as such, writing has been a critical method affecting the accounts provided here. Moreover, it has only been through writing that I have been compelled to reject several lines of thought that either did not hold up in light of the empirical material or simply because they would have deviated too far from the established plot line. After all, the existence of the accounts has been constrained by the timeframe of the PhD, which I have managed to reframe several times already.

Finally, the significance of the existing accounting literature, as discussed in chapter 2, and its constitutive effects on the provided account cannot be overlooked. Arter all, to be qualified as a research account, the account is expected to contribute to, and hence is shaped by, the domain literature within which this contribution is made. Hence, the emphasis on understanding the quality of financialization in corporate reporting, and its constitutive effects on broader
governance issues, has been pivotal in guiding my focus. As such, I have been consciously trying to identify generative ways to think about the observed accounting phenomenon through the present case study.
PROLOGUE: TRAGEDY OF THE HORIZON

Although these panoramas shouldn’t be taken too seriously, since such coherent and complete accounts may become the most blind, most local, and most partial viewpoints, they also have to be studied very carefully because they provide the only occasion to see the whole story as a whole. [...] They should be added, like everything else, to the multiplicity of sites we want to deploy. Far from being the place where everything happens, as in their director’s dreams, they are local sites to be added as so many new places dotting the flattened landscape we try to map.

But even after such downsizing, their role may become central since they allow spectators, listeners, and readers to be equipped with a desire for wholeness and centrality. It is from those powerful stories that we get our metaphors for what binds us together, the passion we are supposed to share, the general outline of society’s architecture, the master narratives with which we are disciplined. It is inside their narrow boundaries that we get our commonsensical idea that interactions occur in a wider context; that there is “up and down”; that there is local nested inside a global; that there might be a Zeitgeist, the spirit, of which has yet to be devised.

Bruno Latour 2005, p.18

On September 2015, at the City dinner at Lloyds of London, Mark Carney, at the time both the Governor of Bank of England and Chairman of the Financial Stability Board (FSB), gives an unusual speech for his usual audience where he warns the financial service sector industry of the looming Tragedy of the Horizon – Climate Change. In his now famous speech, Carney argues that climate change presents Tragedy of the Horizons, as it will impose costs and impacts that “will be felt beyond traditional horizons of most actors imposing a cost on future generations that the current generation has no direct incentive to fix.”

Yet, it is not the planet that is centered in Carney’s speech, but instead, the possible financial risks that climate change could pose to global financial stability. To demonstrate his case, he introduces two types of risks that link climate change to financial stability. First, there are the physical risks. As global temperatures rise, there are possible financial implications of increased weather events (storms, droughts, floods) that could have unexpected effects on existing assets. As, for instance, more extreme weather events increase, companies must ensure that such events do not disrupt critical operations and value chains.

But while the object of physical risk constitutes part of Carney’s story, it is not its main actor. Instead, what captures one’s main attention is the other risk object he introduces, one he names as the transition risk. There is not a long history for such risk object, and it is here, as part of
Carney’s speech, that such object becomes explicitly discussed as part of public discourse. But what are these transition risks all about?

As Carney outlines, transition risks are “the financial risks which could result from the process of adjustment towards a lower-carbon economy”, for instance due to changes in policies to enforce the transition. Carney uses the example of carbon price; if governments were to impose high carbon price now, this would disrupt the current valuations and economics of carbon intensive industries that in turn would be detrimental to the financial stability. Similarly, other policy means, like regulating industries or adjusting capital regimes for banks and insurers, could misguide the valuations to “wrong ends”, as he puts it. Consequently, to quote Carney, transition risks emerge from changes in policies that could “prompt a reassessment of the value of large range of assets as costs and opportunities become apparent”.

But what exactly is meant with “transition” and how it links to the issue of market valuations? While there is nothing strange for the Chair of the Financial Stability Board to give a speech of emerging systemic risks affecting the global financial stability, it was, at the time, unheard of to link such concerns to the UNFCCC climate negotiations and the grand issue of climate change and the aspired transition to low-carbon world. To bring these two previously distanced issues together, Carney suggest that transition risks are financial risks that may arise from governments’ attempts to limit the global temperature rise to 2 degrees, at the time, the magic number materialized in the earlier UNFCCC climate treaties:

The desirability of restricting climate change to 2 degrees above preindustrial levels leads to the notion of carbon budget, an assessment of the amount of emissions the world can afford. Such a budget – like the one produced by the IPCC –highlights the consequences of inaction today for the scale of reaction required tomorrow […] That budget amounts between 1/5th and 1/3rd world’s proven reserves of oil, gas and coal. If that estimate is even approximately correct it would render the vast majority of reserves “stranded” –oil, gas and coal that will be literally unburnable without expensive carbon capture technologies.

In articulating the issue at hand, Carney voices his concern over the idea of “stranded assets”; if the world was to limit the global temperature as agreed in climate agreements, this would set limits to the amount of carbon that can be emitted as set out by the global carbon budget. And as the current valuations of the markets are based on assumption on future that are not in line with the carbon budget, current market valuations are misguided. Hence, to correct such failure in market valuations, it was argued, there was a need to move financial capital away from risky assets to less riskier assets before the risks arising from the transition might materialize.

As Carney explicitly points out, from the regulatory point of view, such “reassessment of values” is not inherently a bad thing, as valuations should “reflect fundamentals, including externalities”. However, as he points out, it is the “speed at which such re-pricing occurs” that can be “decisive for financial stability” if the reassessment were to happen suddenly. In other words, “an abrupt resolution of the tragedy of the horizons is in itself a financial stability risk”.

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Hence, to manage such valuations at risk would require prudent management of the new risk object - the transition risk.

As probably anticipated, when issues are painted, possible solutions emerge. For Carney, this solution requires making the markets in transition. As he argues, “a market in the transition to a 2-degree world can be built”, but to act, “the window of opportunity is finite and shrinking”. Hence, there is still time to manage these risks - “the more we invest with foresight; the less we regret in hindsight”. As Carney concludes, the “risks to financial stability will be minimized if the transition begins early and follows a predictable path, thereby helping the market anticipate the transition to a 2-degree world”.

However, Carney does emphasize that regulators should not accelerate financing of a low carbon economy, for instance, by adjusting the capital regime for banks and insurers because “that is flawed, history shows the danger of attempting to use such changes in prudential rules – designed to protect financial stability – for other ends”. Instead, frameworks that “help the market itself to adjust efficiently” must be developed.

That is why, following our discussion at the FSB last week, we are considering recommending to the G20 summit that more be done to develop consistent, comparable, reliable, and clear disclosure around the carbon intensity of different assets.

After all, “the right information allows skeptics and evangelists alike to back their convictions with their capital”. However, in suggesting the need for better disclosure, Carney does acknowledge that the idea of better disclosure around climate is not a new idea. In fact, as he argues, “there are already nearly 400 initiatives to provide such information”. Accordingly, it is this “existing surfeit of existing schemes and fragmented disclosures” that is considered problematic for it “means a risk of getting lost in the right direction”.

To capitalize on such position, Carney suggests an establishment of an industry-led Climate Disclosure Task Force to provide guidance on voluntary standard disclosure for companies that produce or emit carbon. And as he notes, “the logical starting point is a coordinated assessment of what constitutes effective disclosure, by those who understand what is valuable and feasible”. He backs up his argument by referring to the FSB’s previous disclosure project (Enhanced Disclosure Task Force) around credit risk for banks, which has proved how “private industry can improve disclosure and build market discipline without the need for detailed or costly regulatory interventions”. Like EDTF, “the Climate Disclosure Task Force could be comprised of private providers of capital, major issuers, accounting firms and rating agencies”. As he concludes:

The December meetings in Paris will work towards plans to curb carbon emissions and encourage the funding of new technologies. We will need the market to work alongside in order to maximize their impact.

With better information as a foundation, we can build a virtuous circle of better understanding of tomorrow’s risks, better pricing for investors,
better decisions by policymakers, and a smoother transition to a lower-carbon economy.

By managing what gets measured, we can break the Tragedy of the Horizon.
5. Historicity of transition risk: Framing climate transition as a financial concern

This chapter explores the emergence of transition risk as a financial concern and its implications for framing climate governance. Specifically, it addresses the sub-question of how did transition risk emerge as a new matter of concern for the capital markets and its effects on framing climate governance? In practice, the chapter is divided into two parts. The first part situates transition risk within the historical trajectory of governing and negotiating climate change, illustrating how the role of financial markets in relation to climate politics has evolved over time since the beginning of UNFCCC-led climate negotiations. After, the second part delves into how this climate governance – markets nexus has been mediated by a particular risk object, climate risk, over the years and its transformation into a new issue of transition risk amid the Paris climate conference in 2015.

To provide a comprehensive understanding of what I call as the trajectory of climate risk and its transcendence into transition risk, the section takes a narrative approach, guiding the reader through the gradual changes that have occurred since the establishment of climate negotiations, culminating in the Paris Climate conference. In the concluding discussion, I synthesize this narrative by pinpointing six master frames that have been critical in the trajectory of climate risk. Specifically, I outline how each frame articulates climate risk as a distinct financial concern shaping the understanding of the ways, timings, and mechanisms through which the financial effects of climate change are understood to occur distributing the responsibilities over its management differently. Consequently, I propose that it is this last frame that eventually give rise to the concept of transition risk, eventually paving the way for the establishment of the Task Force on Climate-Related Financial Disclosures (TCFD) as a proposed solution to address these concerns.

The chapter builds on substantial documentary material. The first part draws on a wide range of documents in the field of climate governance, while the second part incorporates a variety of documents related to the concept of climate risk. The primary sources and references are listed in the appendix 2.

5.1. Exploring the climate governance – markets nexus

Over the course of the latter half of the 20th century, the issue of climate change and global warming have transformed from being solely a scientific concern to becoming an issue with economic implications, ultimately leading to its framing as an economically governable problem. The inaugural climate convention of 1992 marked the beginning of the ongoing Conference of Parties (COP) climate talks, a forum where member countries of the United Nations have come to coordinate the efforts to address climate change. These negotiations have witnessed pivotal moments, including the adoption of the Kyoto Protocol in 1997, the
challenging discourse and revised economics of climate change in the mid-2000s, and the landmark Paris Agreement of 2015. Throughout this evolution, the role of financial markets, has evolved from a peripheral concern to a central element in climate politics. In this sub-section, I delve into the details of this evolution.

5.1.1. Making climate change governable

Climate change emerged as a distinct governance issue in the latter half of the 20th century. Initially, climate-related concerns were intertwined with various other environmental issues that began gaining visibility in the post-war era characterized by rising environmental consciousness. The resulting rise of first green political parties and policy programs in the 1960s and 1970s eventually led to attempts to govern such issues as part of global policy making. The United Nations Conference on the Human Environment held in Stockholm in 1972 is considered as the first significant attempt to establish a centralized governing and coordinating body to collectively address the emerging environmental issues. Accordingly, the conference resulted in the influential "Stockholm Declaration," which became critical in establishing a material framework for subsequent conferences, declarations, and treaties on environmental issues. Consequently, the Stockholm conference has been considered marking the beginning of treating environmental problems as global issues, requiring intergovernmental coordination, debate, and policymaking. This development eventually led to the establishment of influential environmental agencies such as the United Nations Environmental Programme (UNEP).

Within this context, climate change, characterized by global warming, gradually emerged as a distinct governance concern. While studies on atmospheric carbon dioxide levels had begun in the late 19th century, it was not until the mid-20th century that the implications of rising CO2 levels gained wider public attention. For long, however, the issue was primarily confined to scientific circles, with interest in understanding the more localized impacts of global warming rather than thinking it as a matter of public concern requiring wider governance efforts. To make global warming from purely a scientific into policy issue required more detailed thinking of its socio-economic effects. Such thinking was especially critical in the United States, where because of the 1970s energy crisis, there was an increased interest in the effects of the increased level of carbon dioxide on the country’s energy sector. In 1977, the US National Research Council published a report titled "Energy and Climate," highlighting climate as the primary limiting factor for the energy sector due to increased CO2 emissions. As a result, in such level, the report was first of its kind to call for a careful assessment of the broader societal effects of global warming and increased CO2 levels. Similarly, in the 1971 the US Office of Science and Technology policy requested the National Academy of Sciences to view “implications of this issue for national and international policy planning” (National Research Council 1977, p.viii) which resulted to a groundbreaking report in framing global warming as a critical policy issue:

21 For instance, the first World Climate Conference in 1971 was mainly attended by the scientific community as climate was not yet viewed as a relevant policy issue.
The conclusions of this brief but intense investigation may be comforting to scientists but disturbing to policymakers. If carbon dioxide continues to increase, the study group finds no reason to doubt that climate change will result and no reason to believe that these changes will be negligible. The conclusions of prior studies have been generally reaffirmed…A wait-and-see policy may mean waiting until it’s too late.

(National Research Council 1977, p.viii)

Consequently, the 1980s witnessed an increasing push to frame global warming as a global policy issue. While in the early 1980s, climate change was primarily debated among natural scientists, towards the end of the decade it became a prominent issue for policymakers. For instance, number of scientific workshops held in the mid-1980s marked a significant turning point in framing climate change as a policy issue for the first time emphasizing the need for active collaboration between scientists and policymakers to explore alternative policies and adjustments to address the issue. (Agrawala 1998, p.608). These increasingly dense entanglements of science and policy eventually prompted the creation of the Intergovernmental Panel on Climate Change (IPCC) in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO). This body was explicitly established to offer policymakers an extensive review and guidance concerning the current knowledge on climate science, the socio-economic repercussions of climate change, and potential strategies for response, including considerations for a potential future international climate convention. Consequently, the release of the IPCC's first assessment report laid the scientific groundwork for climate-related negotiations and dialogues that culminated in the formation of the first climate convention in 1992 at the Rio Earth Summit, marking the beginning of the series of UNFCCC-led Conference of Parties (COP) climate talks.

5.1.2. In search for the economically optimal level of warming

As climate change became framed as a significant global policy issue, the necessity for interdisciplinary approaches to understanding its socioeconomic implications became evident. In the early 1980s, the prominent US National Research Council formed the Carbon Dioxide Assessment Committee to spearhead interdisciplinary research on the impacts of rising CO2 levels. This initiative played a crucial role in emphasizing that analyzing the socioeconomic ramifications of global warming necessitates expertise from a variety of scientific disciplines. This was underscored in the committee's initial report titled "Changing Climate":

As Agrawala (1998, p.607) points out, although the first World Climate Conference in 1979 did not immediately catalyze policy actions, it laid the foundational groundwork for organizing various workshops centered around the issue of global warming, increasingly directing their resolutions and suggestions towards policymakers, such as urging them to establish a maximum temperature rise rate. Hence, these scientific reports, served as a basis for recognizing global warming as a pertinent policy concern. For example, the Toronto Conference on the Changing Atmosphere in the summer of 1988, which was organized based on recent scientific declarations, marked "the high-water mark of policy declarations on global warming" (Bodansky 1994, p.49). While it was not officially recognized as an intra-state conference addressing global warming, the backing from influential actors, such as the Government of Canada bestowed upon it a level of authority that previous environmental conferences had not enjoyed, now including the participation of high-ranking government officials.
the Co2 issue is so diverse in its intellectual components that no individual may be considered an expert on the entire problem.


One of the incorporated scientific fields was economics. In this regard, the American economist William Nordhaus played a pivotal role in integrating an economic perspective into the emerging policy discussions. Included as an author of the 1983 interdisciplinary scientific report, Nordhaus established himself as a critical member of the scientific community working to determine the effects and implications of climate change in order to inform policymaking around the issue.

Due to his active and influential role in discussing the economic consequences of climate change, Nordhaus is widely recognized as the father of the economics of climate change, having established climate change as the new field of inquiry for the economic sciences.23 Nordhaus's interest in climate change stemmed from the intersection of environmental concerns and economic development. Triggered by the famous 1972 publication "Limits to Growth," which strongly argued against the feasibility of exponential economic growth on a planet with limited resources, Nordhaus wanted to explore whether the limited resources indeed would place limits to economic development. (Nordhaus 1973, p.529). Driven by these concerns, he aimed to pinpoint the optimal path for resource consumption and the corresponding pricing structures, ultimately concluding that economic growth would not be stifled by the issue of limited resources.

In 1975, Nordhaus broadened the scope of his research to address the pressing issue of climate change, with a specific emphasis on carbon dioxide. In his paper titled "Can we control carbon dioxide?" he ventured to scrutinize the intricate trade-offs between economic growth and environmental quality, a topic central to the "Limits to Growth" debate (Nordhaus 1975, p. 2015). However, the focal point of his analysis was quite specific: how to limit atmospheric carbon dioxide concentration to a reasonable level and determine the cost of implementing an efficient control path (p.2018). Fundamentally, his seminal work sought to quantify the trade-off between economic development and carbon control strategies, with the goal of pinpointing the economically optimal level of global warming.

In his subsequent publication titled "Economic Growth and Climate: The Carbon Dioxide Problem" (Nordhaus, 1977), Nordhaus underscored the imperative role of scientists, including economists, in laying the groundwork for the formulation of optimal and efficient control strategies—such as determining the optimal degree of warming. Nonetheless, he asserted that the responsibility to carve out a robust framework to operationalize such strategies squarely falls on the political sphere. As he noted, at the time, the central question for economists,

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23 While Nordhaus is just one among many economists, his legacy is undeniable. His models significantly influenced early policymaking surrounding climate change, and even the IPCC reports have heavily relied on his models. He has won the Nobel Prize in Economics, and for a long time has been considered the reference point in the field when discussing the economic impacts of climate change.
climatologists, and other scientists is to assess the costs and uncertainties associated with projected climate changes and, consequently, determine the level of control policymakers ought to aim for. Contrarily, when viewed through a political lens, the daunting challenge resides in orchestrating an international control strategy that harmonizes the varied interests of different nations (Nordhaus 1977, p.346).

It is widely regarded that Nordhaus has been a profoundly influential economist shaping the evolving policy discussions. In his 1991 paper, “To slow or not to slow: the economics of the greenhouse effect,” Nordhaus explicitly sets to supplement his fellow scientists’ suggestions for policy makers planning on the measures to slow greenhouse warming by warning of the possible economic consequences of selected mitigation strategies:

Along with the scientific research have come with growing alarm and calls for drastic curbs on the emissions of greenhouse gases, as for example the reports of the Intergovernmental Panel on Climate Change (IPCC 1990) and the Second World Climate Conference (October 1990). To date, these calls to arms for forceful measures to slow greenhouse warming have been made without any serious attempt to weight the costs and benefits of climatic change or alternative control strategies.

(Nordhaus 1991, p.920)

At the time, Nordhaus expressed concern that the ongoing policy discussions, which were envisioning a global framework for climate governance, seemed to overlook “the economic studies of the costs and benefits of measures to slow greenhouse warming” (Nordhaus 1992, p.1). This, the argument went, was occurring despite the increasing amount of economic data suggesting that “a growing body of economic evidence has pointed to the likelihood that greenhouse warming will have at most modest costs in industrial countries, while programs to impose deep cuts in GHG emissions will have substantial costs.” (Ibid, p.1-2) As he notes,

Like two ships passing in the night, economic studies and the treaty negotiations seem to be proceeding independently under their own stream.

(Nordhaus 1992, p.1-2)

However, it is worth noting that the studies cited by Nordhaus are somewhat limited, primarily drawing from his own research concerning the economic ramifications of climate change. For instance, his notable 1991 paper, which concluded that climate change has minimal impact on economic growth—thus advocating for a "slow approach" to emission control strategies—is shaped significantly by the particular framing of his study. For instance, as noted by an economist Steve Keen (2021), Nordhaus employed a distinctive categorization when defining the "economic activities" potentially impacted by climate change, emphasizing that only sectors such as agriculture and forestry, which are carried out outdoors, would be directly affected.

24 In 2018, Nordhaus was awarded Nobel price “for his long-term contribution to the study long-term economic growth and climate change”.
Consequently, indoor activities, such as things like the microprocessor fabrication, are not considered in his analysis. This approach leads Nordhaus to exclude approximately 87% of all economic sectors from his study, operating under the assumption that they would not be impacted by climate change.

To further illustrate the somewhat selective boundaries employed in his models, Nordhaus (1991, p.923) acknowledges that a "wide variety of non-marketed goods and services" are omitted from his analyses. These exclusions encompass critical aspects such as “human health, biological diversity, amenity values of everyday life and leisure, and environmental quality”, which are not factored into the calculations. Additionally, he concedes that even the more usual variables of economic calculations are acknowledged to hold a significant degree of uncertainty, while often determining the conclusions drawn by the analyses - that is, whether it is economically valuable today to execute mitigation policies aimed to control emissions. This element of uncertainty is particularly notable in the context of the discount rate, with Nordhaus championing the use of a higher rate to justify more gradual mitigation strategies, predicated on the assumed minimal economic repercussions of climate change.25

In his 1993 paper titled "Reflections on the economics of climate change," Nordhaus attempts to establish what he calls as a pragmatic middle ground for policymaking. Aiming to navigate a path between what he perceives as the overly optimistic view of boundless economic expansion and the more pessimistic stance that enforces limits on growth, he conducted a select survey among climate change experts, which included both climate scientists and economists. His goal was to delve into the “diversity of views held by those who have thought deep about global warming and its impacts and about the extent of uncertainties” (Nordhaus 1994, p.45).

In essence, the survey revealed a significant divergence in estimates concerning the impacts of climate change, a discrepancy most noticeable between mainstream economists and natural scientists. For example, whereas substantial proportion of economists concurred that the potential detrimental effects of climate change could be counteracted through technological advancements and human innovation, “many of the non-economists voiced deep concern about the ability of natural ecosystems to adapt to climatic change, particularly for the large temperature increases” (Nordhaus 1994, p.48). For some economists, the effect of climatic change was deemed “essentially zero” grounded in the belief that "energy and brain power constitute the sole constraints to long-term growth." (Ibid) As argued by some economists quoted, with ample availability of these resources, humanity possesses the capability to adapt or forge new technologies, thereby averting significant economic repercussions. Conversely,

25 As Nordhaus highlights, "the choice of a discount rate is a thorny issue in investment studies, particularly when considering investments spanning a century or more" (p.925). However, in his 1993 paper, Nordhaus directly critiques another economist’s (Cline, 1992) adoption of a lower interest rate, arguing that it assumes “a rate of time preference that is lower than what would be consistent with real interest rates.” This assumption, Nordhaus posits, skews the analysis to favor more immediate mitigation actions. Although he acknowledges the inherent “moral” considerations encapsulated in the selection of an interest rate, he contends that “clearly, if we arbitrarily assume a near-zero discount rate (as Cline does), society will be spurred to undertake massive investments in tangible, human, and environmental capital. However, who will shoulder the burden of these extensive savings remains an unanswered question.”
“natural scientists’ estimates of the financial toll of climate change were 20-30 times greater than those projected by mainstream economists” (Ibid). As one natural scientist quoted in the paper notes:

I must tell you that I marvel that economists are willing to make quantitative estimates of economic consequences of climate change where the only measures available are estimates of global surface average increases in temperature. As [one] who has spent his career worrying about the vagaries of the dynamics of the atmosphere I marvel that they can translate a single global number, an extremely poor surrogate for a description of the climatic conditions, into quantitative estimates of impacts of global economic conditions.

(Nordhaus, 1994, p.51)

The reason to outline the above is not to engage in a technical debate regarding the accuracy of the respective calculations. Rather, the point is to illustrate the significant degree of arbitrary judgment that anchored the “economics of climate change” informing early policymaking. Despite the arguably simplistic nature of Nordhaus's computations – a fact acknowledged by Nordhaus himself (1991, p.927) – these calculations played a pivotal role in shaping the discourse surrounding climate change and its mitigation within the context of global governance. Moreover, while Nordhaus was but one among several economists offering such analyses, with the benefit of hindsight we can say his calculations did matter. His 1991 paper along with the models developed therein, emerged as landmarks in the economic research on climate change, profoundly influencing not only climate negotiations but also much of the subsequent economic and scientific research. Consequently, despite the inherent challenges in economically quantifying climate change and mitigation efforts, Nordhaus's body of work has been instrumental in crafting a narrative that frames global warming as an issue that can be addressed through economic calculations.

To conclude, the process of reframing climate change from merely a scientific concern to an issue that can be economically governed spanned several decades culminating in the establishment of the first Climate conventions in 1992 that endeavored to delineate its political, scientific, and economic facets. This process included the organization and creation of a number of interdisciplinary reports and economic analyses, wherein contributions like those made by Nordhaus played a significant role in shaping the perception of climate change as a specific type of economic issue. Ultimately, this framing facilitated the acknowledgment of the necessity for global governance mechanisms capable of also addressing the economic implications of climate change effectively. As was stipulated in Article 2 of the first climate treaty when presented for signatures at the Rio Earth Summit in 1992:

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in

26 For instance, Nordhaus’s DICE (Dynamic Integrated Climate-Economy) models have been a significant component in the field of climate science, integrated within the calculations of the Intergovernmental Panel on Climate Change (IPCC).
accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

(UNFCCC 1992, p.4: article 2: Objective)

5.1.3. Negotiating climate change: The evolving climate governance – markets nexus

The climate convention established in 1992 marked the beginning of a series of ongoing negotiations known as the Conference of Parties (COP) climate talks. These talks have come to serve as the primary decision-making platform for the United Nations Framework Convention on Climate Change (UNFCCC), providing a forum for member countries to discuss and coordinate efforts to address climate change.\(^{27}\) In practice, the COP meetings hold critical importance in evaluating progress, exploring avenues to fulfill the convention's objectives, and crafting frameworks and agreements to foster climate action. As noted by Bodansky (2001, p.32,34), the primary value of the convention was procedural, aiming to "establish a legal and institutional framework for future work through regular meetings of the parties and the potential adoption of more substantive protocols." This approach often resulted in positions that were "deliberately ambiguous," facilitating ongoing dialogue and negotiation.

It is often positioned that the UNFCCC negotiations have unfolded through distinct periods, signifying the evolution of global climate governance. Initially, the Kyoto Protocol, adopted in 1997, set binding emission reduction targets for developed countries, marking a pivotal milestone in international climate talks. Following this, the focus from 1998 to 2009 was on framing a more inclusive framework to involve all nations in climate action, but progress was notably challenging during this period. The COP15 meeting in Copenhagen in 2009 stood as a critical juncture, anticipated to produce a comprehensive global agreement yet failing to do so, steering the negotiations towards a phase of introspection and reassessment of the strategy. Consequently, the period post COP15 witnessed a novel approach to the negotiations, eventually facilitating the creation and adoption of the Paris Agreement in 2015.

Throughout this process, the role of markets has become a critical facet of climate politics, presenting both potential solutions and challenges in addressing global climate issues. The idea of utilizing markets to attain policy objectives has been at the heart of UNFCCC negotiations from the outset. Nonetheless, the role and perception of markets have transformed as time has progressed. The upcoming section succinctly outlines the history of UNFCCC negotiations, highlighting the evolution of "markets" and, more recently, financial markets from a peripheral role to a central position in climate politics.

\(^{27}\) COP parties practically include all United nations member states.
Kyoto Protocol and the making of carbon markets

The Kyoto Protocol, signed in 1997, was the first treaty to emerge from the UNFCCC negotiations, aiming to establish legally binding emission reduction obligations for industrialized countries. Furthermore, it played an instrumental role in framing climate mitigation as an economic matter manageable through market mechanisms, particularly through the initiation of "carbon markets". However, the adoption of this approach did not emerge without controversy. For instance, while the EU had advocated for more ambitious reduction targets, the US insisted the use of flexible market-based mechanisms. Hence, the choice of carbon markets as an example of flexible market mechanisms was a recourse to the difficulties faced in determining binding reduction targets during intra-state discussions. Accordingly, carbon markets were widely perceived as a more neutral solution, argued facilitating cost-effective carbon reductions. (Bernstein, Betsill, Hoffmann & Paterson 2010, p.165)

By merging emission reduction targets with the notion of carbon markets, Kyoto established a lasting framework for the market-climate governance nexus. As this framework sought to qualify carbon as a commodity to be traded at the carbon markets, its adoption subsequently led to the creation of various essential tools to quantify and commodify carbon. However, although the Kyoto Protocol allocated substantial room for the narrative of market-focused solutions based on the pricing abilities of markets, the actual policy goals continued to revolve around nation-states. In other words, despite the narrative around carbon markets, the member states maintained primary responsibility for organizing emission reduction initiatives within their national boundaries. Consequently, as part of the climate talks, the state remained as the central entity to be held accountable for curtailing its emissions (within national borders), with carbon markets serving as the avenue to guarantee cost-effective implementation where it would be most economically viable. Underpinning this approach was a belief that markets were the optimal arena for pricing, carbon market then envisioned to pinpoint the optimal timing, pathways, and pricing for carbon, facilitating the best trade-offs between economic development and climate mitigation strategies. (Pattberg & Stripple 2008; Bernstein, Betsill, Hoffmann & Paterson 2010)

Consequently, the Kyoto Protocol established a robust framework for fostering the nexus between climate governance and markets. Specifically, it laid a durable frame for subsequent discussions and negotiations surrounding carbon pricing, emission trading, and market-based mechanisms for climate mitigation. And while it may not have established a stable agreement per se, it did create a broader framework that was critical guiding following organizing.

Towards Post-Kyoto regime: climate finance and the new economics of climate change

But it was not until 2005 that the Protocol was enforced, with the commitment period spanning from 2008 to 2012. However, the early 2000s represented a challenging period for climate talks due to difficulties in enforcing the protocol. Specifically, several industrialized and the so-called “developed countries” were hesitant to commit to reducing emissions before the so-called

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28 As Braun (2009) and Mackenzie (2009) have documented, the making of the carbon markets has required the configuring of the various calculative tools to make carbon a market commodity and a tradable thing in the markets.
"developing countries." (Engels 2006) For instance, in 2001, the United States withdrew from the protocol, citing potential economic harm and concerns about competitiveness, despite the US being a driving force behind choosing the flexible market mechanisms advocated in the protocol in the first place. 29

The Kyoto Protocol, which was set to expire in 2012, directed the focal point of climate talks towards preparing for the regime that would succeed it, commonly referred to as the "post-Kyoto regime." However, the early 2000s brought substantial challenges in climate negotiations, mainly stemming from the prevailing belief that drastic reductions in carbon emissions could negatively impact economic development and various industries. Essentially, early negotiations were significantly influenced by economic takes that advocated for a gradual and cautious approach to regulatory interventions, as swift emission reductions were perceived to potentially undermine the economic development.

However, the early 2000s marked a significant shift in the economic narratives surrounding climate change governance, culminating in the widely recognized and influential "Stern Review" in 2006. Commissioned by the UK government and spearheaded by British economist Nicholas Stern, the review garnered substantial attention, eventually altering the economic discourse surrounding climate mitigation by emphasizing the economic costs of inaction. Explicitly referencing the calculations made by Nordhaus, the Stern report characterized climate change as "the most extensive market failure ever seen", with costs escalating progressively the longer action is delayed. In this vein, it underscored the costly consequences of inaction, advocating for heightened investment to alleviate the severe impacts of climate change, thereby highlighting the economic advantages of mitigation policies.

Mitigation – taking strong action to reduce emissions – must be viewed as an investment, a cost incurred now and in the coming few decades to avoid the risks of very severe consequences in the future. If these investments are made wisely, the costs will be manageable, and there will be a wide range of opportunities for growth and development along the way. For this to work well, policy must promote sound market signals, overcome market failures and have equity and risk mitigation at its core.

The evidence gathered by the Review leads to a simple conclusion: the benefits of strong, early action considerably outweigh the costs. The evidence shows that ignoring climate change will eventually damage economic growth.

(Stern 2006, Executive Summary, p.i)

However, the Stern Review encountered significant criticism from contemporaneous economists, with the response from Nordhaus being particularly noteworthy. In a critique published in the Journal of Economic Literature, Nordhaus contended that the Review's

29 In 2001, President George W. Bush stated he will oppose Kyoto Protocol “because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy.” (Text of a Letter from the President to Senators Hagel, Helms, Craig, and Robert, The White House Press Release March 13, 2001)
conclusions were heavily predicated on a nearly zero-time discount rate coupled with a specific utility function. In Nordhaus' view, these assumptions made the Review's "unambiguous conclusions about the need for extreme immediate action" unsupportable when replaced with assumptions more aligned with current real interest and savings rates found in the marketplace (Nordhaus 2007, p.686). Consequently, the Stern Review's conclusions were markedly different from earlier economic models that proposed only modest emissions reductions in the near term as the optimal economic policy to mitigate climate change. Moreover, Nordhaus distinctly labelled the Stern Review as a political document given its commissioning by the UK government, implying it might be serving advocacy goals rather than presenting an impartial economic analysis.

Despite the ongoing technical debates surrounding the new economic perspectives on climate change introduced by the Stern Review, the report managed to garner substantial political momentum. It was extensively endorsed and referenced by policymakers and advocates urging for prompt action in climate negotiations, effectively altering the prevailing market narrative around climate governance. Notably, in the months leading up to the COP in Bali in 2007, the IPCC published its fourth assessment report, which highlighted the immense costs of inaction in ecological, human, and financial terms, far exceeding the costs of immediate action.

Concurrently, the 2007 Nobel Peace Prize was conferred jointly upon the IPCC and the former Vice President of the United States, Al Gore, who had emerged as a vocal proponent of the Stern Review's findings and implications.30

In harmony with the insights presented by the Stern Review, climate discussions began to increasingly underscore the necessity for negotiations and policymakers to foster sound market signals to facilitate the channeling of investments towards climate mitigation efforts. This shift brought the topic of climate finance and the funding of climate change mitigation initiatives to the forefront of climate negotiations for the first time. Ahead of the COP meeting in Bali, which sought to draft a roadmap for the emergent "post-Kyoto regime," a designated group was constituted to evaluate the investment flows requisite to address global mitigation and adaptation needs. The assessment produced by the group, unprecedentedly, indicated that "public funds alone" would prove inadequate to finance mitigation strategies, accentuating the pivotal role of private sector investments, which accounted for the lion's share of investment and financial flows (86%) in the capital markets (UNFCCC 2007).31

Consequently, the Bali meeting in 2007 explicitly recognized the role of private investment as a critical source to finance climate action. (Clémençon 2008) Moreover, it was in Bali that trade and finance ministers from most G20 countries convened for the first time to separately discuss the economic costs of climate change and the potential impacts of climate action on economic growth. However, as Clémençon (2008 p.90) has noted, the discussion primarily

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30 To illustrate the significance of the review further, in the Tragedy of the Horizon speech, Mark Carney makes explicit references to Stern review and discusses the costs of inaction.

focused on preventing climate action from hindering economic growth, rather than thoroughly considering how the trading system and the markets could effectively support climate mitigation.

As a result, the Bali conference emerged as a seminal year in the progression towards the post-Kyoto regime, tasked with developing a roadmap for a new agreement to be forged by the time the 15th annual climate conference assembled in Copenhagen in December 2009. This period marked a decisive shift in focus to the economics of inaction, accentuating the necessity of private finance and the need to ensure an optimal policy landscape that promotes sound market signals for investment. The Stern review arguably catalyzed this shift by spotlighting the economic repercussions of inaction and thereby substantiating the necessity for a climate agreement as an economically optimal outcome. Moreover, by highlighting the urgent need for investments to curb the adverse effects of climate change, it categorically underscored the imperative of climate policy to foster a robust investment landscape conducive to a carbon-constrained future. This transition broadened the scope of the climate-governance markets nexus beyond merely carbon markets, now embracing a wider market context and emphasizing the role of private investments for the first time. As such, the focal point transitioned from exclusively targeting emission reductions within the confined sphere of carbon markets to adopting a more comprehensive perspective necessitating widespread market reforms.

The failure of Hopenhagen and the UNFCCC intra-state commitments
The Copenhagen COP 15, poised to craft a new agreement for the post-Kyoto regime, was encased in high expectations, acquiring the nickname of "Hopenhagen". The focal points of these expectations were twofold: establishing medium-term emission reduction targets for developed countries, akin to those set by the Kyoto Protocol, and devising strategies for both short and long-term financing of climate initiatives.

But the global landscape had transformed markedly since the COP meeting in Bali. The pre-eminent market failure necessitating regulatory intervention was no longer climate change, but the spiraling financial crisis. This crisis, still unravelling, was perceived by some as eclipsing the climate issue, while others saw it as a golden opportunity to concurrently address both predicaments through cohesive solutions, such as "green stimulus" packages. Consequently, climate change found a more prominent place on agendas where it had previously been overshadowed, including the G20, which had been newly designated as the primary forum for global economic and financial cooperation due to the financial crisis. In the lead-up to the Copenhagen meeting, intense negotiations took place in 2009, particularly regarding the issue of finance. Number of high-level remarks at the time urged G20 leaders to signal that the financial crisis and climate change could be tackled simultaneously to “set the right tone” for the upcoming COP negotiations in Copenhagen.

However, despite the high hopes and rhetorical commitments, the COP meeting in Copenhagen did not culminate in a global climate agreement. In fact, the meeting has been widely labeled as

32 Most notably in the meetings of the G8, G20 and the Major Economies’ Forum on Energy and Climate Change that for the first time, were placing climate change on their agenda.
a colossal setback in the trajectory of climate negotiations, jeopardizing the credibility of the UNFCCC-led talks. (Bodansky 2010) It is suggested that the failure in Copenhagen revealed the inherent challenges of transnational treaty-making and raised doubts about the UNFCCC’s ability to deliver meaningful progress and coordination in climate action as major polluters, such as the US, continued to resist binding emission reduction targets. Consequently, a growing consensus began to emerge that a Kyoto-style agreement, which sought to establish country-specific emission targets, might never secure approval due to the vastly disparate economic interests held by the various participating nations.

Yet, to label the Copenhagen conference as an outright failure would be to overlook certain nuances, a point highlighted by Bernstein, Betsill, Hoffmann, and Paterson (2010). Even in the face of stalled intra-state negotiations and the absence of binding emission reduction targets, the Copenhagen Accord brought forth pivotal elements that once more reshaped the interplay between climate governance and markets. Foremost among these was the centrality assigned to the role of private finance as a source of funding, marking it the first explicit recognition of private finance in climate negotiations. Although the G20 countries did not reach a clear agreement on the size and sources of climate finance, the negotiations included a commitment by developed countries to jointly mobilize USD 100 billion annually by 2020 for climate mitigation, introducing a new financial framework in the climate negotiations. As the Accord stated:

In the context of meaningful mitigation actions and transparency on implementation, developed countries commit to a goal of mobilizing jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries. This funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance.

Secondly, even in the absence of established binding emission reduction targets, the preliminary consensus reached at Copenhagen conceded that global warming should be confined to an increase of no more than 2 degrees Celsius. This benchmark, albeit not as ambitious as the advocated 1.5-degree target supported by many environmental groups and vulnerable nations, established a critical reference point for global climate initiatives. This threshold not only represented a global compromise but also a shift towards a tangible, universal target in climate change mitigation. This benchmark would later be officially endorsed during the subsequent COP16 meeting in Cancun in 2010, solidifying a global commitment to curb climate change within a specified parameter.  

Finally, as noted by Hale (2016), Copenhagen marked a turning point in the form and structure of climate negotiations. While the summit unveiled the limitations of intra-state negotiations it simultaneously shed light on the significant role that transnational non-state actors and coalitions can play. Hale (2016, p.12) points out that the perceived “failure” of the Copenhagen summit actually spurred a wave of new thinking among a broad spectrum of actors about how to

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33 In the Tragedy of the Horizon speech, delivered before the eventual formation of the Paris Agreement, Mark Carney explicitly referred to this 2-degree commitment that was confirmed in Cancun in 2010.
tackle climate governance more effectively given the existing governance arrangements. Since then, the climate governance landscape has been evolving from a regulatory model reliant on binding, negotiated emissions targets to a more catalytic and facilitative model. This newer approach seeks to foster conditions encouraging various actors to progressively reduce emissions through coordinated policy shifts with aim to mobilize networks of non-state actors like cities, businesses, and philanthropic foundations, and a host of non-governmental organizations. According to Hale, these developments represent a shift in the essential logic of the global climate response, viewing these actors not as mere adjuncts to the UNFCCC process, but as integral components in fostering sustained climate action over time (p. 14).

In summary, while the Copenhagen conference may have lacked a binding agreement, it paved the way for reshaped strategies in climate governance. These strategies were centered around mobilizing private finance, establishing a benchmark with a 2-degree warming limit, and fostering collaboration between diverse actor constellations instead of exclusively relying on state-centered initiatives. Concurrently, the financial crisis instigated a wider critique of the financial sector, nudging efforts to better align market strategies with climate goals.

Rethinking Climate Governance on the Road to Paris Climate Agreement

Following the Copenhagen conference, a notable shift in negotiation strategies paved the way for the Paris Agreement reached in 2015. Recognizing the shortcomings of the Copenhagen summit, the executive secretary of the UNFCCC, Christina Figueres, initiated institutional changes within the organization, acknowledging that a “global” or “uniform” solution was not viable. Instead, it was argued that a more bottom-up” and polycentric approach was needed in building the pathway forward.

As preparations for the Paris COP 21 gained momentum, the focus squarely landed on the matter of finance and channeling investment flows to achieve the 2-degree objective. However, a centralized process to establish such arrangements was conspicuously absent. In the years leading up to the conference, numerous initiatives were launched aimed at galvanizing finance towards such a goal. Accordingly, amid the COP 15 in Cancun in 2010, the UN Secretary-General established a High-Level Advisory Group on Climate Change Financing to address this very concern, highlighting the imperative role of mobilizing private finance. This emphasis was clearly articulated in the group's inaugural report:

especially at a time when many Governments are experiencing fiscal and budgetary constraint, we need to make extra efforts to identify new, innovative and additional sources for the long-term financing that can make a difference.

(The United Nation’s Report of the Secretary-General’s High-level Advisory Group on Climate Change Financing 2010, p.2)

As a result, the G20 finance ministers and central bank governors formally acknowledged the relevance of climate finance and recognized the UNFCCC as the forum for climate change
negotiations while also highlighting the need to discuss climate finance among the G20. While the enthusiasm of some members had considerably varied over time, there was an increased pressure for G20 Finance Ministers and Central Bank Governors for a stronger engagement and cooperation to address the issue of climate finance, especially in mobilizing the funding needed to finance climate mitigation strategies. In 2012, Climate Finance Study Group under the G20 was established to “consider ways to effectively mobilize resources for climate finance” in the attempt to meet the funding goals committed in global climate treaties.

As the Paris negotiations drew closer, expectations regarding the need to mobilize private finance and align investment flows with a "two-degree world" were amplified placing financial markets towards a center of pre-Paris discussions. Consequently, the success of the negotiations was anticipated to be gauged based on whether they conveyed a sufficiently clear message to the markets—particularly to global investors—regarding commitments to transition into a low-carbon world. Just days before the conference, the Secretary-General of the UN, Ban Ki-moon, emphasized in his speech that:

Paris must provide a long-term vision consistent with a below 2 degrees trajectory and send a clear signal to markets that the low-carbon transformation of the global economy is inevitable, beneficial, and already under way.

The climate conference in Paris is not the end point. It must mark the floor, not the ceiling of our ambition. It must be the turning point towards a low-emission, climate-resilient future.

(Ki-moon 2015)

In December 2015, the Paris Climate Agreement emerged as a pivotal milestone when the UNFCCC parties jointly established a goal to realign global financial flows with the climate mitigation plans. This emphasis on finance and capital flows within the agreement was perceived as a crucial element, with an explicit aim to align financial flows with mitigation target. Consequently, although the Paris Climate Agreement became predominantly recognized for its objective to limit global warming to "well below 2 degrees Celsius", it concurrently set an unprecedentedly ambitious goal for the finance sector. As delineated in the Agreement, one of the principal objectives was set:

Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

(Article 2c, Paris Agreement 2015)

34 In 2011, the G20 mandated its finance ministers to consider effective ways for resource mobilization in line with the objectives, provisions, and principles of the UNFCCC, and report on their progress.

35 Such decision was prompted by the United Nation’s “Report of the secretary-General’s High-Level Advisory Group on Climate Change Financing” published in 5th of November 2010.
5.2. The evolving frames of climate risk: Framing climate change as a financial concern

In the early 2000s, the growing focus on the economic effects of climate governance fertilized the ground for the emergence of a new concept at the intersection of climate policy and markets: climate risk. Hence, the remaining part of the chapter describes how the object of climate risk has been critical in mediating the evolving climate policy-markets nexus by shaping the understanding of climate change governance as a financial concern. In what follows, I trace the trajectory of the issue of climate risk and its transcendence into a new concern of transition risk.

5.2.1. Emergence of climate risk: From ethical to a financial concern

The finance sector’s first official engagement with climate issues took place under the United Nations Environmental Programme (UNEP) in the lead-up to the Rio Summit, which led to the establishment of the UNFCCC Climate Convention. In preparing for the summit, the UNEP initiated its first collaboration with financial sector, initially involving only a small number of commercial banks. At the time, the purpose of this engagement was broad, aimed at raising awareness of the wider environmental agenda unfolding at the time within the banking industry. Prior to the summit, the new initiative published its first statement of commitment in the context of climate talks, serving primarily as an aspirational and voluntary declaration of intent in which the banking sector was acknowledged as a pivotal contributor to sustainable development.36

In essence, finance sector’s initial involvement in addressing climate issues stemmed from the socially responsible investment (SRI) movement that had gained prominence in the early 1990s by addressing various social and environmental concerns including apartheid, tobacco use, chemical weapons, and environmental catastrophes like oil spills. Notably, this early engagement was primarily propelled by ethical and moral motivations, as issues pertaining to the environment, encompassing those linked to climate change, were largely perceived as non-financial in nature. Traditionally, the SRI community adhered to the principles of ethical investing, crafting investment decisions based on moral arguments that occasionally warranted the exclusion of specific companies or entire industries from investment portfolios, a practice argued being rooted primarily in moral evaluations rather than financial implications.

For a long time, climate-related concerns remained under the wider labels of “environment” and “sustainable development”. Even in the wake of the Kyoto Protocol in 1997, declarations from the finance sector regarding climate matters were practically non-existent. For example, when the UNEP banking coalition broadened its scope in 1999 to incorporate also other major financial institutions, morphing into what would later be known as the UNEP Finance Initiative (UNEP FI), climate change was not yet isolated as a distinct issue warranting attention. Instead,

36 At the time, climate was not a distinct issue to be addressed but considered under wider labels of “environmental concerns” and issues related to “sustainable development”.

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the discourse of that time gravitated around the more expansive notion of "sustainable development." (UNEP statement 1997)

Nevertheless, within a few years, climate change emerged as a distinct concern for the finance industry. At the turn of the millennium, investor groups began explicitly focusing on climate change, frequently citing the establishment of the Kyoto Protocol and its projection of the “carbon-constrained future” as the inevitable path ahead, with substantial implications for long-term investment strategies. Hence, these long-term effects associated with climate change, the concerns over the financial effects of climate and its governance took a pronounced significance for institutional investors, who generally were seen to operate within longer investment time horizons. In this context, in 2001, UNEP FI established its first dedicated group with focus on the issue of climate change only and commissioned a study on the financial services sector and climate change. This “major two-phase study” (Innovest 2002a, 2002b) was the first of its kind, aiming to assess the financial effects of climate on financial institutions by deciphering the potential impacts of climate change, as well as the projected mitigation strategies outlined in the Kyoto Protocol. 37

The commissioned study, published in 2002 effectively captured the prevailing sentiment of the time regarding the challenges the finance sector faced in engaging with the issue. As stated in the report, the finance sector should not be expected to participate in "non-competitive" or "non-revenue generating" activities if not proven to have financial relevance.

[…] it is also apparent that financial institutions cannot – and for fiduciary and competitive reason should not – engage in prolonged, non-commercial, non-revenue generating activities of social or public interest. […] the key to progress is greater cooperation and collaboration between all stakeholders based on, in this case, a shared interest in protecting and creating value […] for the financial service industry, this means that climate change action must provide an attractive return.

[…] to drive the issue into mainstream consciousness within the financial services community, and onto the agendas of company directors, executives, and institutional investors, it is necessary to discover climate change and carbon as a determinant of value within the industry’s respective functions.

(Innovest 2002b p.12-13)

Furthermore, the report highlighted two major issues that hindered the finance sector's engagement with climate change: the long-term time horizon and the prevailing perception that the financial impacts of climate change would only manifest in the future, with no immediate

37 “At that time, the UNEP FI stood as the preeminent organization coordinating and explicitly delineating the relationship between the finance sector and broader environmental concerns for mainstream financial entities. However, it was not the only voice in this field. The period also saw the emergence of other groups, which played a significant role in championing this agenda. Notable developments during this period include the founding of CERES in 1999, the US based Investor Network on Climate Risk (2003), and the UK-based Investor Network on Climate change (2003).
impact on current valuations. As noted in the report, at the time, the “lack of connection between climate change and planning-horizon of financial risk”, along with the “slow pace of price discovery for carbon”, meant that the financial sector did not “see any immediate monetary value in climate action” (Ibid, p.5-6). Consequently, the prevailing challenge at that time was demonstrating how climate change—particularly carbon emissions, which were the focus of the Kyoto Protocol’s emission reduction efforts—could influence valuations and pose financial risks to be addressed in the present, thereby becoming a relevant concern for investors. As a result, the report positioned that to protect investor value, it was vital to comprehend better "the extent to which climate change will impact or enhance the value of investments" (Ibid, p.4).

The burgeoning concern to comprehend the possible financial effects of climate change resulted in the emergence of a new type of risk object – climate risk. This newly identified risk object quickly became the focal point of discussions and arguments concerning the financial implications of climate change. Consequently, the early 2000s witnessed a surge in reports and publications addressing this new object of concern, accompanied by the formation of investor coalitions rallying around the issue.38 The Kyoto Protocol served as the foundational document for this renewed narrative, with early discourse on climate risk frequently aligning it with the notion of “carbon risk.” In this context, prudent financial evaluations and risk management practices were deemed essential. This shift spurred efforts to quantify and amplify awareness of climate-related risks, culminating in the creation of organizations like the Carbon Disclosure Project (now known as the CDP).39

In conclusion, the emergence of climate risk created a unique dynamic, intertwining the management of the new business risks with the outcomes of climate negotiations. The imaginary of "carbon-constrained future," established through the Kyoto Protocol, laid the groundwork to begin comprehending risk management practices and investment evaluations in relation to the gran issue of climate change. This, in turn, positioned climate negotiations as a source of both financial risks and opportunities, as the regulatory actions to mitigate greenhouse gases were recognized as potential threats to credit risk, investment performance, and shareholder value in emission-intensive sectors. (UNEP FI 2002, p.4; CERES 2002, p.9)

5.2.2. Climate risk as a special concern for long-term institutional investors

As the focus on climate risk intensified, new narratives emerged delineating the roles and responsibilities associated with its management. In this evolving landscape, the stereotypical image of the ethical and morally driven investor, familiar to the SRI community, became insufficient. Instead, the consideration that climate risk has potential long-term financial effects, provided a rationale for examining its impact on the long-term investment portfolios of large

38 Most notably, the US based Investor Network on Climate Risk (2003) under CERES, and the UK-based Investor Network on Climate change (2003), as the largest investor coalitions at the time around the issue.

39 Chapter 7 delves into the development of these calculative tools, particularly focusing on the evolution of reporting standards and frameworks around the notion of climate risk. In this section, the emphasis is only to note the initial phase of this development, characterized by the proliferation of tools aimed at making the associated risks visible, calculable, and known to financial actors.
in institutional investors with extended investment time horizons. These actors, told to be concerned with all factors potentially influencing the performance of their long-term investment portfolios, were now urged to recognize climate as a pivotal element in the matrix of considerations influencing long-term value creation opportunities.

Furthermore, since the beginning of the early 2000s, it was increasingly argued that these actors were not merely driven by a voluntary interest to evaluate climate-related risks but were also perceived to have legal obligations to do so under the scope of fiduciary duty. This was especially the case if climate-related risks were deemed financially material concern. Hence, the following period saw concerted efforts to define the interpretation of fiduciary duty in relation to the issue of climate. This was seen as essential to overcome one of the “cognitive barriers” that had hindered financial institutions from engaging with climate-related concerns. As highlighted in the UNEP FI (Innovest 2002b, p.32) report:

> Inasmuch as companies’ environmental and social performance have historically been viewed as financially immaterial, it follows that they need not be – indeed, cannot be – a legitimate concern for fiduciaries. This narrow view of the proper ambit of fiduciary responsibility is slowly disappearing, hastened on its way by a growing body of European pension regulations requiring at least an explicit acknowledgement that investee companies’ performance on social and environmental issues may be germane to their financial performance.

Consequently, the intersection of fiduciary duty and the management of climate risk became a central topic in various workshops and reports published throughout the 2000s, a period marked by the substantial rise of institutional investors. This era also witnessed the establishment of influential initiatives such as the United Nations Principles for Responsible Investment (UNPRI), which manifested the burgeoning emphasis on Environmental, Social, and Governance (ESG) factors as influential elements in determining long-term value of investment portfolio, with climate considerations becoming a significant element as part of such considerations.

Alongside the recognition of climate risk as a relevant financial concern for financial institutions, a new issue emerged. As the calls to identify and manage climate-related risks increased, the difficulties inherent in managing such risks became apparent. Notably, numerous reports emphasized the fact that large financial institutions encountered significant constraints and limitations in managing climate risks, given their substantial size and the expansive scale of the portfolios they manage. This issue was particularly pertinent to institutions best

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40 See, for instance, Harvard University Workshop with CERES (2004).
41 The concept of Environmental, Social, and Governance (ESG) factors has roots in several initiatives and reports. However, the term ESG was first prominently used following a report initiated by the then UN Secretary-General Kofi Annan. In 2004, Kofi Annan invited a group of the world’s largest institutional investors, representing over $2 trillion in assets, to join a process to develop the Principles for Responsible Investment. During the process which lasted approximately one and a half years, a set of principles were developed, which emphasized the importance of environmental, social, and corporate governance factors when making investment decisions. This initiative led to the official launch of the Principles for Responsible Investment (PRI) in 2006 at the New York Stock Exchange.
characterized as “universal owners”, whose investment portfolios are considered to mirror the market as a whole, making the capital allocation decisions of these actors somewhat constrained.

In essence, the term universal owner emerged to increasingly describe large institutional investors expected to maintain fully diversified, long-term investment portfolios that encompass the broader markets. Consequently, the primary risk to be managed in these diversified portfolios is market risk, these actors then perceived to be deeply concerned about the development of overall market as "their status as universal owners means that their financial returns are significantly influenced by the overall performance of the economy" and not by the performance of individual companies (Ceres 2002, p. 22-23). As highlighted in a UNEP FI CEO briefing (2005, p.4) featuring the originators of the term, the economic interest of a universal owner extends beyond individual firms. Instead, they strive to consider the social, environmental, and economic impacts, aiming to minimize negative externalities across their portfolio. 42

In this context, climate risk became framed as a market risk that could potentially threaten overall economic development. 43 As stated in a widely cited report:

Climate change is a major emerging risk management challenge for institutional investors. Institutional investors, and pension funds in particular, aim to provide pensions and other benefits through long term investment. They can also be seen as ‘universal investors’ in that, due to their size, they commonly invest across the whole economy. If climate change threatens economic development, and especially if there are many or significant impacts, it will also therefore be likely to undermine the ability of pension funds and other institutional investors to fulfil their aims, so it is in their interests to see that risks associated with climate

42The image of the large institutional investor markedly deviates from the more traditional representation of somewhat skillful, information-sensitive, and most importantly, individual money managers - a portrayal that no longer seems fitting for 21st-century mainstream financiers, often referred to as “institutional investors.” Since the early 2000s, financial markets have witnessed an unprecedented rise in large institutional investors who, by definition, manage money on behalf of others (Fichter 2020). While many of these entities, including pension funds, insurers, investment banks, and asset management firms, embody various legal corporate structures and pursue diverse investment strategies to some extent, they predominantly share an "intermediary role" in managing others' money. This role manifests whether in the case of a pension fund handling funds for beneficiaries or professional asset management firms overseeing assets belonging to individuals and other asset owners, like pension funds. Essentially, the magnitude of centralized capital pools, in the form of funds, has expanded enormously, resulting in markets becoming increasingly concentrated in the hands of a relatively small number of large firms. For instance, whereas in the 1970s institutional investors held less than 20% of equity assets, it is now estimated that the world's three largest asset management firms hold a substantial portion, cementing a more "permanent ownership position" characterized by a relatively illiquid stance. In other words, these firms cannot simply exit and divest to wield their "power". See Braun (2016, 2020, 2022) for a more detailed discussion.

43The term universal owner started to appear increasingly in several reports, underscoring the systemic role of certain financial institutions. As one widely cited report on climate risk noted: “Institutional investors currently own over 60 percent of the total outstanding equity of the United States’ largest 1,000 corporations. U.S. pension funds alone have roughly $6 trillion in assets. Shareholdings are now so board and diverse that they represent a broad cross-section of the whole economy. As Nell Minow and Robert Monks put it, big institutional investors are now “universal owners.” (Ceres 2002, p.22-23)
change are minimized. Whilst this responsibility is widely shared, institutional investors are uniquely suited to take particular actions. (Mansley & Dlugolecki 2001, p.5)

In summary, the reports that emerged during the 2000s regarding climate risk emphasized the significant role of large institutional investors in managing this risk. These entities were spotlighted due to their expansive scale, legally mandated fiduciary duties, and the specific responsibilities that come with utilizing market benchmarks and passive investment strategies. Consequently, they were viewed as having not only the interest and capacity but at times the obligation to address this emerging risk. This perspective led to the emergence of a new type of investor figure, one who prioritizes and is interested in the “long-term value creation” of the overall economy, as reflected through their market-wide investment portfolios. Given that climate risk could potentially exert widespread effects on the entire economy rather than individual assets, these guardians of long-term value find themselves deeply invested in the management of market risks considered to correlate with the well-being of the markets as a whole.

5.2.3. Managing undiversifiable climate risk: towards active engagement and stewardship

Positioning climate change as a market risk presented new challenges concerning the ability of institutional investors to manage this newly conceived, undiversifiable market risk. Put differently, while the initial push to engage the finance sector in the climate change discourse was premised on their perceived power and freedom to allocate capital based on their preferences, the introduction of the "universal owner" concept brought to light complexities that questioned this assumption.

As many of the reports were quick to point out, the universal ownership does not easily translate into conventional buy-hold-sell investment decisions, where the power would follow from the liquidity of assets and the possibility to withdraw and allocate funds in active management. Instead, due to the structural lock-in experienced by the large institutional investors, management of climate risk required new forms of risk management strategies with focus on engagement efforts exercised by these constrained yet engaged owners. Number of reports echoed a consistent message: rather than divesting, which in practice is difficult for such large actors, institutional investors ought to engage with their portfolio companies to ensure optimal value management as active yet structurally locked-in owners.

44 For instance, the often legally mandated requirement of large institutions (e.g., pension fund) to hold fully diversified portfolios often mandates that large institutional investors invest in entire markets, typically by adhering to benchmarks and indices that serve as representations of these markets (e.g., S&P 500, MSCI). If these markets, or their proxies, are largely constituted of entities like large energy or utility companies, distancing from such assets is easier said than done. Moreover, a substantial portion of today’s equity markets operate on a passive basis. This means that significant funds, particularly those managed by large universal investors, intentionally refrain from active trading. These funds are closely linked with the development of indices and benchmarks, which are devised to accurately represent the markets as a whole.
Major institutional investors tend to hold their shares for long; their size precludes them from selling significant holdings without disrupting the market, and a large proportion of their assets are indexed to broad stock market indices in any case. Since as a practical matter they rarely sell their holdings, their preferred option for improving the financial performance of their portfolio companies is to express their views forcefully to company executives and directors as activist shareholders [...] 

Fund managers are increasingly using shareholder activism to improve the performance of firms rather than divest and risk inadequate diversification. 

(CERES 2002, p.22-23) 

In other words, the task of managing portfolio risk is increasingly evolving into fostering engagement with portfolio companies, this engagement being viewed as a more favorable approach to managing climate risk by these entities:

For those asset managers and pension funds cognizant of climate change and its impacts, engagement was reported to be the preferred course of action.

The growth of passive index investing means that larger pension funds find it difficult to divest poor performing companies, and there are clear indications that such engagement can alter investee performance [...] 

Pensions funds aware of climate change believed that they do have a role in encouraging investee companies to maximize potential returns and trade in carbon where appropriate (as most cost-effective way of managing emissions). At least one large pension fund is known to be actively engaging with companies on the climate change issue, both to identify those firms which are managing the issue well, but particularly to enable the fund to identify where improvements would benefit both itself and the company concerned. 

(Innovest 2002b, p.22) 

Several reports featured testimonials from managers of large financial institutions elucidating their rationale behind engagement. For instance, in delineating their role as “universal investors” (UNEP FI 2005, p. 1-3, see also, United Nations Investor RoundTable meeting report 2004, p. 19-20), a representative of a large pension scheme remarked:

Because of our size, we own a slice of the whole market. Indeed, a large proportion of our equity assets are held in an index fund. As a result, we simply can’t move easily in and out of companies we see facing environmental, social, or governance risks. For this and other reasons, we are therefore unconvinced by negative screening as a suitable response by pension funds to these challenges. With £19 billion to invest, we are also not convinced that specialist SRI funds, which we accept are well
suited for retail customers, offer a systemic solution to our institutional needs.

Given this context [the company] decided that the best strategy for us is to engage with companies over the long term in an effort to improve their social, environmental, governance, and financial performance – to change the direction of the ship rather than jumping the ship. Having a stake across the entire market, including those companies where there are concerns about governance and corporate responsibility issues, means that [the company], as an active long-term owner, is in a much better position to learn about environmental and social risks, and to call for them to be addressed.

(UNEP FI 2005, p. 1-3)

For institutional investors, engaging with investee companies is viewed as the most effective initial strategy to address such risks. This approach is seen as an “acceptable alternative” since it does not “affect short-term investment returns” (Mansley & Dlugolecki 2001, p.37). As a report elaborated:

Consider a case where a company is making short term profits through generating significant negative externalities, which are bad for the economy and the portfolio as a whole. The appropriate position from a fiduciary perspective might be to hold the stock, so as not to lose the short-term gains, while at the same time pressing both the company and policy-makers to take action to correct the externality (and also possibly to encourage the company not to lobby to defend its short term position). However, it should be remembered that this approach might also have its own risks because the company’s reputation might suffer at some point, with obvious financial penalties.

(Mansley & Dlugolecki 2001, p.48)

Importantly, the advocated engagement efforts were not confined to investee companies only; they also extended to public policy:

The idea of a universal investor implies going beyond engaging with individual investee companies, to considering whether there is merit in engaging more broadly in public policy development. If universal investors can help public policy develop in a way that encourages or protects future economic development, it is clearly in the interests of the beneficiaries. What is more, on many issues, individual companies can only be asked to go so far on their own before further actions cease to become viable in a business sense: these often require changes in the policy framework.

[...] there is a case for institutional investors to adopt a more strategic approach to climate change risk. This is to intervene in the policy debate to encourage governments to take action to address climate change. As such it may offer one of the most effective ways of reducing climate risks.
Most of the reports echo similar sentiment, emphasizing that engagement with public policy is a pivotal aspect of managing climate risk. Institutional investors are perceived as ideally positioned to undertake long-term planning with policymakers, owing to their supposed “lack of vested interests” which allows them to adopt a “genuinely broad, long-term view,” fostering the potential for a “multi-investor initiative with a mandate to address climate change policy” (Mansley & Dlugolecki 2001, p. 47-48; 7). Illustrating this, the guideline for Pension Trustees (2005, p. 26) highlights the argued necessity for financial institutions to engage with public policy in the name of protecting the assets under management:

Trustees are responsible for protecting the assets of their beneficiaries and, essentially, for ensuring the long-term security provided by these assets. In this role, it is valid for trustees to consider participating in the public policy debate around climate change. Many climate-related policies (increased corporate disclosure, carbon taxes, emission reduction targets and credit-trading schemes) have ramifications for long-term asset owners. Trustees could engage with policymakers to encourage policies that best meet the long-term interest of the economy and hence the long-term mandates in their care.

To facilitate these engagement efforts, number of investor coalitions emerged in the mid-2000s. Two notable examples are the Carbon Disclosure Project (CDP), established in 2000 and the UK-based Institutional Investors Group on Climate Change (IIGCC). Initially involving 35 institutional investors, the CDP rapidly expanded to encompass the world's largest investment funds, pension funds, and capital pools, representing trillions of US dollars. While the aim of the CDP was to provide institutional investors with insight into the climate risk profiles of FT500 firms, the IIGCC worked to develop guidelines for best-practice engagement efforts, representing a number of pension funds and investment houses. As noted by UNEP FI report:

Systematic engagement by fund managers with portfolio companies, both individually and in concert with other major institutional investors (such as under the Carbon Disclosure Project) would help investors understand and be satisfied with company strategies to manage climate change and take advantages of opportunities to enhance returns through “climate-friendly” and clean energy themes.

(Innovest 2002a, p.21-22)

In the realm of policy-engagement, the US-based Investor Network on Climate Risk (INCR) under CERES and UNEP FI became a critical forum through which various policy-influencing statements were articulated. For instance, in 2003, CERES, together with ten investor organizations, convened in the United Nations headquarters to launch what would become the “Investor Network on Climate Risk” (INCR) prompting the Former Secretary-general of the United Nations, Kofi Annan, to note that “there has never been so much money in one room at the United Nations”. INCR's primary mission was to educate investors and policymakers about the risks and opportunities related to climate change. Over time, it evolved into a formidable
network comprising institutional investors and mainstream financial firms, collectively managing assets exceeding 12 trillion dollars by 2012.

These organizing efforts eventually led to the formal expression of financial sector perspectives within the context of UNFCCC climate negotiations. A significant milestone occurred in Bali in 2007 when, for the first time, formal statement was directed towards the UNFCCC climate negotiations on behalf of the financial sector. Two years later, in the lead-up to the COP15 in Copenhagen, a coalition of investor groups, including the Institutional Investors Group on Climate Change (IIGCC), UNEP FI, Investor Group on Climate Change, and the Investor Network on Climate Risk, collaborated on a joint statement. This statement called for a “strong action this year from international policy makers in the fight against global warming” in the name of predictable investment landscape as climate policies will affect both global economy as well as individual assets. As the statement read:

Institutional investors are concerned with climate change and climate policy because these will have an impact on the global economy as well as on individual assets. As global institutional investors, we manage diversified portfolios that invest in a cross section of assets, companies, sectors and markets. Therefore, risks such as climate change that threaten to disrupt the global economy are significant risks that investors have to manage. Leading studies indicate that the economic costs from climate change will increase the longer the world waits to take action. Any delay in reducing emissions significantly increases the risk of more severe climate impacts as it locks in more carbon-intensive infrastructure and development pathways.

Beyond the potential macroeconomic impacts, investors are concerned about the ways in which climate change and climate policy will affect their investments in individual companies and assets. [...] and may therefore affect the performance of investment portfolios.

(IGCC, UNEP FI, Investor Group on Climate Change 2009, p.2)

To conclude, by the end of 2009, the “institutional investor” had emerged as a prominent figure in climate governance, increasingly voicing his concerns related to the management of potential financial risks arising from climate change. Such management, however, now required active engagement with both investee companies and policy makers, which called for a new form of stewardship aimed at ensuring the long-term viability of markets. In this setting, these actors find themselves structurally entangled underscoring the growing recognition of the intertwined dynamics between climate policy and capital markets.

5.2.4. From investor risk to systemic financial stability risk: Carbon bubble and the risk of stranding assets

Throughout the 2000s, climate risk continued to be perceived as a risk manageable by investors, as long as it was acknowledged and made visible. Even when presented as an undiversifiable market risk, the responsibility for managing climate risk remained with investors and was not seen as a regulatory concern. The prevailing sentiment was that these risks, though situated in
the future, could be effectively managed through efficient risk management practices and by ensuring consistent and gradual climate policies over time.

However, the situation underwent a rapid transformation after 2010, driven by significant progress in climate negotiations. The initial agreement reached at the 2010 Cancun conference to limit global warming to a 2-degree target introduced a new concern for investors: the potential burst of what became named as the “carbon bubble” possibly triggering yet another financial crisis. This concept came to portray climate risk as a potential systemic financial threat, capable of stranding a significant portion of global assets if the world was to limit global temperature rise to 2-degrees. This new fame of climate risk as a systemic financial issue, eventually drew the attention of financial regulators who were worried about the stability of the markets.

The concept of the carbon bubble originated at the intersection of climate policy and financial markets, made known through the influential report titled "Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?" published by the London-based think tank Carbon Tracker in 2011. This report was critical in connecting climate risk to the idea of carbon budget, which outlines the allowable amount of carbon emissions if the world was to limit global warming to 2 degrees Celsius. The core argument presented by the report was that financial markets were currently valuing a number of carbon-intensive assets in a manner that exceeded the limits of the carbon budget. In other words, if the world were to transition to a 2-degree scenario, a significant portion of global assets would become stranded.

The report by the Carbon Tracker was the first to frame climate risk in the context of stock market valuation for carbon-intensive assets and to question the underlying assumptions that supported their valuations based on climate science. In a sense, it challenged the existing valuation logic of carbon-intensive assets, arguing that current market valuations presuppose a future trajectory that exceeds the carbon budget and is misaligned with the 2-degree world explicitly noting to the need to move financial capital away from these risky assets before the carbon bubble would burst. Consequently, if before, climate risk was understood something that would impact the relative values of different assets at an entity level, the imaginary of the carbon bubble transformed climate change into a systemic market risk, requiring arrangements exceeding the capabilities of even large financial investors.

By presenting climate as systemic risk, the 2011 Carbon Tracker report had a specific target audience: financial regulators who, up until that point, had not actively participated in the

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45 In the mid-2000s, the authors of the report developed an interest in climate studies that examined the quantity of fossil fuel reserves controlled by oil companies and how these reserves aligned with the so-called carbon budget. Particularly noteworthy was a paper published in Nature in 2009 that argued that the utilization of known fossil fuel reserves would already surpass the budget leading to unacceptable levels of global warming. The findings regarding the carbon budget and the incompatibility of existing fossil fuel reserves prompted the authors to conduct an initial analysis. They aimed to determine whether the fossil fuel companies listed on the stock market possessed more fossil fuels than they could burn while adhering to the limits set by the carbon budget. The publication of the 2009 Nature paper, along with the affirmations of the 2-degree target during the 2009 Copenhagen conference and later at the 2010 COP in Cancun, solidified the ‘level of warming’ and established a connection between publicly traded oil, gas, and coal companies, their fossil fuel reserves, and their stock market valuations.
climate risk discussion. As one of the authors of the report put it, the report essentially served as an extensive letter to regulators, aimed at engaging them with the issue. Given that Carbon Tracker was based in the UK, the report was primarily directed toward the UK government and the Bank of England. The report made a compelling argument that the carbon bubble had the potential to result in massive value destruction, akin to the 2008 financial crisis, but this time with the added consequence of permanent value loss.

The capital markets have financed future fossil fuel development based on a false assumption: that what the corporate sector have asked investors to finance can actually be burnt. We believe this poses a large and currently unappreciated risk for the capital markets. In our view, the regulators charged with ensuring financial stability, tackling systemic risks, and promoting long-term investment need to produce a common understanding of the financial consequences of unburnable carbon. We urge other stakeholders in the capital markets to give the regulators a strong message that they need to act to prevent the carbon bubble bursting.

(Carbon Tracker 2011, p.28)

Moreover, by reframing climate risk as a systemic concern, the report fundamentally altered the perception of where and when these risks manifest. It achieved this by highlighting that climate risks were no longer confined to specific emitting industries, which might result in relative investment losses. Instead, climate risks now permeated the entire framework of capital markets: Investment flows, benchmarks, credit ratings, index funds – the entirety of market infrastructure was vulnerable to these risks because valuations were built upon misguided narratives and assumptions.

Importantly, by highlighting its systemic nature, climate risk management extended its scope beyond emissions generation to include their financing aspects. As a result, the responsibility for managing these risks shifted to regulators in major financial centers like London. The report explicitly emphasized the need for regulators to address the risks associated with climate change, acknowledging the substantial role played by the financing of carbon-intensive industries.

The UK has less than 0.2% of the world’s coal, oil and gas reserves and accounts for around 1.8% of global consumption of fossil fuels. The carbon dioxide potential of the reserves listed in London account for 18.7% of the remaining global carbon budget. So the UK is the financial home to the CO2 potential of around 100 times its own reserves. It has already been identified that the extent to which the FTSE100 has become dominated by mining, oil and gas companies leaves those tracking the index exposed to commodities prices risk. It follows that this also constitutes a carbon exposure risk.

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46 Interview with a report author.
Moreover, the report highlights the material lock-in experienced by institutional investors, who cannot effectively manage climate risk without regulatory intervention.

This is a structural problem that is reflected in the benchmarks that are used to measure the performance of active equity managers and the indices that are used as the basis for passive, tracker funds. It would be almost impossible for a mainstream asset manager in Australia or the UK, for example, to reduce her/his weighting to fossil fuel assets compared to the global average without seriously questioning the market risk this would involve given the way that risk is measured in terms of beta.

This means that, even with rising awareness of climate change as an investment challenge, there is limited scope in current market frameworks to make informed choices. Passive funds have no ability to reduce their carbon risk through active management and so the structural constraints are even more fundamental. […]

[…] even actively managed mainstream funds rarely deviate significantly from the sector distribution of the major indices. This can be partly explained by the tendency for performance to be measured against a benchmark index. In the UK, 72.6% of corporate pension funds used an index benchmark as the primary investment objective in 2009.

Following the report's publication, members of Carbon Tracker, along with handful of other investors and scientists, issued a public letter to the Governor of the Bank of England, urging the bank to explore the financial stability threat posed by the carbon bubble. The letter argued that regulators were not currently monitoring the high-carbon investments in the system, which, if left unchecked, could result in a significant loss of financial value. While the Bank of England acknowledged the letter, Governor Mervyn King stated that, according to the bank's recent estimates, carbon did not constitute a financial stability risk. However, the report was sufficient to add climate risk as a potential concern that required further evaluation, as noted by the Governor in his response letter issued in February 2012:

Nevertheless, there is clearly scope for further evaluation of these issues, in particular the potential scale of the risk and transmission mechanisms through which it might impact UK financial stability. To this end, we will endeavor to include this in the list of topics we regularly discuss with market participants, to assess whether or not this is a risk of which they are aware and the extent to which they are taking it into account in their investment decisions.

(Morales 2012)
5.2.5. Making climate risk a regulatory concern: Mobilizing around the carbon bubble

It took the Bank of England three more years to acknowledge climate change as a potential risk worthy of their actions. This recognition was the outcome of a significant mobilization efforts surrounding the issue of carbon bubble. Although the initial report was primarily directed at UK regulators, it gained traction and became a critical reference for numerous other actors engaged with the new systemic narrative. This mobilization lent credibility and weight to the arguments made by the Carbon Tracker, leading to the emergence of additional reports and high-profile advocates made concerned by the issue. In just a few years, the issue garnered enough recognition to inform not just financial policymaking but also the climate negotiations in the lead-up to the Paris COP 21.

These mobilization efforts extended across various countries and constituents, drawing in various actors influenced by the narrative. One notable contribution came from HSBC, a UK-based financial services company, which published a research paper in 2012 that built upon the Carbon Tracker's work and explored the concept of stranded assets in the coal industry. (Robins, Keen & Knight 2012). Titled "Coal and carbon. Stranded assets: assessing the risk," the report argued that transitioning to a 2-degree world posed strategic risks that institutional investors had historically overlooked in stock valuations. The paper presented calculations suggesting that post-2020 carbon constraints could impact discounted cash flow valuations of coal assets by up to 44%. Six months later, a similar report focusing on the oil industry, titled "Oil & carbon revisited: Value at risk from unburnable reserves," also explicitly referenced the Carbon Tracker study. Furthermore, Standard & Poor's (S&P) incorporated the notion into their study titled 'What a Carbon-Constrained Future Could Mean for Oil Companies' Creditworthiness” (Redmond & Wilkins 2013).

Over time, several other investor groups began organizing around the issue, providing oral and written evidence to EU policymakers and the UK government to address the matter. As a result, the concept gained traction in both UK and EU policy circles. In December 2012, the UK parliament held its first hearing on the issue of “high carbon investment”, referencing the work conducted by Carbon Tracker and the subsequent research notes by HSBC.47 During the hearing, one British Member of Parliament noted:

> A number of actors from the financial markets, including Aviva, HSBC and PricewaterhouseCoopers, have already made representations to the Bank’s executive director for financial stability on that matter. Without a thermometer taking the temperature of the market, investors have no idea if the systemic risk is being managed or if the situation is getting worse. Given that most investors are tied to the composition of the market, it must fall to the regulator to take action on that kind of systemic risk and mandate disclosure.

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47 This led to further work within the UK Parliament requesting study on Green Finance by the Environmental Audit Committee on Green Finance (2014a, b, &c)
In the European Union, similar mobilization was taking place. In 2013, the European Greens initiated a study to assess the carbon exposure of the top 43 banks and pension funds in Europe and evaluate their vulnerability to a carbon shock. The findings of this study were compiled into a report titled "The price of doing too little too late: The impact of the carbon bubble on the EU financial system," which was published in early 2014 (Weyzig, Kuepper, van Gelder & van Tilburg 2014). Coinciding with this report, two other studies were released addressing the issue of carbon bubble —one conducted by the UK regulatory agency, Environmental Audit Committee, and the other by the Australian public policy think tank, Australia Institute, along with the US-based environmental group, 350.org.\(^{48}\)

By 2013, the argument surrounding the carbon bubble had gained significant global attention. In 2012, Rolling Stones magazine featured an influential article titled "Global warming's terrifying new math" by Bill McKibben, an American environmentalist and author. McKibben sought to mobilize the concept as an activist framework to advocate for divestment from the fossil fuel industry.\(^{49}\) In addition, several articles addressing the issue were published by a prominent news outlet, and notable figures, including former Vice President Al Gore, expressing concerns over carbon bubble potentially being the largest market bubble in history.

In the spring of 2013, Carbon Tracker, in collaboration with the economist Lord Nicholas Stern, famous from the Stern report of 2006, released an updated version of their report. This new report aimed to provide investors and regulators with the necessary evidence to highlight the growing risks associated with high-carbon assets with objective to assist them in effectively managing these risks in a timely manner.

Carbon Tracker’s work is now used by banks such as HSBC and Citigroup and the rating agency Standard & Poor’s to help focus their thinking on what a carbon budget might mean for valuation scenarios of public companies. The IEA [International Energy Agency] is conducting a special study on the climate-energy nexus which will consider the carbon bubble. Together with our allies, we have brought it to the attention of the Bank of England’s Financial Stability Committee. We await their reaction to this analysis with great interest.

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\(^{48}\) As the Guardian (Matthiesen 2014) article at the time noted: “The world’s financial system is at risk of bursting under the weight of massive over-capitalization in fossil fuel reserves, according to three reports released in the past 24 hours. Previous research has shown three quarters of the world’s listed reserves of carbon producing fuels must stay in the ground if the world is to avoid calamitous climate change. The reports, released by the UK government’s Environmental Audit Committee (EAC), the Australia Institute/350.org and the EU Parliament Greens-European Free Alliance Group, say this has created an overvaluation of the companies who hold these resources. This is known as the ‘carbon bubble’. All three reports said short term risk was exposing the world’s financial system to unsupportable risk. The three reports coincided in both timing and tone. Their conclusions were stark, continued investment in fossil fuel reserves could lead to financial catastrophe. However, they said disaster could be avoid through strong leadership from the global climate talks and governments.”

\(^{49}\) This has marked the beginning of a more organized fossil fuel divestment movement.
We recognize that we are dealing with a risk mitigation exercise that begs involvement well beyond capital-markets research analysts and economists. Given the stakes for pension value, for example, should the carbon bubble go on inflating, the general public should certainly be concerned. (Carbon Tracker 2013, p.3)

By 2014, the concept of the carbon bubble had also permeated the preparatory work of the UNFCCC climate talks. For example, just months before the Paris climate talks, The Executive Secretary of the UNFCCC, who was tasked with coordinating the negotiations leading up to the 2015 Paris agreement, acknowledged the influence of the carbon bubble argument:

Having the certainty of science that we have, I do think that there is the need to take the science on board and begin to shift the investments of corporations. I have said before and I will say it again, if corporations continue to invest in new fossil fuel exploration, they are really in breach of their fiduciary duty because the science is abundantly clear.

Understanding the science, the fact is that we have to move to low-carbon no matter what, with or without policy. We will move to a low-carbon world because nature will force us, or because policy will guide us. If we wait until nature forces us, the cost will be astronomical.

So, it is actually in everybody’s interest to get the policy that will allow us to move in a structured way that does not call upon a systemic risk of falling off a cliff all of a sudden and then that capital needs to be shifted overnight. So what you want is an organized structural process that allows you to move forward and shift the capital in a safe and predictable way. If we don’t do that we will go to low carbon anyway, but it’s going to be much more expensive and it’s going to be very unpredictable where we are going to come up.

(Mathiesen 2014)

By the end of 2014, the concept of the carbon bubble had become a substantial concern for numerous actors as the organizing efforts around the notion had mobilized diverse stakeholders, including financial institutions, environmental groups, researchers, and policymakers. The increasing awareness and attention given to the issue provided ample justification for considering it a relevant and pressing concern for regulators responsible for safeguarding the systemic stability of financial markets. The recognition of the carbon bubble as a potential risk highlighted the need for proactive measures and informed decision-making to address the financial implications of climate transition as this was considered now critical in ensuring smooth transition towards a low-carbon future.

5.2.6. Emergence of transition risk and the decision to establish climate disclosure task force

Ultimately, it was in his dual capacity as the Governor of the Bank of England and the Chair of the Financial Stability Board (FSB) that Mark Carney introduced the concept of transition risk
as a new form of climate risk, while also suggesting the establishment of the TCFD Task Force. In essence, this dual position allowed for the concurrent framing of climate risk as a potential systemic financial stability risk, while proposing a global regulatory intervention in the form of a disclosure task force. Specifically, his role as the Governor of the Bank of England granted him the authority and platform to shape the narrative of climate risk as a novel systemic concern arising from the transition granting realness to the issue of transition risk. On the other hand, his leadership at the FSB was instrumental in proposing global regulatory interventions, spearheading the establishment of the TCFD Task Force focused on enhancing transparency and disclosure worldwide.

The Bank of England emerged as a pivotal forum for recognizing climate change as a potential systemic risk to the financial sector. Although initially met with resistance from the Bank's former Governor, Mervyn King, the escalating concerns about the carbon bubble eventually drove the Bank to address the issue. As early as 2012, the Bank initiated discussions regarding the carbon bubble with contacts in the City of London, a response echoing the growing apprehension voiced by various stakeholders. In 2014, with Carney assuming the role of the new Governor, the urgency to scrutinize the impacts of climate change on PRA authorized financial firms and the overall financial stability in the UK significantly increased. Consequently, the Bank undertook the decision to carry out a first formal study to assess the effects of climate change on the insurance industry, reaffirming its commitment to exploring the risks linked to the carbon bubble and stranded assets.50

In September 2015, mere days before Carney delivered his Tragedy of the Horizon speech, the Bank of England published its inaugural report on the impacts of climate change (Bank of England 2015). The report introduced "transition risk" as a novel category of climate risk, albeit acknowledging that the analysis of this risk was still in its nascent stages. Highlighting the IPCC's call for a substantial alteration in the carbon emissions trajectory, the report posited that a failure to accurately price financial assets based on the risks associated with various transition pathways could have detrimental financial repercussions. Consequently, the report underscored the importance of ongoing dialogues with market participants, academics, and stakeholders in

50 In spring 2014, following the UK Climate Change Act (2008), the UK Department of Environment, Food and Rural Affairs asked the Bank of England's Prudential Regulation Authority (PRA) to prepare a Climate Change Adaptation Report. This request initiated BOE’s study on climate change impacts on the insurance industry. Soon after, the UK Parliament's Environmental Audit Committee requested the Bank's Financial Policy Committee (FPC) to explore the regulatory implications of climate change and monitor potential financial stability risks linked to the carbon bubble. Responding to this, the Bank began a study on how climate change affects PRA-supervised insurance firms, aiming for completion by summer 2015. Moreover, the Bank pledged, through the FPC, to routinely evaluate the risks associated with the carbon bubble in its ongoing analysis of financial stability risks, noting that no significant issues had been identified at that time. (See letters by the BoE dated 2.6.2014; 8.7.2014; 30.10.2014)
gauging transition risk, aiming to foster resilience to climate change within the framework of financial regulation. (p.67).

Finally, while the Bank of England played a pivotal role in formalizing transition risk as a new financial concern, the Financial Stability Board facilitated the development of solutions to address the identified issue potentially threatening financial stability. Since 2008, the G20 has emerged as the main platform for international economic and financial collaboration, with fostering financial stability as the key policy goal. The establishment of the FSB in 2009 exemplifies this shift, as it became the international body responsible for monitoring and making recommendations about the global financial system to promote international financial stability. In 2011, the G20 called for the FSB to be strengthened and transformed into a more enduring organization, emphasizing its role in coordinating global efforts and setting international standards. In 2012, in the aftermath of the global financial crisis, the FSB was explicitly tasked with delivering the G20s reform program of “financial reforms to fix the fault lines that led to the global financial crisis and build a more resilient financial system” by developing standards and principles in collaboration with relevant bodies and stakeholders. (Carney 2017)

Specifically, in the aftermath of the financial crisis, there had been a widespread recognition that shortcomings in risk management tools and practices had been a significant contributory factor. This realization spurred the creation of policy frameworks designed to enhance risk visibility within the financial system, with a marked emphasis on improving disclosure practices. Recognizing the critical role of reliable risk disclosure in sustaining market confidence, the FSB undertook a review of these practices in 2011. As a result, it committed to periodic evaluations of emerging risks and vulnerabilities, recommending potential areas where heightened disclosure by financial institutions could threaten financial stability. This initiative culminated in the launch of the FSB’s first Disclosure Task Force in 2012, centered on bank credit risk, which later served as a foundational blueprint for the development of the Task Force on Climate-related Financial Disclosures.\(^{51}\)

Furthermore, since 2011, the G20 had experienced mounting pressure to enhance focus and collaboration on climate-related issues. This pressure largely centered on urging G20 Finance Ministers and Central Bank Governors to foster greater engagement and cooperation, particularly in securing the necessary funds committed in climate negotiations. In response, the Climate Finance Study Group under G20 was founded in 2012 by member states to explore effective methods to mobilize climate finance resources, aligning with the financial objectives outlined in global climate treaties.\(^{52}\) In the group’s 2015 report to the G20 Finance Ministers, published just days before Carney’s speech, it was argued that the lack of knowledge of risks and opportunities related to climate is the barrier for mobilizing finance towards more green investment. Consequently, the report advocated for the creation of a framework that would

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\(^{51}\) In the Tragedy of the Horizon speech, Carney referred to the EDTF task force of bank credit as a prime example of increasing market discipline and stability through enhanced disclosure practices to serve as the blueprint for establishing a disclosure task force specifically addressing the newly emerging risk of climate change.

\(^{52}\) Such decision was prompted by the United Nation’s “Report of the secretary-General’s High-Level Advisory Group on Climate Change Financing” published in 50th of November 2010.
facilitate more accurate assessment of the risks and opportunities of climate related investment decisions.53

In April 2015, the momentum towards the Paris Climate Conference was building, accompanied by unparalleled expectations for devising concrete strategies to align financial resources with climate commitments.54 In this context, the G20 was convinced to include, as part of its official communication, an official request for the FSB to consider its role on the issue of climate change:

Recognizing the importance of our continued discussions on climate finance, we will work to reach favorable outcomes in the determined areas of the Climate Finance Study Group’s work this year with the contributions of IOs. We ask the Group to finalize this year’s work and report back to us at our September meeting. We ask the FSB to convene public- and private-sector participants to review how the financial sector can take account of climate-related issues.

(G20 Finance Ministers and Central Bank Governors 2015)

In September 2015, just days before Carney's Tragedy of the Horizon speech, the FSB convened a meeting to discuss "the financial impacts of climate change," where discussions were largely framed around the carbon bubble concept. As a result of the meeting, the FSB recommended that the G20 establish a “disclosure task force on climate-related risks” to “develop voluntary, consistent climate-related disclosures of the sort that would be useful to lenders, insurers, investors and other stakeholders in understanding material risks.” (FSB 2015)

The discussions at the meeting on 24 September frequently returned to the need for better information in order to improve understanding and analysis of risks, and over time, to promote a smooth rather than an abrupt transition towards a lower-carbon economy. Participants noted that improved disclosure by companies can help to provide that information base.

Appropriate disclosure is a prerequisite for both the private sector and authorities to understand and measure the potential effects on the financial sector of climate change as markets evolve and as the wider economy transitions towards a low-carbon economy.

(FSB 2015)

Two months later, in December 2015, at the Paris UN Climate Conference (COP21), Mark Carney, in his capacity as the chair of the FSB, announced the formation of the Climate

54 As the Paris Climate Negotiations drew near, the number of widely circulated and referenced reports surged dramatically. Several notable reports, such as those published by the Economist Intelligence Unit (2015) and Ambachtsheer et al. (2015), and Canfin-Grandjean Commission (2015) specifically prepared for the French presidency, garnered particular attention. Furthermore, the significant efforts undertaken by UNEP FI, along with the reports prepared though its "UNEP FI Inquiry into the Design of a Sustainable Financial System" (2014, 2015a, 2015b), were clear indications of this growing momentum.
Disclosure Task Force with the task to translate the market needs for financially relevant climate information into a disclosure framework. As the Paris Agreement concluded to make “finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development,” the Task Force was established as a handle and way to handle such transition.

5.3. Preliminary discussion and a way forward

This chapter has examined the emergence of transition risk as a financial concern by exploring its historical development and implications for framing climate governance. The analysis began with Carney's influential Tragedy of the Horizon speech, considered here a significant moment of problematization marking the first time that the regulatory concern for the financial effects of transition was emphasized, leading to the establishment of the Climate Disclosure Task Force (TCFD). As Carney's speech has come to serve as the origin story for the TCFD Task Force, the analysis highlights the convergence of various trajectories in the speech, hold together by the concept of transition risk. After all, while it was not unusual for the Chair of the Financial Stability Board to address emerging systemic risks in global financial stability, it was unprecedented at the time to link such concerns to the UNFCCC climate negotiations and the issue of transition.

To do so, the first part of the chapter has situated the speech and the concern over the financial effects of transition within the historical trajectory of negotiating and economizing climate change. In doing so, the chapter has traced an ongoing assembly formation in climate governance through which the role of the markets has moved from being concerned over a somewhat a niche issue of carbon markets to placing the financial markets at the center of governance solutions. In following Callon (2009), I have sought to render visible how there exist no separate domain of “markets” upon which the pre-existing, inherently “political” or “scientific” issues of climate change is eventually are placed upon. Instead, as issues are formulated, they by their formation (re)constitute signification to what is, or what it means to be market, scientific or political issue. Hence, the purpose has not been to analyze how pre-existing issues move from one domain (e.g., political) to another (e.g., markets) but how new issues are framed and made real provoking new agencements of authority and eventual overflows.

To delve deeper into the evolving nexus between climate policy and markets, the chapter proposes that this boundary-making process has been influenced by a specific object that emerged in the late 1990s: climate risk. By tracing the trajectory of climate risk, I have illustrated how the understanding of climate risk as a financial concern has evolved over time, challenging the perception of where and when the financial effects of climate change occur redistributing the responsibilities for its management differently.

In the following table 2, I outline six critical frames constituting the trajectory of climate risk. Here each frame articulates a different set of relations for its management while proposing a new way forward. In other words, each frame presents a new kind of issue in managing climate risk for the persona of investor while suggesting the kind of governance arrangements needed
for addressing these emerging concerns. In the table provided below, I present an outline of each frame to demonstrate how they ultimately give rise to a new object of concern - transition risk - which in turn prompted the proposal of the TCFD Task Force as a solution.
<table>
<thead>
<tr>
<th>Year</th>
<th>Climate risk frame(s):</th>
<th>Investor concern</th>
<th>Interessement to climate politics</th>
<th>Location of risk</th>
<th>Temporality of risk</th>
<th>Value creation script</th>
<th>Investor figure</th>
<th>Programmes of action</th>
<th>Overflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>Climate as part of other environmental and social issues</td>
<td>Ethical &amp; non-financial issue</td>
<td>Agenda of sustainable development</td>
<td>Reputational; social contract</td>
<td>Undefined</td>
<td>Ethical investing / SRI community / divestment movement</td>
<td>Marginal ethical investor</td>
<td>Social and environmental reporting / Corporate Social Responsibility</td>
<td>Climate requires its own procedures and protocols</td>
</tr>
<tr>
<td>1998</td>
<td>Climate risk as a separate object of concern</td>
<td>Carbon-constrained future constitutes a new source of business and investment risk</td>
<td>UNFCCC; Kyoto protocol &amp; the imaginary of carbon-constrained future</td>
<td>Future value of individual companies</td>
<td>Climate (carbon) risk a factor to be considered as part of prudent risk management practices</td>
<td>Prudent risk manager: climate requires monitoring and managing possible risks</td>
<td>Carbon accounting &amp; disclosures</td>
<td>Institutional investors with different investor profile and needs</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Climate risk a special concern for long-term institutional investors</td>
<td>Long-term investment: climate affects long-term portfolios</td>
<td>The new economics of climate change (Stern report) and need for &quot;private finance&quot; in climate action</td>
<td>Portfolios of long-term investor/ climate as part of ESG concerns</td>
<td>Undefined temporal window to translate future risks into value creation opportunities</td>
<td>Fiduciary duty regarding long-term value creation</td>
<td>Institutional long-term value manager: from risks to opportunities and long-term value creation</td>
<td>Screening of value drivers (e.g., climate) affecting long-term value creation; est. of PRI, ESG, CDP, etc.</td>
<td>Climate risk undiversifiable risk for large institutional investors</td>
</tr>
<tr>
<td>2009</td>
<td>Climate risk a market risk in the portfolios of institutional investors</td>
<td>Some climate-related risks constitute undiversifiable market risk</td>
<td>Commitment to mobilize private finance; 2 degree target</td>
<td>In the markets, as seen through the investment portfolios of universal owners</td>
<td>Temporality of risk to be managed by ensuring predictable climate policies and investment landscape</td>
<td>Towards active stewardship of market risk</td>
<td>Stewards of the long-term viability of markets</td>
<td>Beyond diversification: active engagement with portfolio companies and policymakers in managing market risk</td>
<td>2 degree target: carbon bubble &amp; stranded assets</td>
</tr>
<tr>
<td>2011-2014</td>
<td>Goal to transition to a 2 degree world constitutes climate risk as systemic market risk</td>
<td>If transition, then market valuations &quot;mispredict&quot; market failure, source of next financial crisis</td>
<td>2 degree target and mobilization of the private finance sector in the road to COP21</td>
<td>Everywhere across financial markets (financial institutions, stock exchanges, indexes, financial centers etc.)</td>
<td>Increasingly uncertain yet urgent to be managed in time</td>
<td>Transition to 2 degree world (carbon budget) sets material conditions for valuations</td>
<td>Institutional investors as locked-in value stewards: need to ensure the management of value across the investment chain</td>
<td>Need to enroll the entire investment chain to manage the market failure</td>
<td>Fixing the systemic market failure requires enrolling financial regulator and entire investment chain</td>
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<tr>
<td>2014-</td>
<td>Climate risk a regulator concern</td>
<td>Unmanaged and disruptive transition a source of systemic financial stability risk</td>
<td>Anticipated Paris Climate Agreement and the need to mobilize private finance</td>
<td>Everywhere across financial markets to systemic degree</td>
<td>Increasingly uncertain yet urgent to be managed in time</td>
<td>Financial regulator to ensure the market conditions for optimal valuation of assets amid transition</td>
<td>Institutional investors as infrastructural actors in the management of systemic risk</td>
<td>Need to map out, evaluate and manage mispriced valuations before too late</td>
<td>Need to govern market-wide management of asset revaluations amid transition</td>
</tr>
<tr>
<td>2015-</td>
<td>Transition risk and Tragedy of the Horizon</td>
<td>Need to make &quot;markets in transition to 2 degree world&quot; by ensuring management of valuations affected by transition</td>
<td>Paris Climate Agreement</td>
<td>Everywhere across the value chain of capital</td>
<td>Temporal window for the management of transition risks</td>
<td>Need to provide the markets with the right kind of information to ensure managed revaluation of assets</td>
<td>Institutional investor as transition stewards across value chain of capital</td>
<td><strong>TCFD Task Force</strong></td>
<td>Transition risk as a new issue of concern requiring its own procedures and protocols</td>
</tr>
</tbody>
</table>

Table 2: Evolving frames of climate risk and the emergence of transition risk
Each frame outlined in the table posits climate risk as a distinct financial concern for the persona of the investor, influencing the understanding of the how, when, and through what means climate can be considered financially relevant issue. Specifically, I posit that the evolution of such frames results from the reciprocal dynamics of framing and overflowing where new issues emerge from existing frames yet continue to give birth to new qualities, affected groups and financial concerns. Therefore, by tracing the framing/overflow dynamics while limiting my analysis to the evolving investor concerns around climate risk, my purpose has been to show how a new investor figure, now more tightly entangled with the politics of climate transition, is gradually being assembled.

For example, before climate risk emerged as a financial concern, climate was primarily seen as a non-financial issue, relevant only for ethical investors within the realm of socially responsible investment. Against such background, the Kyoto Protocol played a crucial role in reframing climate as a financial object of concern by introducing the carbon-constrained valuation horizon. However, while there was an increased focus on possible risks arising from this carbon-constrained future, they were primarily located in the future. Consequently, calls for action centered around better monitoring and management of these risks, leading to the emergence of various carbon and climate disclosure initiatives.

As the early momentum behind climate risk was primarily driven by large financial institutions, this required framing it in a manner that catered to their specific needs. Hence, climate was made financial for considered affecting the conditions of long-term investment portfolios of these actors. Institutional investors, recognized as long-term investors, were urged to consider climate risk as a critical element in the sustainable value creation both for their long-term time horizon and the fiduciary duty to exercise such long-term care. Such figure of the long-term value steward gained further prominence through the emerging landscape of ESG (Environmental, Social, and Governance) investments and influential investor organizations such as the United Nations Principles for Responsible Investment. Within this framing, climate became viewed as a source of long-term value creation, demanding the attention of institutional investors.

However, as institutional investors assumed the role of common spokespersons for climate risk, new issues began to surface. Reports started highlighting that climate risk is a market risk and, as such, partly undiversifiable risk in the portfolios of large institutional investors often referred by the term universal owner. This realization led to a shift in the understanding on how climate risk should be managed now emphasizing engagement rather than mere diversification that was often impossible by these large, structurally constrained actors. Consequently, active engagement with portfolio companies and policymakers became suggested as critical ways to manage risks in the name of protecting the long-term value creation of investment portfolios and the markets as a whole.

Yet, it was not until a breakthrough in climate negotiations in 2010, with the initial agreement to limit global temperature rise to a 2-degree world, that the concept of transition explicitly began framing the evolving climate risk landscape. This led to the emergence of the argument of
stranded assets and the carbon bubble. The stranded asset argument posited that transitioning to a 2-degree world would pose a systemic risk in markets, as current valuations did not account for the value effects of this transition. Moreover, the carbon bubble argument extended the issue beyond specific portfolios to encompass investment flows, stock markets, benchmarks, and regulatory balance sheets. Hence, climate risk became systemic, affecting the entire market infrastructure and exposing financial capitals, like London, as critical sites for addressing the issue. Consequently, climate risk became framed as systemic risk that went beyond the purview and capabilities of individual investors.

As the recognition of climate risk as a potential systemic risk to financial stability grew, it eventually became a regulatory concern. This led to the active involvement of institutions such as the Bank of England, the G20, and the Financial Stability Board in addressing climate risk. As the Paris climate negotiations approached, policymakers, NGOs, and market actors emphasized the need for a structured approach to tackle and mitigate the carbon bubble before it was too late. Eventually, both the Bank of England and the Financial Stability Board were enrolled to articulate a market-wide approach to manage the financial risks associated with the transition.

Consequently, it is from within this last framing with the need to adopt market-wide approach to manage climate risks, that the concept of transition risk emerges as a new issue, requiring novel tools and arrangements for its effective management. This necessitated the establishment of the disclosure task force for climate, with explicit focus on the financial effects posed by transition. As such, the TCFD Task Force was conceived as a solution to address these evolving concerns.

Finally, the chapter ultimately argues that within the trajectory of climate risk, Carney’s speech serves as a moment of problematization, articulating and proposing a particular state of affairs to be tested and examined within its own reality. In other words, it is an experimental moment, and an attempt to make statement about the new issue of transition risk that can only be considered real if the corresponding agencement it speaks about can be regarded as real by a sufficient number of other actors. As Callon has famously noted, speech acts do not create change alone but are situated and conditioned by the socio-material configurations that constitute the speaking subject in the first place. In the case of Carney’s speech, the socio-material configuration giving realness to the object of transition risk is enabled by a script that brings together market regulators, climate science, climate negotiations, institutional investors, policymakers, and various aspects of the financial architecture, making them explicitly concerned with the overarching issue of climate transition as a financial concern. In such sprouting arrangement, however, it is the figure of investor, and his needs, that are brought to the front stage of the governance of climate transition, whose interests of value creation and management are explicitly made critical concerns in the governance of transition.

To conclude, by describing the distributed historicity of transition risk, this illuminates the extensive organizing processes that were enacted, mobilized over the years, and eventually tested in Carney's speech. Although acceptance was not immediate, it had enough force to materialize the new object of transition risk, necessitating the assembly of its own configuration.
to which the Disclosure Task Force emerged as a solution. As Latour (2007, p. 8) highlights, each new issue deserves its own protocol because it surpasses the limits of familiar entanglements. It is this assembly formation around transition risk we next turn to.
INTERLUDE: FACING THE TRAGEDY OF HORIZON

One year has passed from the Tragedy of the Horizon speech and it is time to hear Governor Carney speak again. It is December 2016, and the TCFD Task Force has just finalized its first draft for the final recommendations. Yet, it is fair to say that today’s speech is given in a somewhat different world. While Paris was arguably a success in climate change governance, the global atmosphere around the discussions had quickly also been heating up. For example, just weeks before the launch of the recommendations, President Trump was elected, and his commitments to withdraw from Paris Treaty were well known. More so, Carney’s chairmanship as part of the FSB was soon due, and there was a somewhat shared sense that the next chair might be far from supportive of the climate issue. More so, while drafting the recommendation was over for now, they would still require approval from the G20 and the FSB, which was far from granted. Consequently, it is in this more uncertain world, the Paris COP21 momentum now long gone, that Carney articulates his remarks.

To ensure the legitimacy of the TCFD, Carney begins his speech by reminding the audience that the decision to establish the disclosure task force resulted from a direct request from the G20 finance ministers and central bank governors as they explicitly went to the FSB and asked:

what are you doing about the risks related to climate change? And they had in their minds, I think some of them had in their minds, a more interventionist approach, approaches using capital regulation, insurance regulation directly. And our sense was, having talked to industry and people who have been very thoughtful about this, that wait a minute, there's a fundamental issue with the market […]

We could identify the problem, but we didn't have a chance at getting to the solution. We needed the private sector to provide the solution. And this is a solution. This is a solution for the market by the market.

In his speech, Carney acknowledges that the risks related to climate change are full of uncertainty. Yet, the fact is, as he states, that enormous risks and opportunities are on the way to “pretty much every major industry” as the world is shifting towards a low carbon economy as committed in Paris. Such developments, however, posits questions. As Carney articulates:

we have a lot of questions. We have questions about which financial institutions stand to gain from these developments, which stand to lose from this transition, which industries, companies are most and least dependent on fossil fuels, which businesses are most vulnerable to potential damage from changing physical risks. And in every case, in every case - which firms have the governance, the resource and the strategy to manage and potentially profit from these major shifts.

To begin answering such questions, better information is needed. Hence, Carney reminds the audience that the Task Force was explicitly set to respond to this lack of information that is currently preventing investors to answer those questions.
That's a fact. And that's got to change if the financial markets are going to do what they do best, which is to allocate capital to manage risk and very importantly, to seize new opportunities. Without that information market adjustments to climate change will be incomplete, it'll be late, and it'll be potentially destabilizing. On the other hand, glass half full, with the right information, markets can smooth the transition to a two-degree world and help smooth the transition to the objective of one hundred and ninety-five countries.

In discussing transition, Carney refers to the undisputed evidence that a transition to low-carbon economy is needed. However, he acknowledges that not everyone will agree “on the timing or the scale of the adjustments needed.” Neither is everyone going to agree “on the ability and will of governments to take public policy measures to achieve these tasks.” However, with great conviction, Carney notes:

But with the right information, you can have optimists and pessimists, skeptics, and evangelists back their convictions with capital, you can have a true market. That is what a true market is. You can have a different view, but how well can you express it without the right information? This is about giving people the right information.

Yet, while TCFD is celebrated giving people now the right information to express their views, Carney is careful to point out that it is not just any kind of people who will soon be better equipped to impose their views on transition-related progress. Rather, the recommendations are first and foremost suggested to provide actionable decision useful information for the providers of institutional capital:

these are companies with current market cap of a trillion and a half U.S. dollars. These are institutions, this is institutional capital that controls 20 trillion, 20 trillion US dollars. And this is just the Task Force. They've all announced their support today for the disclosure recommendations.

Finally, Carney assures that as the world is slowly becoming informed about the risks and opportunities arising from the transition, the Task Force recommendations are critical in showing the way forward. As he concludes:

with better disclosure, a market in the transition, underscored market, in the transition to a two-degree world can be built. That market will expose the likely future cost of doing business, of paying for emissions, of changing processes to avoid both those charges and tighter regulation. It will also help smooth adjustments as opinions change rather than concentrating them in a single or short period of time. […]

Climate related disclosures could be transformative for one of the biggest issues for the 21st century.
6. Mobilizing transition risk: Making of the TCFD recommendations

This chapter picks up where the previous one left off, delving into the process of creating the TCFD recommendations. Specifically, it addresses the second sub-question: how does transition risk become mobilized in making of the TCFD recommendations, serving as an organizing category with formative effects? By scrutinizing the formatting effects achieved through the concept of transition risk, the chapter suggests that the TCFD's work becomes less about increased transparency and more about of fostering particular types of subjects with a distinctive gaze and horizon in mind.

The chapter is divided into three parts. In the first part, I describe how the notion of transition risk facilitates the translation of transition into financial phenomena delineating the critical frames that dictate the who, what, how, and when of such risk, all while avoiding the controversial territory of climate politics. After, I move on to describe the materiality of such formatting as making the issue of climate transition as a financial concern necessitates establishing right material conditions. This, I argue, required reframing the critical frames of financial signification, including the subjects and objects of investment, investor’s methods of knowing, narrative scenario of financial value creation and the temporality of the investment. In the final part, I conclude how such knowing is not without ontological effects by arguing that in making transition risk knowable, the recommendations engage in the ontological making of the markets in transition as visioned by Carney by materializing new narratives, devices, and market actors in transition.

The chapter draws upon audio and video materials produced during the recommendation-making process, interviews with members of the TCFD Task Force and other relevant stakeholders, as well as analysis of documents generated throughout the recommendation's development. The primary sources used in the present analysis are listed in Appendix 1 and 3.

6.1. Framing transition as a financial phenomenon: defining the who, what and how of transition risk

Translation climate transition into a financial concern was a delicate exercise. As previously noted, during the drafting of the recommendations, even making an explicit connection to the Paris Climate Agreement was considered contentious, given that the TCFD recommendations were positioned as market solutions for the markets. Yet, recommending the disclosure of transition risk prompts to ask: risks of what, for whom, and, ultimately, who holds the responsibility for managing such risks? In this first sub-section, I describe how distinct critical frames were established around the concept of transition risk.
6.1.1. Situating the TCFD within the markets

In practice, the remit of the Task Force was translated into two-dimensional objectives. First, it was asked to develop disclosure recommendations that could “promote more informed investment, credit, and insurance underwriting decisions,” which in turn, “would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system’s exposures to climate-related risks” (FSB 2015).

Translating the remit of the FSB into the work of a private, industry-led task force was a delicate exercise. While the FSB’s interest was to identify the possible systemic risks climate change could impose on financial stability, such regulatory concerns could not be delegated to a private sector task force. While established under the auspices of the FSB, it was repetitively emphasized that the Task Force should take no judgment over whether climate risk poses financial stability risk but to “develop a set of recommendations that allow the users of that information, the financial sector, to help make that determination” (TCFD secretariat/webinar).

As repetitively noted, staying within the remit was considered critical for the existence of the Task Force, as the recommendations would eventually need to be approved by the members of the FSB and, ultimately, by the G20.

The scope was determined by the FSB. And we were asked to do two things, and effectively, that was the brief of the task force. And I have likened this like sitting in an exam, you know, you answer the questions you have been set, not the questions you wished you had set.

And in the early days, that was a, that was a subject of discussion. That we wanted, some of the members of the Task Force wanted, to expand the remit of the task force, but it was very clear that we were being asked to respond to those two questions. And knowing the Financial Stability Board process, those questions were crafted with great deliberation by the secretariat.

(TCFD member/interview)

There were key boundaries outlining the work of the Task Force to ensure it stays within the limits of its remit. Firstly, it was crucial for the recommendations to be prepared by private sector actors, aiming to address the perceived lack of transparency between the "preparers and users" in the markets. Additionally, a deliberate decision was made to exclude existing reporting standard-setters from the process to avoid any perception of being influenced by any particular interest group beyond the market user-preparer categories. Secondly, it was critical that the recommendations should consider only climate-related risks, excluding broader environmental or social concerns. Specifically, the Task Force's mandate focused on the impacts of climate change on companies, rather than examining companies’ impact on climate. As climate change was considered highly politicized issue, it was important that the group adopts a strict financial materiality risk lens to free itself from the stigma of politics. Therefore, all recommendations put
forth by the Task Force needed to be directly tied to the financial impacts of climate change on companies to inform better investment decision-making by the financial sector actors.

As the remit would outline, TCFD was a solution from markets to markets tasked with translating the market needs for financially relevant climate information into a disclosure framework. However, to earn the right to speak in the name of the markets, and their needs, it was critical to situate the work within the markets, distinct from the seemingly separate world of climate politics. To achieve this, the qualifiers of “private”, “voluntary,” and “market-led,” were mantra-like openings in every TCFD-related event to ensure its existence in the right space. For instance, in the official parlance, it was consistently repeated that the Task Force is not enacting regulatory work but simply there for the benefit of markets and can be adopted on voluntary basis.

One of the clear guidelines form the beginning was that the recommendations would always be voluntary because that was the mandate that the FSB had, for political reasons as well.

It was...it was generally accepted that if they came out as mandatory, then the acceptance would be lower, and it could potentially lead to kind of lobbying to either discredit or to basically reject the TCFD altogether. So, it was strategic decision, not taken by the TCFD itself, but presumably by the FSB, and by the G20 which basically mandates the FSB to make them voluntary. And I don’t think there was any option to move against that, although it was debated, but yeah it was not an option to move beyond it.

(TCFD member/interview)

Critically, the Task Force would need to stay within the limits of financial value creation to exclude other than financial values and issues.

The Financial Stability Board’s Task Force on Climate Related Financial Disclosure is a bit of a mouthful, but it was very important that that name signify what it's about, and it's really about trying to make the connection between a financial impact and climate related risks and opportunities.

And so that is obviously at the heart of how you engage the financial community on this issue, right? We really are.... reminds me of that old [James] Carville comment, which is “it's the economy stupid”. And so, this is about economic impacts.

And yes, many of us feel very strongly about the values around this issue, and what it means. But there's a real economic impact, and by sort of highlighting what that economic impact is, you have the ability to draw on a much wider range of participants to take a look at it.

(TCFD secretariat/presentation)

By staying within the financial signification, the Task Force posited itself outside the seemingly separate political realm of climate politics having its sole purpose in advancing the interest of the markets.
Our view was that our work is not political, that this is a business issue. And it’s intended to be solution for the market by the market...that this is a business issue, and that we are trying to fix the problem both for the prepares and users, and not trying to sell ourselves as a political agenda.

(TCFD secretariat/presentation)

We cannot emphasize this enough, this is about companies, the impact that climate change, its risks, and opportunities, may have on companies, and it is the financial impact. It’s not about the impact companies have on climate. Equally important but not our remit, we have to stick to our meaning, which is trying to determine what the financial impacts are, what’s relevant for senior management and boards, and what’s relevant for financial market participants around climate. How does it impact operating costs, potential markets, and revenue streams, what is the impact on balance sheet, access to capital, allocation of capital.

(Task Force member during a webinar)

However, the narrow remit and explicit focus on financial impact only did create a point of tension. As noted by one member:

We had, there was a huge debate about the direction of the recommendations. We, you know, we were established to look at financial risk from climate change. That’s the only thing right. There were number of task force members who said we need to ask for disclosures on the impact of the companies on climate. Which is the opposite direction right. And that is because, in the Task Force, we have, let’s say real believers in the problem of climate change, we need to fix that. That is not to say others are against that, but they are saying we are here to fix the financial risk disclosures. So that was a huge debate.

So yeah, it was clearly, ehm, a mandate issue, right, we were not entitled to say anything about reduction of carbon emissions by companies, and how much there should be, or which actions should they take to help the climate to save, that just wasn’t the objective.

(TCFD member/interview)

The concept of climate risk played a central role in setting up the recommendations. Climate risk information was said to enable distinguishing information that influence conditions for financial value creation, encompassing both risks and opportunities. Moreover, the risk frame was considered appropriate due to the existence, albeit fragmented and evolving, regulatory apparatus around such an object. Therefore, the starting premise was that in most G20 jurisdictions, issuers already have a legal obligation to disclose financially material climate risk information as part of their financial filings.

Anything which is like an emerging risk or current risk, which is financially material to the company, the board, under current accounting standards, has to be transparent about it and provide also some forward-
looking indicators in terms of where things go. And so, this was kind of, that's more or less hardwired into the financial regulation of all the G20 countries. So, it's very difficult to be against. So, you've got a good starting point for this type of dialogue.

(TCFD member/interview)

Hence, the objective of the Task Force would be to “clarify what may constitute material and relevant climate-related risks” as the issue of materiality is “open to interpretation and debate” driving “much of the disagreement around what companies should disclose” (TCFD 2016a, p.15). As noted in the first TCFD scoping report that was set to guide the actual making of the recommendation, there is “considerable disagreement over what constitutes a material climate risk that triggers disclosure requirements in most jurisdictions…due to the (often) significant uncertainty surrounding the severity, timing, and impact of different climate-related risks on a company or asset class” (TCFD 2016a, p.15). Consequently, in the presence of already existing regulatory infrastructure around the concept, the work of the Task Force shifts in constituting the conditions that would trigger the disclosure of financially relevant climate risks.

6.1.2. Introducing transition risk

The making of the recommendations was structured around two categories of climate risks: transition risk and physical risk. While physical risks were seen to encompass the dangers stemming from the actual physical impacts of climate change, transition risk was associated with to the risks arising from the shift towards a lower-carbon economy. Although the concept of physical risk had already garnered attention from investors, it was the notion of transition risk that emerged as the conceptual innovation through the Task Force's work. (TCFD member/interview).

To think about transition risk was a delicate exercise when attempting to stay within the limits of financial signification. It was repetitively articulated that the Task Force would remain “highly policy neutral” and not take “any position in terms of the needed transition or have an advocacy role in such transition” (TCFD secretariat/presentation). Seemingly, the Task Force had a straightforward technical task: to develop disclosure recommendations that would facilitate well-informed investment, credit, and insurance underwriting decisions.

However, by adopting the concept of transition risk, the Task Force effectively positions the idea of transition as a pivotal organizing event. This was critical particularly at a time when the commitments outlined in the Paris Climate Agreement faced opposition and the necessity to commit to it was being widely debated. By embracing transition risk as a real financial concern, the Task Force acknowledges the inevitability of the shift towards a lower-carbon economy, shifting the conversation from whether it ought to happen to its management. As noted by the member of the TCFD secretariat:

It is important to remember, especially in the US, that the premise is; we are transitioning to a low-carbon economy. So the question is, how smooth can we make that. And the Governor’s view, and Mike’s
[Bloomberg] view, is that this depends on good information. And bad information results in mispricing and poor capital allocation. So, depoliticizing the issue, and making it about good investment decision making is really about what this is.

(TCFD secretariat during a panel discussion)

However, the demarcation between "markets" and "climate politics" becomes particularly contentious when it comes to the concept of transition risk. On one hand, transition is portrayed as an external event that impacts markets; on the other hand, the markets are recognized as crucial in actualizing the transition. Nevertheless, as to remain politically neutral, the Task Force was not entitled to say anything about the needed transition. At the time, even making an explicit connection to the Paris Climate Agreement was a subject of controversy. While some viewed the Paris Agreement as the very reason for the Task Force's existence, others adamantly opposed any association with it.

In one of the meetings somebody says, oh, it's just a coincidence that the TCFD was launched at the Paris COP, but that it doesn't mean that the TCFD is intrinsically designed to help deliver the two degree. It's really there just to give a set of recommendations on disclosure. We are, we are not here to give a view on how we get to two degrees.

But I always thought that was actually not right. And in my interpretation, if you go back to, you know, I'm going to sound like a religious fundamentalists here, but if you go back to Mark Carney's original speech, which is the Horizon speech, which I think...I actually said in one meeting, you know, this is the Lord's Prayer of the TCFD, and we should be reciting it every morning, at every meeting of the TCFD, because it's all in here. And that is a brilliant, brilliant speech, because he sets out the problem, and he also sets out why we need the TCFD. And for me, the most important sentence in the whole speech is, where he says, the idea, what we're trying to do here is to create a market in the transition to the two-degree world. So, to say that this is not linked to the goals of the Paris agreement is not right, because he said it in that speech, you know, he said to create a market in the transition to a two-degree world.

(TCFD member/interview)

Therefore, to think about transition as a financial phenomenon requires thinking it as something that might affect financial valuations. As initially outlined by Carney, the transition risks are “the financial risks which could result from the adjustment towards a lower-carbon economy” possibly provoking a sudden revaluation of a large range of existing assets. In other words, too quick revaluation of, let’s say, assets of an energy company due to a drastic climate policy could be a source of financial stability risk. This perspective introduces an interesting aspect to the management of transition risk, inherently entangled with the management of the overall transition itself.
It was simply put, trying to avoid sudden shocks to the system in a way that, and by system I am talking about financial system, the way financial system was exposed to financial shock during the 2008 financial crisis. That was very much at the back of the FSB’s mind. So, the idea behind the TCFD was to avoid a sudden transition which would lead to financial instability and that was always, always the objective.

(TCFD member/interview)

Hence, the management of transition risks requires “managed transition”.

The Task Force needs to think collectively about how the macro picture of finance market instability and climate change could relate to the micro terms of reference we have, and whether we can encourage disclosures, that can encourage better management of the risks which therefore creates the virtuous circle. By getting companies to think this, we actually drive down the risk. That of course has to be the point. What we need is a managed transition.

(TCFD member during a panel discussion)

But transition obviously implies that some are transitioning from here to there, ideally in time. The question then arises: Who is to transition and where? The TCFD's focus lies in facilitating the transition of “finance flows” from “industries at risk” towards “less risky assets”.

The whole idea of Task Force started with the notion, from Mark Carney who at time was the chair of FSB, that there might be a systematic financial risk if, hmm, if we do not resolve climate change in a timely manner.

And he was not concerned at all, if you like, about the emissions as such but more, the implications or impacts of it. And his statement, what of course, that’s not his own statement, is fully prepared, his statement was that by the time we get there we are too late to act.

And then the financial system can start to shake because, you know, investors are, call it, in wrong industries, call it industries at risk, and therefore we need to know those risks. And that’s when they started to look into that and concluded like well, you know, there is no sufficient disclosure on what the risks are, so we need a framework that addresses that issue.

(TCFD member/interview)

In a sense, transition risk becomes a handle of, and a way to handle the transitioning of the now risky assets towards climate resilient future by requalifying them less risky.

One of the things you know, what have to be considered is that rearing capital towards business that are already very green, or have very low carbon footprint, does not really affect the companies that really need the transition. So, by a way of example, a utility that is transitioning its base
from coal to solar, but has not completed it, or is just starting, would not score well in the EU taxonomy. And yet, I would argue, that's exactly the kind of business that would need capital to transition of the generating base.

(TCFD member/ interview)

Thus, the management of financial risks is intricately intertwined with the management of transition. While the FSB’s proposal was cautious in framing the Task Force's work on entity-level disclosures, at a closer look, the proposal presents an interesting circular argument. It is not simply that better disclosures would inform better investment decisions, end of the story. Rather, the provision of right information is expected to “promote a smooth rather than abrupt transition towards a low-carbon economy,” allowing the “financial institutions and relevant stakeholders”, to manage these risks accordingly, “if they wish”, and “based on their views of transition scenarios”:

> Using climate-related risk disclosures, financial institutions and other relevant stakeholders could then assess the credibility of firms’ transition plans and their ability to execute them and analyse the potential changes in value of their assets and liabilities that could result from a transition to a lower carbon economy or to other climate-related events (e.g., physical or legal risks). This would allow stakeholders not only to manage and price these risks accordingly but also, if they wish, to take lending or investment decisions based on their view of transition scenarios.

(FSB 2015, p.2)

However, recommending the disclosure of transition risk prompts to ask: risks of what, for whom, and, ultimately, who holds the responsibility for managing such risks? In other words, who are the “financial institutions” and other “relevant stakeholders” depicted within this framework?

6.1.3. Enrolling the markets

Before delving into the substance of the recommendations, it is essential to examine the experts who were deemed relevant to draft the recommendations, who, as Carney eloquently put it, are "those who understand what is valuable and feasible." The Task Force members were categorized based on their profiles into three groups: "users" (comprising insurers, asset owners, asset managers, and lenders), "preparers" (encompassing both financial and non-financial companies), and "other experts".55

55 In the initial terms of reference, individuals were selected based on their personal expertise, but there was also recognition of the importance of including the "right company names" as acknowledged as part of the interviews and webinars. Moreover, ensuring global diversity was crucial, even though there was an apparent bias towards European and North American representation. On the “preparer side” TCFD included both non-financial companies and financial institutions. To ensure wide adoption and acceptance, it was considered crucial for the Task Force to involve members from leading industry players on the non-financial side, including some of the world's largest
Curiously, in the preparer category, TCFD recommendations were targeted both to investors (financial groups) and public companies (non-financial groups). In such context, the financial institutions come to posit a dual position of being disclosure preparers and the user as the recommendations were targeted to cover “all entities along the supply chain of capital”.

You have to remember that for the FSB, it's about the financial system. So if you look closely at the remit, the remit is actually asking the financial community to disclose their risk. We acknowledge that in order to do that, they need their underlying companies that they invest to disclose.

(TCFD secretariat during webinar)

Such frame, however, was based on the rationale that the recommendations would serve to the user needs of financial institutions, allowing them to more effectively manage the climate risk associated with their portfolio holdings. The Task Force's remit was clearly defined, requiring them to provide recommendations that would benefit "investors" in making "better-informed investment, lending, and underwriting decision-making." Nevertheless, such configurations are not without ambiguity. The concept of an "investor" raises questions: Who exactly constitutes an investor? And what specific user needs might such a persona possess?

Defining the user
While it is explicitly acknowledged that there is a multitude of different users of financial information, each with distinct and often multiple purposes, it is reasonable to argue that a specific type of investor gaze serves as the foundation for recommendations. This gaze, however, does not belong to a singular user; rather, it emerges as an evaluative perspective shaped by the interactions among various market participants. In other words, the evaluative gaze can be seen as being formatted through the relations that exist within the value chain of capital, to use the parlance of the Task Force.

We are the users of the data. And what I wanted to try and create for you was a sense of, if you go down the supply chain of capital, or the value chain, what are the different intermediaries experiencing between those of us that kind of use the data, and the intermediaries between how it flows. How the capital flows from the end users, the companies that require the capital, to the ones whose capital it is. So, this is very intentional, and I'll introduce them now.

(TCFD member during panel discussion)

corporations in their respective sectors such as transportation, energy, and food. On the financial side, while the intention was to include "all entities across the credit and investment chain" including asset management firms, asset owners, banks, and insurance companies.

Among the "other experts" involved, the Task Force included a partner from each of the four major accounting firms, (KPMG, PwC, Deloitte, and EY). These firms provided their services on a pro-bono basis and played a vital role as facilitating work-streams within the Task Force. They were also perceived as crucial partners in disseminating the recommendations through their extensive networks. Additionally, professional investor consultant, credit rating spokesperson, and a sell-side analyst were included as part of the "other experts" group.
The value chain of capital operates as follows. At the top of the chain, we find large multinational financial institutions often referred either as the asset owners and managers – the ultimate portfolio managers. These are not anonymous individuals with spare savings looking to invest, but rather large multinational financial institutions whose asset pools are valued in the billions, if not trillions, of US dollars often serving an intermediary role in investing money for others. Task Force members associated with pension funds and insurance companies exemplify the asset owner figure presented in the Task Force. On the asset management side, the TCFD membership includes individuals affiliated with renowned organizations such as UBS Asset Management, Aviva Investors, and BlackRock, the latter being world's largest asset manager. 56

While these owners are considered to have discretionary power in managing their assets, they often encounter constraints due to their reliance on numerous other market participants and devices. For instance, it is evident that institutional portfolio and fund managers heavily rely on the recommendations of analysts from investor consultants. As a result, the Task Force's membership includes members from financial service providers critical to the value chain of capital, such as investment consultants and analysts from the broker-sell side community.

Secondly, a significant concern that emerges in these discussions is the concept of fiduciary duty and how the exercise of such duty is intertwined with various contractual arrangements, legal codes, and codified performance systems that track benchmarks often established by other market participants. As a result, a member from a global credit rating agency was also included in the Task Force's membership. During the TCFD user panel session, one of the leading benchmark companies aptly pointed out that indexes and benchmarks are intricately woven into the fabric of finance.

Just to give you a little perspective with XX – 95 percent of US pension assets that are invested globally, that is, equity assets that are invested globally, are invested against XX benchmarks.

And the reason I mention this is not so much to brag but to indicate the extent to which we live in a benchmark driven world in finance these days. And if you think about the investment value chain going from asset owners, though consultants, to asset managers, benchmarks are written in their investment policies for the investment consultants. They are looking at benchmarks in the context of the asset allocation models they are developing for their clients, and also monitoring managers using benchmarks. And then asset managers themselves are reporting their performance in relation to benchmarks.

(Spokesperson for the users during panel discussion among the users)

Moreover, many investors are legally obligated to maintain a fully diversified portfolio and invest in the "markets as a whole," thereby limiting their ability to invest against the markets.

56 Asset managers are particularly intriguing user category as they are not owners in the traditional sense but instead manage the assets on behalf of the asset owners (e.g., pension funds). However, they possess legal ownership of the stocks and hold the right, for instance, to vote in company's annual meetings and are the party primarily engaging with holding companies on behalf of the owners.
Furthermore, this is exacerbated by the fact that large part of the equity markets today is passive. That is, many portfolios do not engage in active trading, and are often tightly coupled with the development of indexes and benchmarks expected to proxy the markets. In other words, taking active buy-sell decisions would necessitate a shift from passive to active investing, altering the investment logic of many funds, whose rise have been enabled by this passive form of investing. 

Finally, a significant concern arises regarding a structural constraint faced by large institutional investors due to the size of their portfolios. In multiple discussions, the concept of a "universal owner" is brought up to describe the challenges encountered by large fund managers, where diversification through active management is not feasible within the current arrangements. In other words, there are limited investment opportunities available for reallocating capital under the existing structure. As one pension fund manager articulates in the panel discussion,

we have a large fund; we are globally exposed. What does that mean? It means that there’s nowhere for [us] to hide. So even if, as [another pension fund], is thinking about how to tilt exposure to carbon risk, you can’t hide. So we have had all manner of interesting conversations with, let’s say Exxon, and let’s say we come to the point where we think we can’t take this any further and say, why not sell your shares. And we do get asked to do that by divestment by different groups like 350.org who are pushing investors very hard and quite rightly on these issues. The point is, even if we sold Exxon, we’re still exposed to the risks which come from their emissions. So we are starting to think about the idea that just as there are systematically important financial institutions […] we need to start thinking about systematically important carbon emitters. We have looked at the carbon footprint of our public equity portfolio, which is around 10 000 companies and its in 47 markets, so not a bad proxy for what’s going on. 80 companies alone are responsible for 50 percent of the emissions, and they are not all in oil and gas and energy companies.

(Spokesperson for the user category in the TCFD panel discussion among the users)

Consequently, the user, in a sense, is less confined to the mindset and risk appetite of a particular economic individual. Instead, it is part of a more interconnected arrangements. However, given that money managers are deeply entrenched within the fabric of finance, the question arises: if not translated into simple buy, hold, or sell decisions, what does the management of transition risk by these users entail? After all, the remit of the TCFD was purportedly oriented around serving their information needs for decision-making.

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57 And here, we are not talking a type of niche investing. For example, at the moment, nearly half of the US’s equity markets are passively invested and the amount is estimated to increase in the future. (see, for instance, Johnson 2022 [https://www.ft.com/content/27b5e047-5080-4ebb-b02a-0bf4a3b9be08])

58 See chapter 5 for more discussion on the idea of universal owner.
And user needs

As noted above, the TCFD recommendations configure a very particular type of investor for its image: A figure of a large, structurally constrained, financial institution whose task, nevertheless, is to manage the financial risks arising from climate change. Such figure deviates significantly from the conventional portrayal of a faceless, information-sensitive individual—the typical homo economicus—with subjective risk appetite, investing on his own behalf in efficient markets. Instead, the user figure depicted here is a more dispersed one, intricately woven into, and constituted as part of, the wider relational fabric of the markets.

In practice, the TCFD recommendations were suggested to enable framing the investor engagement in a useful way and to help ask “the right questions”. This was deemed vital, particularly for users by who noted the engagement activities with their portfolio companies as a central risk management strategy due to the structural constraints they found themselves. As noted by a Task Force member representing BlackRock, the world’s largest asset management firm:

As the world’s largest asset manager, we are responsible, we are the fiduciary for over four and a half trillion dollars for our clients, and our responsibility is to protect and grow those assets. And again, I think it's always important to recognize with BlackRock, we're not an asset owner. This is always on behalf of our clients; we are the fiduciary. Every year we engage with over fifteen hundred companies specifically to talk about how they're managing these risks or how they're looking at these issues as opportunities.

(TCFD member during a panel discussion)

As a result, the recommendations not only offer information to be integrated into the decision-making process by singular actors, but also serve as a tool for framing engagement among various actors across the value chain, particularly between portfolio managers and portfolio companies. As such, the recommendations equip the engaged investors with their interactions during the mutually incentivized journey towards ensuring long-term value creation.

In such context, investors are positioned critical in evaluating the “resilience” and “transformation capabilities” of their investee companies in the face of the transition. Hence, the recommendations, in one sense, go beyond simply making something pre-existing visible; instead, they serve as a tool to actively engage in the process of transforming companies to align with the optimized asset portfolio in the face of the transition. Accordingly, the investor is framed as the ultimate steward ensuring the long-term value creation in the face of transition:

The focus is very much on the organization, and how it sees its strategy developing over time…and on the process of strategy and the process of capital allocation. So it is partly about internal corporate process; how does stress testing scenarios feed into the strategy process internally. And it’s about external process; how can you use this to have meaningful dialogue discussion with stakeholders, owners obviously, but with other stakeholders as well.
So, it is a mistake to think that TCFD reporting is about producing a glossy report and that is sort of the end product. This is intended to be an iterative process, a process of discovery, process of learning, stress testing, where you make an assessment of stress test and have a dialogue with your stakeholders and then you improve as you get in new information.

So, the focus is very much on our side on this process and not so much with report as an end product. It’s not about compiling a report, but about reflecting on how this type of information can help both companies and investors to make better decisions, so that we have a smoother and faster and less costly transition to low carbon economy and with less risk of assets being stranded in non-productive use. So that’s an important starting point to for a discussion around what good reporting is. Good reporting has to be seen in the context of the objectives of reporting and those objectives are related to capital allocation.

(TCFD member during a webinar)

Consequently, the recommendations are framed in the image of the investor interested in the long-term value creation of the entire markets in the face of a transition. Not necessarily for moral consideration, but because managing the market risk is the main risk in the portfolios of these large market actors. In this context, managing portfolio risk increasingly involves engaging with portfolio companies, as the investee company itself is viewed as a "portfolio of projects," and a "platform for value creation." The management of the transition risk is about ensuring the optimal “project portfolio” in the face of transition (TCFD member/interview).

Finally, let us not overlook the role of the information needs of the regulator in the process of formulating the recommendations. Although financial institutions were positioned as the primary users, the ultimate rationale was that such information would ultimately serve the information needs of regulators, even if these needs were not frequently publicly advocated during the recommendation process. Given that the primary aim of the FSB was to enhance the disclosure of financial institutions, places them as co-regulators of market risk, and, more crucially, of the transition.

To conclude, by framing transition risk as a real concern for the users depicted here, the transition goal committed in the Paris Agreement is translated into a financial concern. Moving forward, the subsequent section delves into the materiality of this financial signification as making transition financial concern requires establishing effects in distributed practices across the value chain of capital.

6.2. Formatting the materiality of financial signification

Framing transition as a financial phenomenon necessitates material investment to generate financial effects throughout the value chain. In the next section, I will describe how the notion of transition risk was critical formatting the method of knowing about the financial effects of
transition. In other words, I will illustrate how establishing transition risk with financial effects, required formatting the recommendations in a way that facilitated its integration into the existing processes through which financial signification is enacted.

As I delve into this analysis, I will emphasize the critical role of the TCFD recommendations to act as a formatting valuation device. Here, the primary focus is to show how the recommendations seek to inform and shape the distributed financialized gaze by structuring attention and orchestrating decision-making in a manner that influences the priorities of various actors. Furthermore, the ensuing discussion will provide a detailed examination of the ontological effects that such formatting produces.

6.2.1. To give a form: formatting things to enroll the needed other

To make transition risk with tangible financial effects required formatting the recommendations in a way that would enable such effects to manifest. For the TCFD, this meant formatting recommendations into four major themes, all considered critical sites through which change in practices could be provoked: Governance, Strategy, Risk Management, and Metrics and Targets. Each theme was considered providing critical access point to reporting organizations, fostering the necessary connection for action.

![Core Elements of Recommended Climate-Related Financial Disclosures](image)

Core elements of the TCFD recommendations

In practice, for the transition risk to manifest as part of pre-existing processes, it needed to fit into those places it intends to affect. In making of the recommendations, the right form was considered critical in getting into places, for not having the right shape might block access in the first place to the world of those required to materialize the desired effects. For not having the right form, the issue of transition might be deemed irrelevant, by those responsible for materializing the intended outcomes, or go unnoticed all together. Consequently, adapting to the frames that have already materialized becomes critical in translating transition into financially material concern.
I think the view of the Task Force was that in order for this to be easily implemented by companies, they have to fit in with the existing structure that most companies operate under. And so, this concept of general governance, corporate governance, around strategy and risk management, and how those interplay. And then, of course, metrics and targets. So, this is not an unusual contract, and we felt that if you create a separate thing for climate, that it would never be adopted.

And so, it’s intending to sort of fit under any other type of risk that might be considered. Or opportunity, strategic opportunity. So, we framed it that way. We don't think creating separate standalone processes to look at this issue is going to be helpful at all. I think boards and senior management are already overwhelmed with their expanding responsibilities and roles, especially around disclosure. And so, the idea is to make this fit with existing processes, and we think we've done that by structuring this this way.

(TCFD secretariat during webinar)

While the four thematic pillars served as the access points for contact, the critical part was to make the recommendations sticky and taken up by others. In this regard, it was critical to make “easily and widely adoptable recommendations” – something that would be easily taken up into circulation without heavy investment. To achieve this, the main recommendations were structured into eleven concise recommendations, each corresponding to a specific theme. This formatting approach enabled creating an "easily adoptable one-pager," facilitating their uptake.

As we like to joke, it is also extremely important that we got the recommendations onto one page. All right. Again, everybody's busy senior executives have a hard enough time dealing with the complex issues of running their businesses day to day. This is what I would call consumable first step.

(TCFD secretariat during conference presentation)

It’s a very logical structure and it's proved to be enormously powerful. You know, when you look at TCFD, there is one page, and it is the page with the four pillars, and then the three boxes within each pillar. And of course, that clarity and simplicity, I think, is one reason why TCFD is successful, because it's very principled.

(TCFD member/interview)

Paradoxically, ensuring the recommendations' effectiveness requires making them easily adoptable, which in turn requires making them less affective.

There was also, of course, quite some debate about the setup of the recommendations as a whole. So, the one pager with eleven recommendations, discussion about which elements to be included, the order of the recommendations, the order of the categories, the four
categories, and the level of detail. Its now, it’s quite generic, flexible, however you want to call it. It doesn’t tell you exactly what to do.

But there were number of task force members who wanted to arrive more specific requirements in there, which in the end did not make it. And there was a good discussion about... ehm... for example about linking carbon emission to remuneration, so to report on remuneration links with climate change. And well, yeah, in the end it was in the guidance but initially it was like should it be in the recommendations, and yeah there was quite debate about that.

(TCFD member/interview)

The main recommendations as an “easily adoptable one-pager.”

Moreover, to have material effects, the issue of transition risk needs to be “elevated” to the “right people” who might otherwise think it being irrelevant. It is essential to get those who already matter to take up the topic for it to matter. For instance, if the object of concern is not made visible and calculable in the language of those who matter, it might remain irrelevant.

One of the key things that we're trying to do is it's essentially institutionalize the concept of climate change risks and opportunities at the very highest level of companies that senior management and the board
level...And provide a framework that allows you to integrate those considerations into the way you run your business today. [...] 

We hear it all the time from finance firms, from the Chief Accounting Officers, who still don’t get why this is financially relevant. And so, one of the goals is really to try and elevate this to senior management and the board level. (TCFD secretariat/webinar)

We tried to come up with a structure that was, what we would call, commensurable by normal people. So, governance, strategy, risk and metrics and targets. That’s bread and butter. Not create a separate process where climate is this unique thing. It’s not. If you make it an additional burden to the board and senior management in a way that is different from the way they run their business, this will never succeed.

So, we need to be able to speak the language of the financial community, the CFOs, so that it resonates with them. We also needed to make it into one page because attention spans are not there.

(TCFD secretariat/panel discussion)

Hence, to have an effect does not result simply by changing what is being said but by whom and where things are being said. For instance, it is often acknowledged that the information about the possible risks arising from climate change do exist. Such knowing, however, is having little effects for being discussed in wrong places and by those whose voice does not seem to matter to provoke difference in the processes that have come to matter.

And that’s why Mike Bloomberg and Mark Carney are such important actors in this work. They do have the ear of the mainstream finance business community and we are all trying to sort of elevate this to that board level.

I think we all have to acknowledge that lots of these companies within the sustainability group is a somewhat isolated group and it is not as connected to the Chief Financial Officers’ offices as they should be. This is an effort to try and pull them together and elevate that, and that alone, if we succeed, will be very important win.

(TCFD secretariat/TCFD webinar)

To secure the enrollment of those who matter requires constituting a safe space with a sufficient level of comfort and time to feel the effects of the new issue.

We very quickly got on a principle that probably wasn't explicit, but it was sort of implicit around the group, that the whole idea was to get started, raise the floor rather than raise the ceiling. So making it accessible, making it something where companies could engage, start the journey, improve and build it exclusively, that was really what certainly I was advocating for through the through the early days...you know, get everybody in and raise the floor gently.
(TCFD member/interview)

The safe space ensures the issue might not become too affective or contagious by avoiding an attachment to other issues and associations that might be considered too threatening for the current state of affairs. The words attached to “finance” and “business,” in contrast to “environment,” guarantee easier access.

And yes, many of us feel very strongly about the values around this issue, and what it means. But there’s a real economic impact, and by sort of highlighting what that economic impact is, you have the ability to draw on a much wider range of participants to take a look at it.

(TCFD secretariat/webinar)

We very much have trying to tie these two worlds together and make it relevant for a wide range of business interest. And that’s the key for us, making this about business decision rather than an environmental decision.

(TCFD secretariat/webinar)

For the recommendations to be successful, they should not disturb the flow of the existing processes. There is still time; the risks remain in the future, not here and now.

It might take for them [companies] a little while to get there, that made look inward of lot of members of the task force to say ok, what is the objective here. Is it to say that 100 % of these disclosures need to happen right away, and that they need to be in financials? Or is it to say that we recognize that it will take for some companies more time to gain the comfort that they need around some of these disclosures and willing to start thinking about what climate-related risks and opportunities mean to them. And that disclosure might end up in their annual report or sustainability document, they might end up on the website, or in their CDP report. Wherever they end up, having them available somewhere is better than having them available at all, so that was very much the kind of spirit around that.

(TCFD member/webinar)

6.2.2. Inscribing affordances: orienting the evaluative gaze

By formatting things one way rather than another provides a handle and a way to handle things in a particular way. The recommendations are useful rendering things actionable— a tool for intervention and engagement as they make people talk about certain issues while equipping them with the right imaginary and tools to think with.

In this context, the recommendations hold a central position in connecting the figure of the investor with the rest of market participants and the portfolio companies. Unlike certain speculative market actors, these investors are said to engage in a more fact-based and rational
pursuit of long-term value creation, grounded in the evaluation of the fundamentals of the portfolio companies. In a sense, the recommendations act as a handle to enroll and intervene in various processes deemed critical in determining the true value of things.

The financial crisis of 2007-2008 was an important reminder of the repercussions that weak corporate governance and risk management practices can have on asset values. This has resulted in increased demand for transparency from organizations on their governance structures, strategies, and risk management practices. Without the right information, investors and others may incorrectly price or value assets, leading to a misallocation of capital.

(TCFD 2017, p.ii)

In ensuring the correct valuation condition, TCFD recommendations constitute a tool for investor engagement in the value management.

It is fair to say the use of these reports have been so far primarily about informing engagement and making sure that you have good engagements [with stakeholders]. I think that we are not at the stage where you can have the kind of comparability across companies where there is something you can put in spreadsheet and tactical asset allocation.

But I do think it has been an important in the discussion between investors and corporates. One we are seeing lot of investor attention is what is good dividend policy, which goes at the heart of capital allocation. So, when a company makes money from its existing business do you want that money to be reinvested in the existing business model, or do you want to take that money out and reinvest it in something else. And so that goes at the heart of this issue on viability of business model in the face of climate transition.

So there is a lot of attention around capital structure, dividend policy… we are not at the stage you can take reporting of 1000 companies and put that into spreadsheets and get out some numbers…hmm…but that was maybe not ever the intention either. The intention was, I think, more the understanding the capacity of individual organization to transform themselves and create value for the investors.

(TCFD member during a webinar)

In more specific, the recommendations are seen as a vehicle to reconfigure critical sites for investor engagement. For instance, the board becomes a critical site for intervention.

Actually, it was never said, but actually, probably, the implicit objective of the TCFD was to change behavior in corporate boardrooms, through the weapon of disclosure. So, what that says is that when you ask a company to disclose information, things happen.

And this was a subject of ferocious debate about who should be involved within that process. So, one of the corporates was extremely exercised
about any mention of the audit committee being involved. Eventually that was put in, not in the recommendations, but in one of the other areas of narrative. But the idea is that when you ask company to make disclosures, particularly in their annual report, which is what we were saying, then the audit committee gets involved, so the senior non-executive director, the chair of the audit committee, the finance director gets involved, etc. So, this was to change the conversation in corporate boardrooms. And I think it has been very successful. And when you put the emphasis on a company to explain what they're doing, they have to talk about it, otherwise they can't say anything.

(TCFD member/interview)

To make the board talk about possible transition risks is to provoke a realization and acceptance of a particular kind of reality within which financial signification needs to be enacted. Currently, however, some companies are told to exist “in another planet”. As such, some actors lack the capacity to assess valuations’ fundamentals adequately, unlike those capable of ensuring a more rational long-term value creation, rooted in evaluating their portfolio companies’ fundamentals.

Many say this subject does not affect me. And in the Task Force we have talks about acceptance, acceptance being the first step. And what we would love companies to say, ok, I do need to spend some time and energy to evaluate; do I have this risk, and how material could that risk be? And that’s a challenge, because there might not be expertise in the organization, there might not be expertise at the board, they might need to look for third parties to help them navigate it.

But the first step in terms of baby steps is to acknowledge that there is a risk and opportunity out there and bake that into a process. But then that means… there could be a real financial impact to the organization and governance structure of that company, and it needs to understand when does that risk materializes, is it a short term, long, do I have to redirect my investment, talk to bank, do I need to change my business model? You need to think these once you have opened the can.

If your board is kind of the same old board that has been there for years and years and years and grew up with the organization… they are not going to recognize that this is a problem […] And I wouldn't be surprised if you looked into the boards that maybe, they don't have the expertise to really assess the climate related risks and opportunities. And so, then this is about good governance.

(TCFD member during a panel discussion on transition risk)

However, guiding who should think about what and where is one thing, while explicitly establishing connections with material effects is another. For instance, questions regarding managements’ incentives, and the location of disclosures were some examples of controversial matters in this regard.
XX’s point was we should talk about targets and incentives of management. And I was a bit against that at the start. I thought, Jesus, you know, you're just going to turn people off again. People are not going to adopt TCFD because they're not going to want to talk about that. I was wrong on that. I mean, you know, actually it's a very important part on where the rubber hits the road. I mean, you can only really believe that a management team, and a board, are headed in that direction if they have actually been incentivized to make those changes.

(TCFD member/interview)

Hence, there are limits on how tight or explicit some connections were made.

It was also discussed as to what extent we should have remuneration in there as a target. We left that out because politically too sensitive. So, remuneration was kind of carved out, just complicates things with remuneration issues because it's very politicized.

Nobody of us wanted this whole important topic to be sidetracked by discussions about the remuneration, because the lack of transparency on, the objectives of the company, when it comes to climate change transition, or their strategies to take advantage of opportunities, that's so much more important issue than how this is linked up with remuneration. There are so many remuneration issues around, which have nothing to do with the issue of climate change.

So, I also was not, you know, very, let' say very attached to giving that prominence because I was also and you know, I also fear that this could sidetrack us. I was much more focused on getting the metric in, you know, that people actually report a carbon footprint of their portfolios. I thought that was much more important and there was a lot of resistance to that too. So, you've got to, you've got to choose your battles. Right. So I was not, I was not concerned about the remuneration thing. Others might have felt a bit more passionately about that. But for me personally, I thought it was, you know, you've got to choose your battles. This will come later.

(TCFD member/interview)

6.2.3. Narrating and bringing future in the present: scenario planning and business model reporting

As repeatedly emphasized, the TCFD was not to say anything about how companies should manage transition risks. However, the orienting aspect becomes visible by the way the recommendations intend to reconfigure existing processes and direct them in a particular way. This was done not only by defining who should be thinking and managing such risks, but by introducing new tools to think with that would enable materialize particular kind of future imaginary guiding the financial signification. Most notably, this included the introduction of scenario analysis and business model reporting.
We thought that if we wanted to make reporting framework that would give guidance for capital allocation, decisions that are important for investors, it’s not so much about how the companies affect the climate but about how climate change and climate polices could affect companies financially. So there was always a strong financial materiality lens on the reporting framework.

And this reflects the important role of investors in the market economy because in the market economy, it is really investors that are responsible for capital allocation and for making sure that capital flows to the most productive uses.

And in the climate context we know that we need to make a transition to a low carbon economy. What we don’t know is the extent that that transformation will happen through the transformation of existing companies or by existing companies being built down and new companies being built up. So will car producers of the future be today’s car producers who have become leaders in electric vehicles or will newcomers like Tesla take place. Will the energy companies of today transform themselves into leaders in renewables energy or will the new players come and take their place. So in order to answer these question, we need more information on corporate strategies. And so really, reporting of stress testing of business models is at the core of TCFD.

(TCFD member during a webinar)

Ultimately, however, the Tragedy of the Horizon was the tragedy of too short time frames and a temporal issue inherent in current investment practices. Transition risk was suggested to make visible this temporal quality currently going unnoticed because of existing devices. As a result, scenario planning was suggested as a solution to fix existing practices, especially in jurisdictions where the materiality of financial risks was understood placing too much emphasis on the risks of here and now.

And it all goes back to Governor Carney's sort of great speech back from September 2015, when he talked about the Tragedy of the Horizons. And really, in short, it means for this issue to become material, in the sense that the most of the financial community makes it, we have to think a little bit longer term. And a great way to do that is to talk about scenario analysis.

(TCFD secretariat during a conference regarding scenario analyses)

Recommending scenario analysis was much contested at first. Yet, it quickly became clear they should form a critical part of the recommendations.

The importance attached by the Secretariat and Mark Carney, I think, has been hugely influential in these topics. In certain areas, he did really push, you know, scenario analysis was one of them. He, from the beginning, it was made clear from the secretariat that, you know, that he felt this was a very important thing and it should not kind of fell off the table.
In essence, scenario analysis was seen to enable better management of the future, and the period of transition to reach there, in the present.

One of the big innovations of this report is to introduce scenario analysis, to complement static disclosures. And this is because investors and creditors need to know the strategic as well as the static, and they need to be in a position to weight a firm’s strategies against plausible public policy developments or technological advances and evolving risks and opportunities.

The decision was justified for the arguing that financial markets have the exceptional ability “incorporate information about the future” for their long-term horizon:

I think this is Mark Carney's whole point, that the extent to which we today face climate change risk is really indirectly through financial stability risk, because financial markets can incorporate information about the future much more quickly than that, than the real physical impact will be felt. So, I think bridging this tragedy of the Horizon is the exact purpose of the script. So, you're actually trying to cover a long term time period that has a direct impact on the short term, potentially.

However, setting a time frame for “long-term” was controversial. Specifying a definite time horizon was not seen as an option. Eventually, the issue was resolved by framing it around the horizon of the investment. This framing was perceived as uncontroversial, particularly in the presence of institutional investors with assumed longer timeframes.

For time horizon I think we had an elegant solution. Time horizon is the length of your investment, or how long what's the longest period you make investments for.

But scenario analysis was not introduced with the mere purpose to enhance the foresight by extending the time horizon. Instead, it played a crucial role in conceptualizing transition risk as a form of "tail-risk," lurking at the edges of normal distribution models, prompting critical consideration of the improbable yet high-impact events that could have financial effects.

So, I think the best way to think about scenarios is as alternative futures. They are visions of what the future might be. They are not forecasts or predictions, which are the result of someone’s opinion, a prediction or a result of a model, a single view of future. But they are in fact a series of different, potential futures […] so you stretch out the possibilities of what the future might look like and the purpose of doing that is to give
management the tools to think about the future as not necessarily the extension of what it is today, which is just human nature.

(user spokesperson in the TCFD panel discussion on scenario analyses)

In this context, scenario analysis goes beyond merely calculating probabilities and plausible futures; instead, it serves as a vehicle to express imaginaries that existing management tools would not enable articulating. At times, it was referred as a framing device, a tool to think with. But not just to think and extend the imagination to something epistemically unimaginable but to direct it toward a particular type of future to entrench what has been perhaps been unimaginable in the light of existing tools.

So, look, my view on scenario analysis is that it's a framing device. It's a good way of getting people to think about how their business stacks up compared with business as usual. But the scenario analysis per se is only as good as the assumptions you make. But that's how I think about it.

You know, for about a year, certainly when we published it, it was the hottest topic, everyone wanted to talk about scenario analysis. You hear less about it now, and that is simply because I think everyone is moving much more towards two degrees, and even one and a half degrees, and a net zero. But it's the framing device. That's how I think about it, it's how it sets the narrative and dictates the narrative.

(TCFD member/interview)

In various instances scenario analysis was argued to address the limitations of current reporting. Especially, the excessive focus on historical backward-looking accounts was deemed problematic.

There is a challenge to move from historical numbers to future looking in the context of asset allocation, which is a challenge…how to build resilient portfolios that benefit and contribute to the two-degree outcome, but which are also aware of the risks of not achieving Paris agreement understanding 4,5 6 outcomes physical risks properties, infra, supply chains…

(TCFD member during panel discussion)

But as often noted, scenarios are only as good as the assumptions companies incorporate into them. For instance, in one panel discussion concerning transition risk, it was acknowledged that if companies were to use wrong assumptions, like “unrealistic carbon prices”, the markets, would make their own evaluations and put those organizations “under the mercy of markets”.

The focus for the task force, relates to financial assets, stocks, bonds, for instance. And here the question is what is the value at risk for my portfolio if the transition to a low carbon economy accelerates? I think for this type of assessment, there is actually no scenarios available because you need scenarios, with risk parameters that you can integrate, you know, DCF model, for instance, like what are what would be the costs,
what will be the increases in revenues. So, you need assumptions on the taxes on the energy efficiency standard and usually the IEA scenario, for instance, do not provide this type of information. You just have the outcomes.

The ultimate audience are probably prudential authorities to check the impacts and implications on financial stability. And once again, climate policymakers to understand how, like hard they can push the companies toward the climate targets.

(user spokesperson in the TCFD panel discussion on scenario analyses)

Consequently, to recommend scenario analyses, was not to suggest any kind of scenarios. In the recommendation, Task Force specifically recommends companies, to:

Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2 Degrees C or lower scenario.

As such, there are certain limits within which the imagination is encouraged to take place. While careful in trying to stay transition neutral, the 2 C degree scenario was considered as “a key type of transition risk scenario”, for it “lays out a pathway and an emission trajectory consistent with holding the increase in the global average temperature to 2 C above pre-industrial levels”. It was argued that “a 2C scenario provides a common reference point that is generally aligned with the objectives of the Paris Agreement and will support investors’ evaluation of the potential magnitude and timing of transition-related implications for individual organizations” (TCFD 2017, p.27).

To recommend the scenario analysis under the 2-degree warming pathway was controversial.

I cannot tell how long we agonized over every word in this one sentence. Because the idea is not to overprescribe, what company should do. It is for them to communicate what is the resilience of their strategy across wide range of scenarios. However, as investors, there has got to be one scenario, or what we prefer, there should be one scenario that everyone does to get some comparability.

(TCFD secretariat during a conference presentation)

For instance, some members felt that disclosing a 4-degree scenario was more realistic, considering the current state of things unfolding.

Should we have a four-degree scenario, that was also, quite, quite contentious. So, this is, so if we basically have a policy failure and we get runaway climate change. And I had a view, and I still hold this view, that the environmental impacts of four degrees are so overwhelming that they swamp corporate modelling. There is an insurance company view that is different, that tries to assess the financial cost of a four-degree world.
I also was very concerned, I remain concerned, that we shouldn't be sanctioning talking about four degrees in the same breath, as one and a half degrees, for four degrees is catastrophic. It is existentially threatening to humanity. One and half degrees is not. And I was, I am, I remain concerned that just having the corporate world talking about four degrees, like it's just a normal thing, was really dangerous and another area of considerable discussion.

(TCFD member/Interview)

Eventually, the decision to recommend the disclosure of 2-degree scenario was justified basis on the apparent comparability the choice of common threshold would enable.

You have to remember, getting 32 people to agree, to reach consensus agreement. There were some individuals that felt strongly it needs to be 1.5 [degree], but then there were others saying it should not be even two considering the realistic path we are on. So, it was a bit of practical compromise…and maybe you should look at also 1.5, or maybe even 4 degrees in some cases, but the very least, one of them should be around 2 because that creates the idea of comparability.

(TCFD secretariat during webinar)

Although the 2-degree target was derived from the existing climate agreement, making an explicit connection to the Paris Climate Agreement was controversial among some members at the time. While for some, Paris served as the primary rationale for the TCFD's existence, others were less enthusiastic about establishing such linkages.

When we had the discussion about two degrees during meeting in Paris in September 2016, there were people in the room who said, well, there should not just be the two-degree scenario analysis, we should allow people to be doing three degrees and four degrees, which I thought was completely missing the point.

And that's where we had this big discussion about, the TCFD remit is not about Paris, it's a coincidence that the TCFD was launched during the Paris COP, we just need people to be thinking about different climate scenarios. And so, I think that's where we came in. It is a very clear dividing line between different people in the room.

The benefit, as I saw it, was to help change the narrative around climate risk and say which company, if we go to the two-degree world, which companies are going to suffer. The obvious pushback from fossil fuel companies was, and this is September 2016, right, oh no, it's unrealistic, two degrees is anyway too difficult. You know, do the scenario analysis, but let's also be realistic and do three degrees, four degrees.

(TCFD member/interview)

Furthermore, despite some members' insistence and the idea initially framing FSB's decision to establish the Task Force, linking scenario analysis explicitly to the concept of a carbon budget
was ultimately set aside. Nonetheless, the concept of a carbon budget was consistently raised in numerous panel discussions, with many stakeholders deeming it essential to define boundaries within which companies should base their planning on scientific evidence. In the final recommendation, the terminology used was carefully selected to convey specific connotations and meanings.

So, right, so when you say two-degree scenario analysis, you're essentially saying science-based target. And I'll be, I'll be blunt about this. There is certain language that we try to avoid using because you're talking about a broad audience here.

Really, I'll just say, that in the US, for example, to tell a corporation that they need to do a science-based targets, some might take that and say so I'm supposed to do things for science and not because it makes business sense to me. But two-degree scenario is a science-based target. We're not explicit about that. And you'll note that we sort of referenced a lot throughout the document as we're careful about appealing to a broad audience.

(TCFD secretariat during a webinar)

6.2.4. Financial accounts and making transition narratives durable

While scenario planning was regarded as the framing tool to think with, it was crucial to connect it to more durable things through which financial effects become manifested. In practice, this was achieved by mapping out in detail the process of how the object of transition risk can translate into financial impacts in the company’s financial filings. In other words, the recommendations critically mapped out preliminary linkages in the ways transition risk could be understood through the main categories of financial reporting: companies’ revenues/expenditures (income statement) and balance sheet (assets & liabilities and capital & financing).
This mapping was critical in determining the degree to which disclosure around transition risk would affect the more established arrangements of financial reporting and auditing practices. For instance, to make transition as an event with financial effects required establishing linkages to companies’ current and future capital expenditures. Here, transition risk enabled configuring a narrative that companies should disclose forward-looking expenditures to reflect its financial resilience in the long term in the face of transition.

There's a diagram in the TCFD, which is a financial, a financial reporting diagram with income and expenses, the balance sheet, etc. That was very carefully crafted around.

For example, we wanted forward looking impacts on capital expenditure disclosure. So that's a very carefully worded disclosure narrative around that. That was extremely contentious. You know, first of all, should we be saying that? Secondly, to what extent should we be asking for it? You know, there were people saying, well, we can't put this out, this is a profits forecast. So, there was a lot of corporate resistance around whether or not this was going to cause corporates problem, which, of course, was complete nonsense.

(TCFD member/interview)

In a sense, companies’ transition narratives are expected to gain substance and durability by linking them to financial reporting items. This attempted quantification of transition-related narratives is not pursued for the sake of presenting appealing numbers alone; rather, they are seen as critical nodes to materialize further entanglements financial reporting items may afford. On the other hand, narrative disclosures are what lend meaning to these numbers and allow them
to be assessed against the backdrop of these transition-related narratives. Together, the numbers and narratives form a future-oriented story that is subject to evaluation by the user, who is now equipped and authorized to assess whether the information provided is "appropriate" and "reasonable" and whether it presents an object worthy of investment, care, and existence in a climate-changed world.

A company saying, by 2035 we will be, for a lack of better expression, net zero. And here is the milestone by 2025, we already achieved this percentage reduction in 2030. So not only setting those milestones, but also describing in narrative form how they will achieve that and what and what investment expenditure would be needed to support that.

So, TCFD, so one of the things about TCFD is that this forward-looking component, TCFD has a very strong forward-looking component. That's what makes it powerful. And of course, accounting standards are generally points of time are backward looking. Actually, climate change is a forward-looking issue for investors. Take an oil and gas company today, what are you going to look like in 10 years’ time? Are you going to make the transition to a zero-carbon world?

(TCFD member/interview)

However, quantifying and translating transition risk into tangible effects in financial reporting items proved to be controversial. There was considerable resistance to suggesting disclosure beyond qualitative narratives that would influence a company's financial planning and disclosures on financial filings. Much of the received criticism related to risk of disclosing “company sensitive information”,

I like to point out that before the Securities Act of 1934, revenue was confidential business information. So, there is sort of explicit, policy and disclosure requirements, they change over time. And then there are industry norms that change over time, and we're trying to influence those industry norms and we hope, and while we acknowledge not all this will be disclosed immediately. We think that we want to put the stake in the ground trying to move the needle towards a bit more disclosure.

(TCFD secretariat during webinar)

Much of such resistance was linked to existing legal coding and rules.

The push back there was again, there was a sort of transatlantic debate. The issue is the much more legal centric environment in the US. Most general case, so you cannot put a long-term subjective scenario forecast in a [financial] filing because the legal consequences of it in the US environment are much more severe. That was, that was an example of the tension. By the way, it was resolvable, because you can actually put, I mean, the lawyers will tell you that you can put whatever you like in your filings provided you appropriately disclose the nature of the variability in the estimation that's involved.
But, you know, most, there are a number of companies, I mean, number of companies in the States use that as an excuse to be honest. I'm not going to say that because it's competitive information, or I'm not going to say that because it's you know, it's not subject to safe harbor. Well, actually, you know, there is a way of finding a way to disclose it that does not create legal, undue legal risk for the preparers of those filings.

(TCFD member/interview)

In the end, the actual recommendations were left rather open-ended. Specifically, there were only few explicit references to existing reporting rules and standards. However, it was widely acknowledged that the recommendations should fit and speak to various jurisdictions, legal codes, and standards. For instance, in the case of accounting standard-setting, there was a clear decision to make the recommendations fit for accounting standards so that the standard-setters could later easily engage with the recommendations:

So, we spent time [engaging with Accounting Standard Setters]. Obviously, through Mary Shapiro's former position as chair of the SEC. So the SEC was kept informed. We kept IOSCO informed. There was another Clarence House dinner and, there was the secretary general of IOSCO was there. And, you know, there was a lot of work done to keep the IASB, for example, up to date. I think, along this way, one of the Bank of England people secomend to the FSB left and joined the IASB. So there were lots of connections that enabled us to keep the standard setters involved in terms of what this is where we're heading.

(TCFD member/interview)

6.3. Discussion: Formatting markets in transition

This chapter has explored how transition risk became mobilized in making of the TCFD recommendations and its formatting effects. By doing so, the second chapter argues that the TCFD recommendations were critical in setting up a method of knowing about the financial effects of transition by taking the notion of transition risk as a critical organizing category. By translating transition into financial issue, the recommendations format the relational arrangements that both enable and secure the object's existence as a new financial concern. To put it differently, as there is no singular transition risk to be known, the recommendations materialize critical frames through which the object is brought into being framing the who, what, how, and when of such risk. Such frames are critical for they afford certain modes of action, and the capacity to act to materialize over others conditioning the production of acceptable statements about transition risk and its subsequent management.

Critically, however, such knowing is not without ontological effects. For this, the chapter argues that in making transition risk knowable the recommendations engage in the ontological making of the markets in transition as visioned by Carney. In specific, I argue such formatting is enacted through reframing the qualitative limits of financial signification: the subjects and
objects of investment, investor’s methods of knowing, narrative scenario of financial value creation and the temporality of the investment. Next, I will briefly discuss how the observed formatting through the object of transition risk come to affect the critical frames of financial signification.

Figure 3: Ontological formatting of the markets in transition

Narrating markets in transition

In line with the rudiments of performativity, the TCFD recommendations are critical in enacting the Carney’s vision of making markets in transition. Specifically, the Tragedy of the Horizon speech is used as a master frame and script around which the making of the recommendations becomes organized. Critically, the narrative enabled thinking transition from within financial signification while locating the exercise of making the recommendations within markets as to avoid the forbidden space of climate politics. In doing so, however, existing market arrangements were called into question. As a result, a point of intervention is opened to reconfigure various market arrangements, justified by the need to make markets in transition.

In practice, the narrative script outlined in the Tragedy of the Horizon speech provided a vital framework for various actors to situate themselves as they make meaning of their actions and identities. In doing so, it set a plot and a scenario within which other organizing could unfold. Yet, such a plot is not without limits, as there are critical signposts that situate the narrative to certain places, emphasizing the role of some over others and their subsequent relations along a
temporally progressive story line. While it confines the discourse within the realms of financial signification and its inherent limits, it does not dictate fixed boundaries. Rather, it facilitates a continual and subtle reshaping of the critical frames constituting the financialized gaze, associated with the figure of the investor, the objects of investment, and the evolving nature of financial value, underscoring their plasticity and the absence of a fixed essence.

**Qualifying market actors in transition**

If we consider that the master narrative offers a broader scenario within which to comprehend the object of transition risk, then the principal actors within this narrative plot represent another critical layer of framing. In the current context, these main actors of the script are anticipated to engage collaboratively in the creation (and protection) of financial value amidst the transition. In this narrative, the investor assumes the central role, now made concerned of the financial effects of transition through the object of transition risk.

As the chapter describes, a particular kind of investor gaze forms the basis of the recommendation: A figure of large, structurally constrained, financial institution with interest in the long-term value creation, equipped with the optimal time horizon and the capabilities to steward a managed transition. Yet, upon closer examination, this gaze isn't confined to a singular user. Instead, it emerges as an evaluative perspective formed through the entangled relations constituting the market ecosystem comprising elements such as investment consultants, rating agencies, analysts, calculative tools, narratives, and various legal and contractual arrangements. To paraphrase Callon, there is a distinctive distributed agency at play here, where a plethora of forces shape the user's agency, indicating that actions are not confined to well-defined actors.

Interestingly, the recommendations seek to differentiate between market actors who can accurately evaluate the correct value of assets and those who are currently misguided in their valuations. The transition risk prompts the emergence of a particular kind of market actor - one endowed with the ability for more rational long-term value creation. According to the narrative, these actors can discern the true horizon of things and optimize capital allocation during the transition. This vision of a more rational *homo-economicus* is juxtaposed against a more speculative market participant who, as the narrative tells us, currently gets the fundamentals of valuations wrong. Therefore, while the markets are figured as the most optimal and efficient “collective calculative agencement” (Callon & Muniesa 2005), some actors are said failing to grasp the fundamentals of financial signification correctly.

If the narrative establishes institutional investors as key subjects in managing financial risks arising from transition it simultaneously constructs the corresponding objects of investment now affected by transition risks. Within this framework, the recommendations position investors as stewards overseeing the transition, interested in evaluating the resilience and transformation capabilities of companies seen now to be in transition, all with the aim of facilitating a well-managed transition. Consequently, existing investment portfolios transform into investment objects in transition, whose performance, riskiness, and new value-bearing qualities can now be assessed in relation to the gran issue of transition. Accordingly, the recommendations serve as
both a means and a tool, fostering engagement between active stewards and their portfolio companies in the collective management of financial value.

Notably, these recommendations transcend the boundaries of simply serving the supposed information needs of financial institutions; they also are said to meet the specified information needs of the financial regulators. This reciprocal engagement encourages a collaborative dynamic, shaping the relationship between the regulators and systematically important financial institutions, which are now seen as co-regulators in overseeing the management of the transition.

By placing financial institutions as the main subjects in the management of transition risk, these actors come to bear the responsibility to assess companies’ transition plans, including their timing, pace, and form, with the ultimate goal of steering the markets towards a two-degree world.

**Configuring calculative infrastructure for transition**

To equip the new transition concerned actors, the recommendations play a pivotal role in reconfiguring the socio-material conditions through which the management of transition-related financial risks and opportunities can now be understood and practices. In this regard, the recommendations become vital in reframing the distributed calculative infrastructure around the transition. This formatting, in turn, facilitates the commensurability of various assets, allowing for their evaluation and comparison based on transition-like qualities. As part of these new arrangements, the investor becomes framed as an engaged transition steward, as its now made concerned by the transition performance of portfolio companies. In doing so, it is positioned to undertake the responsibility of evaluating progress by assessing the resilience, transformation capabilities, and credibility of the transition plans of their investee companies.

In one sense, the transition figured here is a transition where it is critical to keep everyone on board. Hence, it is not to abandon the risky assets but to ensure their transformation amid transition and continue financing them against credible transition plans, judged by the investors as engaged stewards. The key TCFD recommendations pertaining to business model reporting and scenario analyses serve as a foundation for assessing these future-oriented evaluations. Within this context, scenarios aren't about merely projecting probabilities or plausible futures. Instead, they strive to give life to alternative visions that traditional management tools, with their emphasis on historical, backward-looking data, might not enable realizing. Furthermore, these forward-looking devices pave the way for the disclosure of novel accounting objects, such as the resilience of a company's strategy and their transition plans that further materialize these future-looking value promises.

Interestingly, the credibility of these new forward-looking accounts becomes tested as part of financial reporting, for instance, by asking for information on forward-looking capital expenditures. In this regard, financial reporting conventions come to serve a critical node as part of this forward-looking financialized gaze, affording realness and durability to specific value articulations. In other words, while scenario planning and business model reporting become vital tools for facilitating forwarding-looking imaginaries, these can be made *more real*, by attaching the proposed narratives to the more durable accounts of financial reporting. Consequently,
financial reporting emerges as a pivotal node through which transition-related financial narratives become articulated, evaluated, and ultimately judged by the new kind of accounting user.

Hence, the accounts formulated under TCFD guidelines are not evaluated basis on how accurately they assess or predict the future’s uncertainties correctly. Neither does their usefulness or efficacy hinge on the fulfillment of the projected promises (such as achieving carbon neutrality by 2030). Rather, these accounts hold significance not in guaranteeing the realization of transition-related promises (like the successful execution of transition plans), but in establishing a durable node in a network of promissory relations, thereby affirming the value worthiness of companies amid transition during an evolving journey of transformation.

Consequently, TCFD quite literally addresses the need to move financial capital from "risky assets" to "less risky assets" as visioned by Carney. However, this does not merely translate into moving capital away from or between pre-existing objects of investments but about requalification of the risky assets to less risky ones. Hence, while the recommendations establish ways to know about the financial effects of transition, they critically also reconfigure the limits through which something may or may not be qualified financially valuable. This requalification process embodies a perpetual creation and realization of financial value in the prospective future, which in turn translates into assets having value also today. Therefore, these disclosures are expected not only shape the calculative space of equivalence but also mold temporal durations of things. What matters is the temporal enactment of value to enable things going, even if the valuation promises never actualize but are continuously revised against an ever-receding value creation horizon that remains always at risk.

**Constituting time for transition**

This temporal dimension is intrinsic to the TCFD's efforts, given that managing transition risk inherently involves negotiating time. As Doganova and Muniesa (2021) argue, temporality is not merely a backdrop against which projects and expectations evolve in a sequential manner. Instead, it arises as a result of socio-material organizing. Thus, the concept of transition risk does not just format the calculative space of actors and their relations around the management of transition; it also shapes the temporal durations of things. In the present case, it means the produced sense that there is still time to make the now risky assets less risky: that is, to manage these valuations with the help of the temporal space now opened through the imaginary of markets being in transition.

To put it differently, by adopting transition risk as an organizing category, the TCFD not only envisions a specific type of future but also creates a temporal window and a pathway towards it. This process materializes the spatiotemporal frames that define the "markets in transition," allowing certain actors to strategically position themselves and undergo transformations to ensure their future existence before such risks materialize. This progression and movement through the transition space is ultimately enabled and assessed by the emerging calculative infrastructure formatted around transition risk.
Furthermore, the envisioned transition here is one where it is imperative to keep and maintain value-bearing assets on board, at least until their disappearing value can be offset by new value-bearing attributes facilitated through novel types of disclosures (e.g., transition plans, sufficient capex, changes in the business model). Consequently, the strategy is not to abandon, for instance, carbon-intensive industries at risk outright, but rather to foster their transformations that, in turn, requalify them as value-bearing investment objects, backed by credible transition plans. Given the emphasis on forward-looking data that directs attention on the future earning capacity of companies, carbon-intensive assets may continue to be investment objects as long as they are accompanied by climate-related disclosures approved by investors.

Somewhat paradoxically, while establishing new limits for financial signification, the recommendations simultaneously open a novel temporal space for further value creation as the risky assets may be transformed back into value-bearing ones through the management of transition risk. In other words, the very frames that delineate the “value at risk” tropes (business model, carbon-intensive business operations), simultaneously provoke the conditions for further value extraction. Consequently, transition-related disclosures become instrumental in fostering ongoing value creation on the basis of projected future though them, thereby sustaining value in the present, irrespective of past circumstances or the actual realization of such projections.

As a result, the TCFD plays a pivotal role in mediating both the present and the future. Through the new frames and disclosure objects, the investment object is endowed with existence and duration, all the while being required to operate within these frames and consistently validate its position therein. In the present case, the investment objects are now envisioned as entities that persist and evolve within the spatiotemporal imaginary of “markets in transition”, a framework that delineates the conditions for their continued existence. Newly introduced accounting concepts, such as “transition plans” and “climate resilience,” further define and give substance to this imaginary, making it both actionable and governable with these very tools.
INTERLUDE: A NEW HORIZON

It is March 2019, and it is time to hear Governor Carney speak again about the pressing issues of climate change as a financial concern. This time, however, the location of the speech has changed from the financial district of City of London to the heart of European politics - European quarter in Brussels. The remarks given today are part of the European Commission’s High-level Conference on Sustainable Finance, organized to “bring together the support and commitment from EU leaders and key private players for the changes needed in the financial system”.

The title of his speech: “A New Horizon”.

Carney begins his speech by reminding the audience of his now-famous Tragedy of the Horizon speech, where he discussed the financial risks posed by climate change that escape the traditional horizons of most actors. As he notes, by the time climate change poses immediate danger to financial stability, it might be too late to stabilize the atmosphere at two degrees. As he notes:

> The paradox is that risks will ultimately be minimized if the transition to a low-carbon economy begins early and follows a predictable path. But for markets to anticipate and smooth the transition to a 2-degree world, they need the right information, proper risk management, and coherent, credible public policy frameworks.

Yet, despite acknowledging the existential risks at stake, today’s speech is filled with hope. While acknowledging the difficulty of the task Carney assures that the building blocks for a transition to a low-carbon economy are being put in place, as markets are beginning to understand the costs of climate risks:

> Today, catalyzed by the COP21 Paris Agreement, and national policies such as the UK Government’s Clean Growth Strategy, some of these elements are coming into place, creating a potential path to break the Tragedy of the Horizon. But the task is large, the window of opportunity is short, and the stakes are existential.

In pursuit of that New Horizon, let me briefly discuss progress and prospects in three critical areas - reporting, risk, and return.

With a focus on reporting, Carney reminds the audience of the work carried out by the TCFD Task Force, arguing that TCFD’s work is now ensuring markets have the “right information to price climate change and reward climate innovation.” Furthermore, as with any good market product, TCFD recommendations have quickly found their place at the golden equilibrium of

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supply and demand “since there has been a step change in both demand and supply of climate reporting”:

On the demand side, current supporters of the TCFD include three-quarters of the world’s globally systemic banks, 8 of the top 10 global asset managers, the world’s leading pension funds and insurers, major credit rating agencies, and the Big Four accounting firms. In total, these financial firms manage almost US$110 trillion in assets.

As for the supply side, it is argued that now “over 600 organizations, with a total market capitalization of US$9 trillion, have endorsed the TCFD recommendations since 2017”.

Furthermore, while TCFD recommendations are celebrated to enable better risk management amid transition, Carney critically highlights that the New Horizon brings also new opportunities as achieving mobilization capital in the name of transition, does not have to come at the expense of returns. Instead, as Careny assures, the current support for more “long-term investment” is now “driven by the expectation that sustainable investment can generate excess returns.” As he notes:

Advances in reporting and risk analysis are paving the way for investors to realize the opportunities in climate-friendly investment by re-orienting their focus to broader, more sustainable long-term value creation.

Celebrating the wide and fast adoption of the TCFD recommendations, Carney argues that it is only reasonable to expect that soon authorities will mandate climate-related disclosures as they are at the core of ensuring that the “financial system is resilient to any transition hastened by [climate policies]”. In this setting, it is argued to be the task of financial policymakers “to develop frameworks for markets to adjust efficiently.”

Consequently, Carney seems to be delivering his earlier predictions made in the Tragedy of the Horizon speech, noting that currently, “a market in the transition to a two-degree world is being built,” revealing “how the valuations of companies could change over time as climate policies adapt and carbon intensity declines.” As he concludes:

In this way, recent progress in disclosure, risk management, and return optimization is creating a path to the New Horizon. A virtuous circle is becoming possible where companies disclose more information, investors make better-informed decision, and sustainable investment goes mainstream. […]

The more prolific the reporting, the more robust the risk assessment, and the more widespread the return optimization, the more rapidly this transition will happen, breaking the Tragedy of the Horizon.
7. Accounting for transition risk: Reframing the limits of financial reporting

To explore the organizing effects of the TCFD framework further, the final empirical chapter delves into how the climate transition was gradually acknowledged as a relevant accounting issue by the International Accounting Standards Board (IASB). After all, TCFD was to establish a disclosure framework for financially relevant climate-related information to be included in corporate financial reporting. Hence, the chapter answers the third sub-question of how has the TCFD framework, and its focus on transition risk, come to affect accounting standard-setting.

The chapter is organized into three sections. In the first section, I offer a concise history of climate risk as a reporting concern, highlighting its historical exclusion by the IASB due to an asserted lack of financial impact, as recognized within the IFRS standards. Subsequently, the second section details the pivotal role the TCFD played in refarming the understanding of the financial effects of climate transition affording a new set of assumptions, narratives, and conceptual imaginaries that enabled articulating transition as a financially material issue from the perspective of the accounting standard-setter. In the final discussion section, I draw together the empirical analysis by suggesting that making transition financially material in the imaginary of the accounting standard-setting required reframing the qualitative characteristics of the IASB’s conceptual framework - relevance, materiality, and faithful representation - that organize accounting rule making.

In this chapter, the analysis draws upon a diverse range of resources including audio and video materials, stakeholder interviews concerning engagements with the IASB on the pertinent issue, and a textual analysis of relevant documents. Detailed information on the primary sources and references utilized exclusively for this analysis can be found in Appendix 4 and 5.

7.1. Climate risk in testing the limits of financial reporting: a brief history

We should stay within our scope of providing decision-useful information on financial matters to investors. We should not try to branch out into the question of what do companies do to save the earth.

Chairman of the IASB 2019

To play their role effectively in this transition, financial markets need good quality, comparable information, above all the effects of sustainability related risks and opportunities for making investment decisions. [..]

My expectation is that second part of next year [2022] will be the year we have our first climate standard in the market.

Chairman of the IFRS Foundation 2021
The TCFD Task Force did not arrive to nowhere; instead, it entered an already existing, albeit chaotic, space of corporate reporting. As acknowledged by Carney in the Tragedy of the Horizon speech, enhancing disclosure around climate change wasn't a novel concern. At the time of the speech, to quote Carney, nearly 400 initiatives existed already to provide such information, a situation considered problematic. Therefore, from the onset, it was vital that the TCFD would not position itself as "just another framework" in an already "crowded and messy landscape" (Carney 2015). Rather, it was explicitly articulated that the Task Force's duty was to coordinate the landscape by providing it with a new orientation, given that "the existing surfeit of existing schemes and fragmented disclosures means a risk of getting lost in the right direction" (Carney 2015). As noted at the time, the TCFD's objective was to "bring the topic to a new audience" and select "what is relevant" from the existing frameworks to "bring it all together in a meaningful way" (TCFD Secretariat during a webinar 2016).

To understand how TCFD framework became critical in reframing the limits of the financial reporting, the first part of the chapter offers a brief history of climate risk as a reporting concern. In doing so, the goal is to show how climate risk has been instrumental in creating the seemingly distinct realms of financial and non-financial reporting – terms widely used to categorize and map out the broader corporate reporting landscape. Specifically, I discuss how the expansion of reporting into the "non-financial" and later "not-yet financial" realms led to a proliferation of various reporting initiatives in the early 2000s and 2010s failing to cross the limits safeguarding the boundaries of financial reporting. In doing so, I highlight how climate-related issues have been historically excluded by the IASB as a financial reporting concern due to an asserted lack of financial impact as recognized though the IFRS standards.

Through the scrutiny of previous efforts to position climate risk as a relevant financial reporting issue, I shed light on the qualitative limits of financial reporting as policed by the IASB. Specifically, I highlight how these boundaries facilitated the expansion of the non-financial reporting space, seen to exists outside the purview of the IASB. However, the objective here is not to chronicle the history of the various initiatives shaping the so-called non-financial reporting landscape with a focus on climate risk. Rather, I intend to illustrate how the concept of climate risk has been pivotal in probing the elusive boundaries between the seemingly separate financial and non-financial realms, where the financial reporting standard-setter (IASB), and the IFRS standards, have been pivotal in maintaining the concrete durability of these imagined boundaries.

7.1.1. Doubting materiality: The emergence of climate risk in making climate financially material

Early efforts to recognize climate change as a relevant corporate accountability and thus, a reporting issue called into question the very foundations of financial reporting – namely, its exclusive focus on financial concerns and the narrow interest to serve only the investors as the key stakeholder group. Along these lines, financial reporting, by its very definition, was viewed as inadequate for addressing other crucial, yet non-financial matters, such as climate change. This perceived insufficiency spurred the development of alternative and complementary
reporting practices designed to function *alongside* the more established practice of financial reporting to meet the information needs of *other* stakeholders.

The establishment of the Global Reporting Initiative (GRI) serves as a crucial signpost in creating an alternative and separate space within the reporting landscape. It can arguably be considered the first comprehensive attempt to broaden the scope of corporate reporting to include other than financial concerns. By explicitly focusing on wide range of non-financial concerns, addressing the information needs of diverse stakeholder groups, and considering an organization's impact on its external environment, GRI aimed to provide guidelines initially on environmental impact reporting. This mandate was later expanded to encompass guidelines regarding the organization's social, governance, and sustainability impacts on its external environment.

Accordingly, it is fair to argue that the emergence of the GRI marks the beginning of two distinct trajectories that have played a significant role in defining the corporate reporting landscape, a trend that remains prominent today. The first trajectory relates to issues located *outside* the realm of financial reporting, focusing on the wider impacts a company imparts on its external environment. In contrast, the second trajectory concentrates on issues deemed *financially material*, restricted within the boundaries of financial reporting. During this period, climate change was primarily categorized under the first category, recognized as an environmental and sustainability concern, and thereby classified as a non-financial matter.

Consequently, since GRI's inception, two distinct realms have come to shape and define the wider corporate reporting landscape: financial and non-financial reporting. While financial reporting remained the territory of the financial reporting standard setter, the nascent non-financial realm became a fertile ground for various reporting initiatives and entities to emerge. This development led to the emergence of a multitude of new corporate reporting objects, subjects, organizations, and rationales, all aimed at enhancing the relevance of the broader corporate reporting.

With the advent of the Kyoto Protocol and the subsequent implementation of the European Union Emissions Trading Scheme (EU ETS) in the early 2000s, the IASB found itself addressing the issue of climate change for the very first time. However, this engagement was rather limited, predominantly focusing on carbon emissions rights and accounting procedures for cap-and-trade emissions schemes. In conjunction with the inauguration of the EU ETS in 2005, the IASB's Interpretation Committee issued what was termed IFRIC 3 on Emission Rights, representing its first endeavor to establish official guidelines on emission accounting, which proposed that entities record the emission allowances allocated to them. Nevertheless, disagreements regarding the technical aspects of categorizing these allowances as assets and

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60 For the history of GRI, see for instance Brown, de Jong & Lessidrenska (2009) and Levy, Szejnwald Brown & de Jonh (2010). For the so-called “pre-history”, see Larrinaga & Bebbington (2021).

61 Non-financial reporting, as the chapter will make evident, does not have fixed definition but can be understood refereeing to other reporting forms excluded outside the core financial reporting. Hence, often other names are also used, such has sustainability, CSR, or environmental/social reporting – all often labeled under the broader term of non-financial reporting.
liabilities resulted in the IASB retracting the proposal within a few months, deeming the accounting for emission allowances not an immediate concern (International Accounting Standards Board 2005; Bebbington & Larrinaga-González 2008). Consequently, while the issue has periodically resurfaced on the IASB’s agenda, no official guidance has been issued since then, with climate-related issues consistently remaining outside the IASB’s purview.

However, the early 2000s saw an increasing momentum around the notion of climate risk. As subsequent discussions increasingly framed climate change as a potential financial risk for investors, it became progressively challenging to confine the issue strictly within the "non-financial" sphere. Yet, it did not wholly qualify within the criteria of financial reporting either. Despite this, a mounting number of advocates, recognizing investors as concerned group being affected by climate risk, started urging for the dissemination of climate-related information pertinent to investors. The aim was to render climate risks visible, measurable, and calculable thus enabling investors to manage these risks more effectively. As a result, the topic of climate risk began to blur the lines between the non-financial and financial realms.

As the momentum around climate risk intensified, so did the interest in defining the procedures that would facilitate disclosure of pertinent climate-related information for risk assessment. This burgeoning concern in turn fertilized a conducive environment for the emergence of various initiatives and organizations, each aiming to facilitate the disclosure of investor-relevant climate information. This rise in initiatives and organizations marked a significant shift towards recognizing climate risk as a central element in investor decision-making processes, accentuating the increasing acknowledgment of climate risk as not merely an environmental issue but also a financially material concern.

As various methods, standards, and frameworks around climate risk proliferated, a corresponding demand for the harmonization and standardization of practices began to emerge. The first formal attempt to standardize disclosure practices around climate risk from the investor's viewpoint took place in the mid-2000s. In 2005, a coalition of investors composed of several influential investor spokesperson organizations initiated the first Climate Risk Disclosure Initiative, aiming to develop a pioneering framework for climate risk disclosure. This initiative represented the initial steps in cultivating a cohesive stance among investors, who were now actively pursuing insights into the potential risks posed by climate change.

Two years later, the initiative led to the formation of a new entity: the Climate Disclosure Standards Board (CDSB). CDSB sought to establish investor-relevant accounting standards for climate by following the conceptual framework and structure of financial reporting standard-setters, such as the IASB. The first CDSB framework, released in 2010, focused on the risks and opportunities that climate change presented to an organization's strategy, financial performance,

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62 See chapter 5 for detailed discussion on making climate risk an investor concern.
64 For a more detailed history of CDSB, see for instance Pattberg (2017) and Thistlethwaite (2015).
and condition. Thus, by framing climate as a material concern for investors, the CDSB’s starting point was explicitly to categorize climate risk as financially material information.

On the other side of the Atlantic similar noteworthy developments were unfolding. After the Securities Exchange Commission’s (SEC) ruling in 2010 requesting publicly traded companies to disclose material risks to investors through their regular filing for the SEC, the Sustainability Accounting Standards Board (SASB) was established in 2011. Like CDSB echoing the IASB’s conceptual framework for financial reporting, SASB was established to mirror the framework of the US-based Financial Accounting Standards Board (FASB), with an intention that the SEC would eventually mandate also the SASB standards in the name of investor protection. Thus, the establishment of SASB marked another manifestation in the trajectory of climate risk reporting shifting towards the needs of the investor. Specifically, it aimed to guide companies in disclosing financially material sustainability information to their investors, with its materiality assessment based on the criteria of "interest to a reasonable investor" and "evidence of financial impact."  

However, while the work of initiatives such as the CDSB and SASB was justified based on investor relevance, they did not explicitly challenge the current financial reporting standards, such as the IFRS standards established by the IASB. Instead, climate risk was seen as one potential valuation variable among many others. As a result, while some climate-related issues were now deemed significant to investors, their financial effects, as understood through financial reporting standards, were located in the uncertain future with possible value effects. Hence, the disclosure of climate risk was envisioned to occur outside the realm of financial reporting, climate risk remaining outside the financial materiality lens of the IASB.

7.1.2. Questioning valuation relevance: From present values to drivers of value creation

In the late 2000s and early 2010s, climate risk, with its potential future value effects, was increasingly recognized as a material concern. Yet it didn't fit into the financial reporting realm

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65 The establishment of the SASB has attracted surprisingly little attention, given the significant forces and figures instrumental in its foundation. Initially aimed at the US markets, its creation was significantly influenced by anticipations of the SEC eventually mandating such disclosures, a move aimed to bolster investor protection in the capital markets following its 2010 ruling. The board of directors has featured prominent individuals such as Michael Bloomberg (also the Chairman of the TCFD) and Mary Schapiro (the co-chair of TCFD and former chairperson of the SEC). Additionally, it has historically included representatives from significant US institutions, including the CEO of Morgan Stanley and the former chair of FASB. Its primary donor has been Bloomberg Philanthropies, with its Sustainable Finance Portfolio substantially financing the establishment of the SASB (similarly to the TCFD). Moreover, individuals linked with Bloomberg and the TCFD, like Michael Bloomberg, Mary Schapiro, and Curtis Ravenel, contributed personal funds to support the organization in its early days. Other major donors include the Big 4 accounting firms and foundations such as the Rockefeller Foundation, and the Betty and Moore and Ford Foundations.

66 In essence, the foundational concept of the SASB posited that the materiality of a specific sustainability topic should be assessed based on the "evidence of interest from the perspective of a reasonable investor" (e.g., financial risk, regulatory drivers, industry norms, social trends, opportunities) coupled with an evaluation of the "potential impact of sustainability issues on a company's financial condition or operating performance." Additionally, consideration should be given to "whether the management (or mismanagement) of the topic has the potential to materially affect a company's valuation, or its operational or financial performance" (e.g., revenue/costs, assets/liabilities, cost of capital/risk profile).
as understood by the IASB. This was due to perceiving financial effects being located in the future and hence, not affecting the preparation of financial reports understood to account for valuation effects in the here and now. However, with growing acknowledgment of climate change as a potential future value driver, it was asserted that investors needed to understand its implications for assessing a company's fundamental value conditions. This resulted in an ambiguous state for climate risk, sparking a new debate about the relevance and temporal scope of the information reported in financial statements.

Around 2010, other issues started challenging the limits of financial reporting, raising questions about the valuation relevance of the information being prepared under the current accounting standards. Climate risk was prominently among these issues, increasingly perceived to have potential valuation implications, paralleled by other concerns such as those surrounding the intangibles. However, these concerns were understood to escape the temporal boundaries of financial reporting standards due to their future-oriented nature, residing in a somewhat abstract field of possibilities that remained unquantifiable. Yet, a somewhat shared sentiment emerged among many stakeholders suggesting that various material issues, especially those related to intangible assets and climate, were not adequately represented through financial reporting. Even if such issues were perceived difficult to quantify in the present, they were seen as critical factors underpinning market valuations. Consequently, there was growing concern that these valuation-relevant issues, including climate risk, were escaping financial statements, despite their significant influence on a company's market value.

The sentiment is captured by an accountancy professional in close contact with the IASB and IFRS Foundation at the time,

> We have done a number of papers and we said, you know, there is a problem with accounting in the sense that the financial statements only cover, which are 20 percent of the balance of the market Capitalisation of companies and 80 percent is kind of unaccounted for. And investors just got that information from all kinds of places, but not from a central disclosure regime that companies have to comply with.

(spokesperson for accounting profession/interview)

As the discourse around the various fundamental, yet unaccounted, value drivers grew in importance, there was an increasing need to make them visible in financial reports. As a result, a new qualitative reporting space within financial reporting began to evolve, aiming to account for these value drivers that were intrinsically challenging to quantify. This led to the development of an additional space within the financial reporting realm, focusing on qualitative narrative reporting. Particularly in Europe, the early 2010s saw the rise of several initiatives advocating for more qualitative and narrative disclosure forms. These initiatives aimed to shed light on the "long-term prospects of the business" and to "provide a broader picture of shareholder value.

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67 See, for instance the UK Corporate Governance Code (2010) and the UK Company Act (2006, 2013) and their focus on strategic narrative reporting, and the EU Non-Financial Reporting Initiative (2014)
creation in their annual reports" (Chapman 2014, p.1). This evolution in reporting sought to ensure that these crucial, yet elusive factors didn't escape the scrutiny of financial reporting.

Several initiatives emerged in response to critiques about the value relevance of financial reporting.\(^{68}\) As a result, an alternative framework began to take shape, positioning that financial reporting should encompass factors affecting long-term value creation, and not merely the focus on the historical accounting of profits, costs, and results. The establishment of the Integrated Reporting Council (IIRC) was particularly pivotal in advancing the notion that reporting should serve as a vehicle to communicate a company's value creation process and the sources of value over time.\(^{69}\) When the IIRC was first established, the primary focus of reporting remained on communicating results and profits, as the now prevalent term of "long-term value creation" was still in its nascent stage within the context of financial reporting. As noted by one of the founding figures of the IIRC:

> And if you break that down the communication is that it's not just accounting but it's more than that but there is, it's a narrative, and it's a narrative that has been formulated from the board rather than necessarily from regulation, okey. So that's the communicating piece. Then value creation piece is really a term, that wasn't really used back in 2011 where people were talking about results and profit rather than value.

(standard-setter organization/interview)

In retrospect, the IIRC played a pivotal role in establishing a new discourse around corporate financial reporting in the context of long-term value creation. It did so by bridging the gap between financial value drivers and their not-yet-financial impacts, with series of conceptual innovations necessary to account for these temporal dynamics of financial value. In this process, reporting transformed into a tool for articulating a company's value creation narrative, amplified by forward-looking storytelling about the business model, corporate strategy, and governance issues - elements fundamental to the conditions underpinning financial value creation that had previously escaped reporting.

While the IIRC is often thought to have originated from and operated within the realm of "non-financial" or "sustainability reporting", it more accurately played a crucial role in connecting various not-yet-financial issues to traditional financial reporting, through the lens of long-term value creation. Although the strategic focus of the IIRC was not entirely solidified in its early days\(^{70}\), it is fair to argue that the IIRC's vision has been centered on promoting a reporting form that illuminates how an organization's strategy, governance, performance, and outlook contribute to short-, medium-, and long-term financial value creation. In doing so, it has made its existence dependent on the figure of the long-term investor, who recognizes the role of

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\(^{68}\) See, for instance the much-cited report of Core & More by the Accountancy Europe (former FEE) that was used to structure much of the stakeholder discussions with policymakers and standard-setters at the time.

\(^{69}\) For a review on Integrated reporting related research, see, for instance Rinaldi, Unerman & de Villiers 2018.

\(^{70}\) See, for instance, Flower (2015).
various types of capitals in influencing an organization's ability to generate long-term financial value.

However, it's important to note that within the framework of IIRC, climate was merely one of many factors with potential value implications. The first Integrated Reporting Prototype Framework, released in 2013, already suggested that companies should report on the "full range of factors that materially affect an organization's ability to create and preserve value over time." Nevertheless, while the IIRC was not explicitly centered on climate issues and their financial impacts, it was instrumental in establishing the foundational infrastructure through which these impacts could materialize and occur. Essentially, climate change was one issue among many that could trigger value effects when connected to and prompted by other things.

In a sense, by introducing a new conceptual framework, the Integrated Reporting Framework established the format for narrative reporting through which companies could tell their value creation story to providers of financial capital, with a forward-looking emphasis. In other words, the IIRC established a method to associate some topical issues, like climate change, if deemed material through other mechanisms and external sources (i.e., SASB materiality metrics, investor concerns, etc.) to financial reporting. Like the CDSB framework, climate change served as one narrative device among many within the broader story of value creation now to be told through reporting:

Like the CDSB Framework, the IIRC Framework provides that disclosures should be limited to those that have a material effect on the ability of the organization to create value over time.

(Promethium Carbon & Climate Disclosure Standards Board 2013, p.2)

Nevertheless, the increasing momentum around narrative reporting with focus on financial value creation wasn't enough to challenge the standardized norms of corporate financial reporting as understood through IASB. From the IASB's perspective, Integrated Reporting, and other organizations within the "wider reporting landscape" remained confined to the realm of narrative reporting, bearing no actual financial value effects as recognized under the IFRS standards. Despite numerous attempts by influential accounting professional groups to sway the IASB, the financial reporting standard-setter maintained its reluctance to incorporate these new reporting innovations into its standard-setting work.

We you know, we got to talk at the IFRS advisory council about our ideas. And we were invited by the IASB [to present our ideas] And we did that presentation at the end of autumn [2015] in a private meeting.

Now as [our report on broader corporate reporting] was out already and [IASB chair], we were pushing and saying, look at the UK now has a strategic report. Why don't you do something internationally? And [IASB chair] was, first of all, dismissive. You know, listening politely, but saying it's not for us.
And so when we were finished he said no. Great, great stuff, but I don't think this is for us for the next 20 years. This is for the future. And we started with, okay, well, but, you know, financial statements only tell a small part of the story, this is actually to supplement it with more information. And so there was a kind of a polite reception, but the idea was actually dismissed.

(spokesperson for accounting profession/interview)

7.1.3. Challenging the fair presentation: questioning the numbers and future of stranding assets

Moving into the early 2010s, none of the reporting initiatives with focus on climate risks had explicitly called into question the existing financial reporting standards. While they framed climate as a financially material issue, none explicitly questioned the reliability of the figures and values represented in the audited financial statements as produced by current accounting standards. Instead, climate remained a topic within the scope of narrative reporting that could present value-relevant qualitative disclosure without necessarily influencing present valuations as recorded through core financial statements. As a result, while climate started to be perceived as a significant financial issue, its actual valuation effects were still thought to escape the actual financial statements, appearing to reside in the distant future rather than the present moment.

The stranded asset argument, which ultimately highlighted climate risk as an area of concern for policymakers and the Financial Stability Board (FSB), as discussed in Chapter 5, also played a key role in challenging a fundamental quality of financial reporting – their faithful representation. In other words, the stranded asset argument was not only instrumental in engaging the FSB and the Bank of England to address the issue of climate change but also framed it as a significant concern for the financial reporting accounting standard-setter. For the accounting standard-setter, the message at the time was unambiguous; climate risk is a material valuation issue that affects preparation of the current financial statements if the world is to remain within the carbon budget as committed in the climate negotiations. As one of the Carbon Tracker report authors noted:

We were interested in talking to the International Accounting Standards Board about climate risk, and that’s the reason the Carbon Tracker has had an accounting and disclosure team from the beginning… Because it’s always about what’s a fair and honest view on how a company presents itself to its shareholders and its creditors […] because the argument was, if you can’t burn half the reserves, what is the accounting treatment of the reserves you can’t burn? Write them down, do you depreciate them or do carry them at book value?

Subsequently, the argument about stranded assets was not only aimed at UK regulators and policymakers but also targeted the accounting standard-setter. This became increasingly apparent in the ensuing collaborations focused on this articulated concern. For instance, in 2013,

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71 Interview with Carbon Tracker report author; see chapter 5 for more detailed discussion about the Carbon Tracker report and issue of carbon bubble and stranded assets.
Carbon Tracker, in collaboration with ACCA (Association of Chartered Certified Accountant & Carbon Tracker Initiative 2013) released a report that explicitly stressed that the disconnect between various emerging climate-related issues and the preparation of financial reports was problematic should the governments enact the transition to a low-carbon.

Recently, we teamed up with the ACCA to explore what the changing energy system might mean for how the reserves of coal, oil, and gas are treated in financial reporting. This feeds into a growing debate around the potential of stranded assets, which may not be ultimately bearable to provide the revenues the market currently assumes that they will. The research was designed to provide the baseline for current standards and practices in this area and identify some areas for further investigation […]

[…] A group of standards are emerging around carbon reporting and integrated reporting yet rarely are these mandatory requirements which are seen material to financial reporting.

(Leaton 2013, video)²²

The report played a crucial role in highlighting how climate transition might impact financial reporting through existing standards. Specifically, it pointed out the existing disconnection between the qualitative narrative disclosures and the numbers reported in the financial statements. Aligning with the stranded assets argument, it was argued that the narratives currently provided in reports were inconsistent with the actual reported numbers. This inconsistency was evident in, for instance, the valuation of carbon-intensive assets or expenditures presumed to drive the necessary innovations in a world influenced by climate change. Additionally, the report suggested ways in which climate-related disclosures might influence the preparation of financial statements. For instance, it stressed the significance of forward-looking capital expenditure to better understand a company’s conditions for value creation in the face of transition.

We would also like to see companies to discuss the implications of this data when explaining their capital expenditure strategy and risks to their business model. This would then link the numbers to the narrative and would demonstrate that they are actively managing the issue.

The financial reporting bodies can also play role by involving their standards to address the carbon viability of reserves. We have identified couple of areas, such as the IAS36 of fair valuation approaches, which may be fruitful. However, we would welcome your views on the best way in addressing these issues.

[…] We are essentially asking for forward-looking information which explains what happens if the future does not repeat the past. Given the

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revolution that is occurring in our energy systems it’s clear that on one way or the other, the future will not repeat the past. We therefore think it’s important the world’s accounting standards and financial regulation, are ready to deal with that.

(Leaton 2013, video)

In a subsequent report published a year later, Carbon Tracker, in collaboration with the CDSB, explicitly argued that the current accounting treatment left what they termed as “Carbon Asset Stranding Risk” invisible and off-balance sheet. This omission, they claimed, constituted a source of a new systemic financial risk.

Preserving the status quo whereby fossil fuel energy resources are sought, invested in, valued and listed on stock exchanges threatens not just environmental but financial and economic disaster. Given that the objective of financial reporting is “to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity” and that annual reports, at least in the UK, must be fair, balanced and understandable, it is time for reporting standards to be updated to require disclosures relating to [Carbon Asset Stranding Risk]

(Climate Disclosure Standards Board 2014, p.6)

Despite facing such confrontations, the IASB maintained a deliberate distance from climate issues, even amidst active engagement from various constituents. Reasons for that were said to be many, but main among them was a reluctance to overstep the boundaries of existing financial reporting. The IASB continuously affirmed that addressing climate issues would mean exceeding their mandate and jurisdiction. As continuously repeated, IASB’s focus was on serving global investors and capital markets, and climate-related matters were considered part of the political domain. As an organization, the IASB had finally gained some stability, and stable funding, having established itself within the remit and due process focused purely on financial reporting for global capital markets.

[before COP21 in 2015), IASB had been approached on that [the issue of climate]. And I think, first of all, they were defensive. The IASB felt that they had done a brilliant job of establishing themselves in 140 countries, and they needed to be really, really careful that they didn’t move beyond their existing remit. Because if they did, they could lose what they had managed to achieve.

And then, insofar as campaigners were talking to them, what they were asking them for was a new standard on climate. And they [IASB] would say – “well if you want to do a new standard on climate, we have got a process for that. It lasts about 10 to 15 years. So why don’t you suggest that next time that we draw up our five-year plan and we’ll think about it. But you know, some people are wanting to talk about leasing as well”. And so, people withdrew from that.
A similar sentiment was echoed by others, noting that climate issues were simply seen as beyond the IASB's remit:

You know, in one of those meetings where I said, there were fists landing on the table that, you know, some of those people [IASB committee members], they were personally starting to warm up to this. And, I recall we had discussions at the committee. Then, you know, you have a break and have some discussions, and some would say - my children, they talk about this, you know, they say that daddy, you don't understand that the climate is going down the drain and the temperature will rise, and you don't do anything about it. And you don't even realize. And now they say that now you guys [accounting profession] start to think about this as well. And, you know, they start to, like, warm up to it and they start to see it, but then they couldn't link it to what they were doing. They were like, no, this has nothing to do with us.

As a result, in the period leading up to COP 21 in Paris, the scope of climate reporting had expanded significantly, but the core accounting standards, as policed by the IASB, had largely remained unaffected by the issue. As remarked by a person closely associated with the IASB at the time:

By Paris [COP21], there is no serious initiative to change financial reporting. […] it is only in the past two or three years that we turned and said, look, the most fundamental reporting, and the information that has most impact on company behavior is the accounts, not the frontline narrative. So while the frontline narrative reporting is all very well, and we support all of those things, you have to do the accounts first. But that was left aside, and it was left aside, because it looked difficult. It looked like it was going to take a long time to do […] The narrative reporting was easier to do. You can get lots of support for it. Of course, the auditors and the accountants were delighted that somebody would like to report something else. This wasn't an awkward conversation about, that if you're going to have to close down your oil well by 2050 you can't possibly value it that way. I know I signed off the accounts last year, but I'm not doing it this year.

As remarked by a person closely associated with the IASB at the time:

7.2. TCFD in reconfiguring the qualitative limits of financial reporting

The brief history outlined above illustrates that up until the Paris Climate Agreement and the establishment of the TCFD, the climate issue was firmly kept outside the limits of financial reporting standards. While climate was increasingly recognized as a financially material issue
that warranted investor scrutiny, it was perceived to have no substantive impact on accounting standards, or the production of financial statements as safeguarded by the IASB and the IFRS standards.

This situation, however, was set to change in the coming years. The remainder of this chapter seeks to describe how the TCFD framework and its focus on transition risks became instrumental in translating climate transition into a relevant accounting issue for the IASB. By doing so, it challenged the qualitative limits of financial reporting—relevance, materiality, and faithful representation—that organize accounting rulemaking by framing transition as an economic phenomenon in line with the IASB’s conceptual framework. The remaining sections describe three critical framing operations, enabled through the TCFD framework, that ultimately enabled articulating the issue of transition as a present financial concern within the confines of existing financial reporting standards.

7.2.1. Restoring relevance: making climate transition as part of financial value creation narratives

Constituting the broader financial reporting

In late 2016, the burgeoning "wider reporting space," as perceived by the IASB, exerted enough pressure for the standard-setting body to officially declare its stance in relation to this expanding landscape. As an initial response, the IFRS Foundation launched a preliminary survey on "wider corporate reporting" landscape. (Loweth 2017a, 2017b) This was aimed at briefing the IASB Board members on the subject as the IASB faced growing demands to formally articulate how its standards relate to the increasing amount of other reporting frameworks and standards. At the time, it was observed that "wider corporate reporting is now firmly on the regulatory and policy-making radar screen" and the Board was encouraged to introspect its own position and role as part of the broader reporting landscape (Loweth 2017b).

In particular, the issue of climate reporting was the driving force behind the pressure. The report resulting from the initial survey noted that climate change was ascending to be the main topic to hit the G20 agenda, of which the establishment of the TCFD Task Force and its recommendations was considered a manifestation. As the TCFD recommendations gathered increasing acceptance and endorsement from a multitude of actors, the IASB found itself prompted to articulate how the usage of IFRS standards might be influenced by the TCFD recommendations. After all, despite being a private standard-setter, the IASB nonetheless represents one of the 12 critical standards expected to form the infrastructure for a robust financial system, as defined by the Financial Stability Board. As the TCFD, established under the authority of the FSB, explicitly aimed to address the disclosure of financially relevant climate information, the IASB was left with little choice but to take a stand on the issue.

Consequently, a rising number of speeches delivered by the IASB, its members or other spokespersons for the IFRS Foundation started to regularly include the topic of climate change
The shift in openness towards the issue was observed by an interviewee in close contact with the IASB’s chair.

[the chair of the IASB] goes to these FSB meetings, and he sensed that just all of a sudden climate had become an issue and that, you know, they were going to latch onto that. So, you could just see the sudden shift. Because the IASB is a very conservative place […] So when the FSB started to talk about, it all started to click and [the chair of the IABS] to think, well, maybe this is a subject that we need to do something with.

(spokesperson for accounting profession/interview)

Nonetheless, the Board was quick to conclude that the TCFD recommendations do not affect the IFRS standards as such. Instead, these recommendations were said to pertain to qualitative disclosures currently prepared outside of the financial statements. In the first official IASB meeting to discuss the influence of the TCFD recommendations on IFRS standards, the board members concluded that the TCFD recommendations primarily concern the preparation of narrative reporting and have less bearing on actual accounting and the generation of financial statements. As noted by the report author during the IASB Board meeting:

The TCFD recommendations that came out in December last year, seemed to focus, from my perspective, much more on disclosures in the front end, if I can put it that way, in management commentary and similar parts of the annual report, rather than the accounting per say. Accounting considerations merit two paragraphs in the report where they refer to, in this Board's terms. IAS37 on provisions of IAS36 on impairment, but they do not seem to criticize, or make any comments on either.

And you could argue that if there are climate related issues that hit the accounting, then those two standards and the framework is generic enough for them to be taken into account. So, the focus is much more on disclosures that look at four areas governance strategy, risk management and metrics and targets.

(Report author at the IASB Board meeting March 2017, meeting audio)

As a result of the meeting, the board adopted a preliminary position on the issue: while the growing momentum around the TCFD disclosures underscored that climate had now become a material concern for investors, the information requested was seen to be related to qualitative disclosures encompassing governance, strategy, and business model reporting. This perspective categorized climate-related information as part of the front-end narrative reporting in annual reports, which did not affect the production of the financial statements. Consequently, climate considerations were not deemed to influence the use of actual IFRS standards and the financial statements. Instead, climate-related issues were situated in the qualitative domain of narrative reporting, which, according to the members of the Board, had recently become “chaotic and

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73 See, for instance, IASB chair speeches from April 2017, September 2017, and November 2017 (Hoogervorst 2017a, b, c).
confusing” due to the proliferation of other reporting standards and frameworks focusing on various "non-financial" matters. As articulated by the Chair of the board, if the IASB was to assume any role in the context of the "wider reporting space", it would be to bring clarity to the somewhat turbulent narrative reporting space currently occupied by numerous organizations providing standards and guidelines for reporting outside the financial statements:

I am not at all worried about financial information losing its relevance. But I think the packaging will probably change in the future. And I think we have to be part of that creation.

You know, if there is anything that is not sustainable, is the chaos that there is now in the sustainability reporting, in a wider corporate reporting at the moment […] So I am strongly convinced that we need to do something… not perfectly clear to me what exactly the role is that we should follow. And I am also not clear what the end product could look like if there is an end product. But I have become convinced we need to play more effective role.

(Chair at the IASB Board meeting March 2017, meeting audio)

Consequently, the Board concurred that it should play a role in safeguarding the relevance and quality of narrative reporting in the interest of protecting the investor.

our area in [the reporting landscape] is very clear, our goal is to protect investors. And actually, if some of the corporate reporting is misleading investors, then we need to consider how we can protect [investors] from [misleading] corporate reporting.

(Board member at the IASB Board meeting March 2017, meeting audio)

With a goal to clarify the existing landscape of broader corporate reporting and its relation to IFRS standards, for the first time, the IASB explicitly and formally entered into a somewhat shared space with the other reporting bodies. By opening this shared space, the IASB needed to articulate a cohesive framework that could bind this new territory together. In the process, a somewhat distinct realm of "broader financial reporting" started to take shape. Specifically, the issue of climate becomes considered part of the “broader financial reporting,” where also the questions related to the TCFD could be addressed, leaving the production of financial statements unaffected.
The revision of the Management Commentary: Financial reporting for the long-term value creation

The IASB's official response to the identified problem of messy landscape came in November 2017, marking the start of a new phase. To navigate the disorder in the narrative reporting space, it was formally proposed that the IASB should revise and update its Management Commentary Practice Statement (MCPS), which provides guidelines for the generation of narrative reporting within the scope of financial reporting. (Loweth & Chapman 2017a, b)
To this end, the Board underscored the role of the MCPS as a mechanism that facilitates the disclosure of financially material aspects as part of broader financial reporting. In doing so, the Board began to formally discuss financial materiality in relation to a new conceptual imaginary; the idea of long-term value creation to be able to consider things fundamental to the company's long-term value perspective even if such aspects would not yet have effect on the core financial statements as prepared by the IFRS standards. Accordingly, the Board formally acknowledged that climate might be one of those issues that have financial value relevance that might not yet have been reflected in the financial statements, due to such effects being located in the future. Notably, this shift in discourse to situate financial reporting in the context of long-term value creation affected the decision to revise the MCPS.

Our core business, as set out in our Conceptual Framework, is the provision of information that is useful for investors and other providers of capital when they make investment decisions. This will also be the case with our work on wider corporate reporting. We are venturing beyond the traditional financial statements, but not very far. We have decided to update our version of the MD&A—our non-mandatory Practice Statement on Management Commentary.

We are trying to illustrate how management commentary can clearly communicate the sources of a company’s long-term value creation and link the traditional financial statements with other information included within the financial report. Because we have decided to keep our focus on investors, we are not looking at information needs that come from a broader group of stakeholders—or that may be relevant from a broader public policy perspective, such as metrics for measuring sustainability and climate reporting.

(Speech by IFRS Trustees Vice-Chair in December 2017, Lloyd 2017)

The MCPS revision process officially commenced in March 2018, with explicit focus on the idea of long-term value creation. For instance, the initial paper stating the objectives for the revision problematized the fact that current financial reporting does not account for the “external trends, including systemic matters such as those identified by the Financial Stability Board’s Task Force on Climate Change irrespective of whether they are expected to crystallize in the financial statements in the short term” (Tabone & Chapman 2018, p. 3). Consequently, several areas for improvement were listed, including a "better description of the entity’s business model, value creation," "better discussion of key risks and mitigation of those risks," and "insights into progress towards longer-term goals" (Ibid, p.4). The paper also flagged the issue of the time-horizon employed in reporting as problematic.

Therefore, the revision of the MCPS focused on providing better guidance on how to disclose information that would provide “insight into the company’s strategy for creating shareholder value over time, its progress in implementing it, and the potential impact on future financial performance not yet captured by the financial statements” (presentation at IASB meeting March 2018, p.8) It was emphasized that the revision would focus on updating concepts such as long-
term value creation and business model reporting, to allow telling the company’s unique financial value creation story.

Presentation slide at IASB meeting March 2018

In practice, the MCPS was aimed for clarifying the elusive boundaries of the financial and non-financial information. When explicitly asked how the management practice report aligns with other non-financial information, the chairman of the IASB clearly articulated that reporting, as guided by the MCPS, *is not* about non-financial information but rather what he preferred to call "broader financial information" *not yet* adequately captured in the financial statements due to its more forward-looking nature (Bruce & Hoogervorst, 2019)\(^74\). For instance, if the information exhibited by the TCFD recommendations is deemed material for the investors, such qualitative information is said to have place as part of broader financial reporting as recognized through the MCPS.

Ultimately, the decision to revise and update the Management Commentary Practice Statement was justified due to "the increased interest in narrative reporting, both from investors and creditors, and from other users of financial reports [who] increasingly ask for information that complements an entity’s financial statements to provide more insight into its long-term prospects" (Exposure draft on management commentary. Basis for conclusion 2021). This narrative to be now prepared in line with the MCPS designated the space for the climate-related

information, as their financial effects were considered to be in the future not affecting present valuations.

It is more for the problems that are further in the future, which don’t have immediate financial effects right now. The financial statements are essentially backward looking, not so much forward looking and then you need other instruments of providing information to the markets.

And that’s why we have restarted working on what we call the management commentary practice statement, practically a guide to companies on how to write the commentary to financial statements, how to write the annual report. That is a good vehicle for focusing on financial risks that are not yet captured in the financial statements but that may enter the financial statements at the later date, also climate related risks.

(Interview with the IASB Chairman, Bruce & Hoogervorst 2019)

In such context, climate transition is characterized as a valuation horizon that does impact a company's long-term value creation yet leaves the actual financial statements unaffected.

The financial statements will always remain an important reality check. During the Dot-Com Bubble at the beginning of the century, the increasingly absurd price-earnings ratios of Internet start-ups served to feed healthy skepticism that later turned out to be justified. These days, similar concerns are arising about the valuations of the Silicon Valley tech giants and short sellers are getting more aggressive by the day. Ultimately, all value creation has to pass through the financial statements. If it takes too long, the income statement will indicate that the intangibles of a company may have evaporated in thin air, possibly on the trajectory to planet Mars. […]

[…] It is also clear that there is an increasing awareness that environmental and societal restrictions have an impact on long-term value creation. The establishment by the Financial Stability Board of the Task Force on Climate-related Financial Disclosures is a notable example of this trend.

(Speech by IASB chairman in September 2017, Hoogervorst 2017a)

In May 2021, the IASB unveiled its proposal for the revised practice statement that now explicitly focused on the concept of value creation with said purpose to provide "insight into factors that could affect the entity's ability to create value and generate cash flows across all time horizons, including the long term" (Exposure draft on management commentary 2021, p.23). As such, the practice statement becomes something that the Board "envisions entities could apply in conjunction with narrative reporting requirements or guidelines issued by other bodies" who focus financially material issues with possible future value effects. This placed the MCPS as "an appropriate location for information about environmental and social matters that is
material to investors and creditors” (Ibid, p.6) that enables companies to tell "their unique stories, focusing on the distinct factors that determine their success." (Hoogervorst 2021) 

7.2.2. Re-instating faithful representation: TCFD and the reasonable expectations of the investor

Safeguarding numbers: constituting transition as an economic phenomenon

While the increased focus on narrative reporting left the core financial statements initially unaffected, the TCFD framework eventually became instrumental in further questioning the credibility of those statements. As momentum grew around the TCFD-aligned disclosure, a number of actors began to argue that there was a disconnection between the narrative qualitative information disclosed as part of the annual reports and the numbers reported in the financial statements. However, while the TCFD provided a critical grounding point for such an argument, it was insufficient alone to provoke change in the production of financial statements. Instead, to qualify climate as a valuation issue affecting financial statements required further organizing efforts.

As the IASB remained firm in its refusal to address climate as a specific topic on its standard-setting agenda, an alternative solution emerged. To make climate relevant for the IFRS standards, it became necessary to articulate an interpretation of the existing standards concerning the issue of climate.

And [IASB member] said, do not go to the IASB asking for a new standard, ask for an interpretation of the standard, and then make sure that that goes through all of the mechanisms that the big four, big six, you have to call them accountants have got. So is it in their audit practice standards and their training. Is it, is it in that, Is it in all of those sorts of things? And, you know, if you're looking at an asset life of a coal fire power station, it has to be, and the climate is taken into account when you do that. And that's what you should press for.

(spokesperson for investor group/interview)

In 2018, a seminal paper was published by the Australian Accounting Standards Board and Australian Auditing and Assurance Standards Board, outlining how existing accounting standards relate to the issue of climate change. This report became critical because, for the first time, an accounting standard-setter formally articulated how climate risk might be material to the production of financial statements, beyond just narrative reporting. Drawing on the TCFD as a reference point, the report explicitly argued that the revised materiality guidance provided by both the AASB and IASB would lead to the interpretation that some climate risk-related information should indeed "be reflected within the financial statements" (p.6).

A high-level review of climate related content in 2018 annual reports has shown that climate related risk is being considered. However, the

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financial statements do not reflect this. The majority of climate-related disclosures are currently made in the broader annual report, primarily in the director’s report and corporate governance statement and not in the financial statements. For some entities, applying the materiality definition and the principles in APS 2 would result in some of this information being reflected within the financial statements.

(Australian Accounting Standards Borad & Australian Auditing and Assurance Standards Board 2018, p.6)

In November 2019, the IASB, explicitly "inspired by work from the Australian Accounting Standards Board (AASB) and Audit and Assurance Board (AAASB)" (Anderson 2019, p.1), provided its first formal articulation on how its current standards relate to the issue of climate. The so-called in-brief paper marked the first time the existing IFRS standards were explicitly described as a framework to reflect climate-related issues. This paper was produced in response to "investors and other stakeholders" who were "increasingly asking the IASB why [climate change] is not mentioned explicitly in IFRS Standards," while making an explicit reference to the TCFD as a sign of such growing interest (Anderson 2020). By specifically echoing the arguments presented in the Australian paper, the IASB’s document argued that even if the IFRS standards do not make explicit reference to the topic of climate change, they are still fit for purpose in addressing the issue.

Given investor statements on the importance of climate-related risks to their decision-making, the implication of the materiality definition and the [Materiality] Practice Statement is that companies may need to consider such risks in the context of their financial statements rather than solely as a matter of corporate-social-responsibility reporting.

(Anderson 2019, p.3)

As noted by a Board member, the issue of climate now affects not only the MCPS or the narrative part of annual reports but also the very IFRS standards used to produce financial statements.

It is worth emphasizing that these are IFRS disclosure requirements. So, reporting this information outside the financial statements, whether it is the management commentary or sustainability report, is not a substitute for including the requirements in the financial statements themselves.

(Anderson 2020)

At first, the reception of the novel interpretation was controversial and widely ignored, met with skepticism or resistance by those who questioned its premises or implications.

The initial response, I remember it, because we put together a bunch of accountants at the ICAW in the UK. Oh, this is just a board member

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opinion. And so, we responded to that rather robustly, in saying, you want to do that, you want to treat it that way, well, we'll see you in court, sort of a response.

(spokesperson for investor group/interview)

However, despite some resistance, the paper became a catalyst for further organizing around the issue. It was widely referenced in speeches, webinars, and debates, all making the case that climate considerations should be factored into the preparation of financial statements. By the end of 2020, what started as a mere "opinion piece" was translated into official communication material as part of the IASB's formal educational resources serving to "support the consistent application of the requirements of IFRS standards". (IFRS Foundation 2020b)

As a result, a growing number of webinars and speeches began to reiterate the view that climate was no longer merely a topic for discussion within narrative reports, but rather a critical issue to be considered when preparing financial statements. The change in tone became apparent, even in the stance of the Chair of the IASB.

At first sight, one might think that financial reporting, as it is, has no relationship with sustainability issues at all. None of our Standards even mention ‘climate change’ or ‘sustainability’. Moreover, financial reporting merely seeks to describe economic reality as it is, giving equity investors and creditors decision-useful information. IFRS Standards do not seek to move those decisions in a particular direction, such as achieving a more sustainable economy. In fact, we very much emphasize the importance of neutrality of information.

However, my fellow Board Member Nick Anderson—inspired by work by the Australian accounting and auditing standards boards—recently published an excellent article which makes crystal clear that this seeming disconnect between IFRS Standards and sustainability issues is deceptive. The principle-based approach of IFRS Standards means that issues that relate to, for example, climate change could be captured by our requirements, both in terms of recognition and measurement and disclosure.

(Hoogervorst 2020)

Consequently, it became widely acknowledged that even though IFRS standards do not make explicit reference to the issue of climate, the existing standards are still considered fit for addressing the matter. As noted by a Board member during a webinar titled accounting for climate:

So, although the worlds cannot be found in our requirements, it does not mean that IFRS standards do not address climate risk. IFRS standards do address climate risk.
So, to bridge this communication gap we published an article last year highlighting exactly how our standards could be applicable to climate risk.

(Anderson 2020)

IAS1 and the reasonable expectations of the reporting user
Arguably, however, there is a difference between stating that the IFRS standards are suitable for addressing climate-related issues and actually identifying the concrete mechanisms through which these issues can manifest as tangible effects in financial statements. Following the acknowledgment of the formal relevance of IFRS standards in accounting for climate issues, subsequent work focused on elucidating how climate can impact the reported numbers in financial statements. In this juncture, the IAS1 standard - the overarching requisites for the presentation of financial statements encompassing guidelines for their structure and defining the minimum requisites for their content - became instrumental in framing climate transition as an issue to be considered in the formulation of financial statements.

Ti framing was afforded by three qualities of IAS1. First, it constituted an overriding standard through which certain issues can become relevant to consider when preparing financial statements, even when such issues are not specified by individual IFRS standards. Specifically, the standard enabled the framing of certain events as economic—such as the transition to a low-carbon economy thus prompting the requirement for disclosure within the core financial statements. Consequently, climate transition was framed as a distinct, impactful economic phenomenon, necessitating consideration when preparing financial statements. This in turn afforded means to begin discussing other various transition-related issues as part of financial reporting, such as those suggested by the TCFD recommendations. As noted by a Board member during a webinar:
Under IFRS, a company must consider whether to provide information not required by specific standards, if that information is necessary for primary users, investors, and creditors, to understand the impact of particular transactions, other events and conditions on the financial statements. This is all about ensuring that the users receive material information – the information that really helps to understand the financial statements.

(Anderson 2020)

Second, the IAS1 enabled speaking in the name of the “reasonable investor” and his expectations. In practice, the popularity of the TCFD was used to argue that climate is now under the scrutiny of such an investor now warranting disclosure. Accordingly, climate transition becomes framed as an issue of direct relevance to a reasonable investor even if not required by specific IFRS standards explicitly. As pointed out by a board member:

As set out in IAS 1, information is material if omitting, misstating, or obscuring it could reasonably be expected to influence decisions that the primary users of financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity […]

(Anderson 2020)

Finally, in alignment with the frameworks delineated by IAS 1, the transition is portrayed as a qualitative concern of material significance for the nature of the reported item, irrespective of whether the reporting entity perceives the effects of such an event to be material. As noted in the IASB’s new educational material concerning climate (IFRS Foundation 2020b):

[…] item of information could influence primary users’ decisions regardless of its size, and a quantitative threshold could even reduce to zero, such as when information about a transaction, other event or condition is closely scrutinized by the primary users.

Disclosures in other documents (including presentations, management commentary and sustainability reports) will not compensate for the omission of disclosures that are required to be made in the financial statements and are therefore subject to audit in most jurisdictions.
As further emphasized by a board member during a webinar (Anderson 2020):

The focus of that publication was to illustrate how qualitative external factors, such as the industry in which the company operates, and investor expectations may make such risks material and warrant disclosures in the financial statements, regardless of their numerical impact.

Consequently, even if the reporting organization concludes that the impact of an economic phenomenon, such as the transition to a 2-degree world, on the reported numbers is negligible, disclosing information regarding this conclusion, as well as the methods leading to it, remains crucial constituting the foundational basis for dialogue with engaged investors. As answered by a Board member when asked about the uncertainties related to the disclosed number:

I think if you genuinely get to the point where you thought, well actually I appreciate this as a material information, but I cannot come up with a reliable number, for me, that is material information in its own right and I would hope that that would be disclosed, that this could significant risks, but I simply do not have the confident to come up with a reliable number. This then forms the basis of a dialogue between you and your investors.

(Anderson 2020)

In this context, the TCFD was widely considered tangible proof that climate is now material for various industries, and the transition itself constitutes a material event that should be discussed when preparing financial statements.

And this is about that user receive material information, material that really matters to them to understand the financial statements. We are very clear by what we mean in terms of materiality. This is defined through the eyes of the investor; it’s through the investor prism. And it’s information
that could *reasonably* be expected to influence decisions that investors make on the basis of the financial statements.

Importantly, it is not just about the size. It is also about the *nature of an item*, or combination of both.

(Anderson 2020)

7.2.3. Ensuring materiality: Formatting the reporting infrastructure for climate transition

From climate risks to climate transition: TCFD, global momentum and the enrollment of the IFRS Foundation

The IASB's efforts to clarify how existing standards could address climate-related financial concerns proved quickly insufficient. As TCFD had succeeded in generating global momentum around climate disclosures this led to increased demands for more comprehensive reporting rules surrounding governance goals related to the transition. As 2020 drew to a close, the complex and confusing landscape of various reporting bodies, combined with the IASB's limited guidance, were increasingly argued to be a significant barrier to mobilize capital markets for climate transition. In February 2020, in one of his final addresses as the Governor of the Bank of England, Mark Carney emphasized the need for improved disclosure as part of the preparations for the upcoming Climate conference COP 26, scheduled to be held in Glasgow:

The objective for the private finance work for COP 26 is simple: ensure that every financial decision takes climate change into account [...] On the road to Glasgow, we will focus on the three Rs: reporting; risk management; and return - to help unlock the private financial flows that are vital to the transition. This will support a wider shift to Paris alignment and be underpinned by public finance efforts to deliver $100bn.

On the issue of reporting, Carney noted that there is a need to improve the “quantity and quality of climate-related disclosures by implementing a common framework built on TCFD”

An old adage is that which is measured can be managed. For COP 26 we want you to help refine and implement TCFD disclosure; and we will work with authorities to commit to pathways to make climate reporting mandatory.

(Carney 2020b, p.2-3)

In this context, the European Commission (EC) acted as a significant catalyst. In late 2019, as the EC was finalizing its new Green Deal—aiming for a comprehensive policy package to make the EU carbon-neutral by 2050—the issue of disclosure and the need for mandated climate disclosures were brought to the forefront. A few months later, the spokesperson for the EC announced the vision for the EU to develop its own reporting standards under The European Financial Reporting Advisory Group (EFRAG), that would align with its policy ambitions regarding transition. It was explicitly outlined that in developing these standards, the TCFD recommendations would be used as the starting point.
The year 2020 witnessed several similar policy statements. For example, in November 2020, the UK Government expressed its intention to mandate climate disclosures in line with TCFD recommendations. Similarly, New Zealand swiftly passed a bill mandating climate disclosure based on the TCFD's blueprint. These efforts reflect the increased momentum of the time, a sentiment aptly captured by Mark Carney in his letter to the Financial Stability Board published in December 2020.

Today, the TCFD is the gold standard for such reporting and thesis for new announced mandatory reporting regimes around the world, including in the United Kingdom, the European Union, and New Zealand. [...] 

Following on from the success of the TCFD, the FSB is well placed to support further integration of its recommendations into more established disclosure frameworks. The time has come to move from voluntary, market-led disclosure to establishing pathways to mandatory climate disclosure for the largest companies in the largest jurisdictions.

The International Financial Reporting Standards (IFRS) Foundation is a mechanism by which to achieve this. Its role in overseeing the International Accounting Standards Board (IASB) and accountancy standards, as well as the depth of its existing standards in over 140 countries, ensures that it is well placed to take the TCFD recommendations forward in a manner that can achieve global consensus. (Carney 2020, p.2)

As calls for mandating climate disclosures intensified, the IFRS Foundation found itself under escalating pressure to take action. During the IFRS Trustees meeting in February 2020, the discussion centered on climate reporting as the growing demands for the development of global standards around it. As a result, the Trustees concluded that it was necessary to further explore the implications of these developments for the IFRS Foundation.  

More decisive steps were taken at the subsequent Trustee meeting in June 2020. Based on informal engagement "with a cross-section of stakeholders involved in sustainability reporting (including the investor and preparer communities, central banks, regulators, public policymakers, auditing firms, and other service providers)"; the Trustees formally took the issue of climate and other investor relevant reporting on its working agenda. In practice meeting resulted in the decision to develop a consultation paper to inquire whether IFRS trustees should expand their standard-setting activities into this area.

Just few months later, in September 2020, the IFRS Foundation published its consultation paper (IFRS Foundation 2020a) on Sustainability Reporting asking about the necessity for a global set

77 This decision was aided by the findings of the informal Task Force (that included also members of the TCFD) established by the IFRS Foundation in late 2019 who had taken part in informal stakeholder engagement around the reporting issue: “The Task Force’s initial findings were presented to the Trustees in February 2020, and the Trustees mandated the Task Force to explore with stakeholders involved in global financial market governance whether and to what extent the IFRS Foundation could have a role in the remit of global sustainability reporting.” (IFRS Foundation 2020a, p.17)
of internationally recognized sustainability reporting standards and whether the IFRS Foundation should play a role in establishing such standards. Specifically, the consultation paper asked, “If the IFRS Foundation were to establish a Sustainability Standards Board, should it initially develop climate-related financial disclosures before potentially broadening its remit into other areas of sustainability reporting?” By December 2020, the IFRS Trustees concluded their consultation and in March 2021, the decision to create an International Sustainability Reporting Standards Board (ISSB) was announced. It was noted that the new Board would be working alongside the IASB with focus on investor relevant reporting prioritizing the development of standards for financially relevant climate disclosures. As outlined in the announcement (IFRS Foundation 2021c):

> due to the urgent need for better information about climate-related matters, the new board would initially focus its efforts on climate-related reporting.

Notably, the ISSB would not start from scratch. Instead, it was to build on the work of the TCFD and the recent joint work of the leading standard-setters in from the “wider reporting space”, including IIRC, CDSB, SASB, CDP, and GRI. Specifically, the announcement concluded that the work of the ISSB would be grounded:

> upon the well-established work of the Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD), as well as work by the alliance of leading standard-setters in sustainability reporting focused on enterprise value. The Trustees will consider the prototype proposed by the alliance for an approach to climate-related disclosures as a potential basis for the new board to develop climate-related reporting standards.

To prepare for this work, the IFRS Foundation will initiate a process of structured engagement with the relevant organizations.

(IFRS Foundation 2021c)

Return to the reporting landscape: making of the climate standard for enterprise value creation

The task facing the IFRS Foundation was substantial; even as it sought to build upon the work of existing standards, establishing connections with other reporting bodies necessitated intricate mapping and further organizational efforts from within the conceptual confines of the financial reporting standard-setting. To format a coherent landscape for financial reporting, one that could both unify and maintain separate the production of core financial statements (oversight by the IASB) from broader financial reporting (soon to be the territory of the ISSB), presented a significant challenge that required further map-making.

This initial mapping was largely carried out by the Big 5 reporting organizations (IIRC, CDSB, SASB, GRI, CDP) participated in the so-called Corporate Reporting Dialogue (CRD). Specifically, it was carried under a project established under the CRD - “Better Alignment Project” - established in 2018 to show how the existing reporting frameworks and standards
could be used for TCFD aligned reporting. However, these early efforts were widely considered to be inadequate, often described as "too little, too late." By the end of 2019, the attempts to harmonize disclosures had hit a standstill, widely perceived as falling short of meeting “market expectations” that were said to need a one standard. The sentiment shared by the former Chair of the project is telling,

Now, as we have been moving forward on this project, we have been given a lot of comments from high-level people really. They are saying that, well, the Better Alignment project is pretty good, that it is a good stage to go forward, congratulations, but that’s going to take two years. And we haven’t got two years.

Previous speakers saying what’s been happening to climate and what’s likely to happen. This does not go far enough. We are still going to have whole lot of different standards, and you are going to have confusion. Even if we sorted some of that confusion, some confusion will remain. What they are saying that it’s too little too late. Well, it’s a bit of a challenge to try to respond to that sort of comment.

(Chair of the Corporate Reporting Dialogue at the IIRC Conference in London, 2019)\textsuperscript{79}

However, the sweeping global momentum surrounding the TCFD in 2020 propelled the Big 5 into a revitalized mapping exercise. In September 2020, coinciding with the IFRS Foundation's consultation, the organizations published a report outlining a vision for what they called as a more “comprehensive reporting landscape”.

In practice, this new “cohesiveness” was enabled by adopting a new conceptual tool: \textit{Enterprise value creation} (Corporate Reporting Dialogue 2020b). This new term was said to signify the goal that financial reporting should orient around in distinguishing the financially material information from other, non-yet financial information. Through this notion, the reporting frameworks and standards that had historically used the investor prism (SASB, IIRC, CDSB) as their filter (in contrast to GRI, who had remained with the broader stakeholder view and focus on reporting issues even without financial materiality) were now considered providing material information to be included as part of financial reporting. This elevated them to a level equal to existing financial reporting standards, as the notion of enterprise value creation was said to be in line with the IFRS standards focus on the financial "value conditions of firm”.

\textsuperscript{78} Since its establishment in 2014, the CRD was an umbrella for an assembly of projects in which the reporting organizations considered "the most relevant ones" in the landscape with the "combined power to shape the future of the corporate reporting landscape, creating a cohesive, meaningful, and durable roadmap that builds business and investor confidence" were participating (CRD 2014). The “Better Alignment Project” established in 2018 was advertised as “a groundbreaking two-year project focused on driving better alignment in the corporate reporting landscape”, with the purpose of making it easier for companies to prepare “effective and coherent disclosures that meet the information needs of capital markets and society” (CRD 2018) About the project, see for instance: Corporate Reporting Dialogue 2018, 2019a,b,c.

\textsuperscript{79} Direct observation during a live event.
By relying on this new conceptual mapping, in December 2020, the Big 5 published a follow-up report where it proposed a prototype for the new climate standard. This proposal was said to adhere to the form set by the TCFD recommendation, with a particular focus on governance, strategy, risk management, metrics, and targets, meeting the needs of the capital markets for consistent, comparable, and reliable climate-related financial disclosures. It was explicitly offered as a material starting point for the ISSB to begin drafting its first standard on climate. As argued at the time, the report was expected to show it can “serve as a useful input for the Trustees of the IFRS Foundation” (Corporate Reporting Dialogue 2020a, p.4):

[this report shows] how certain components of our current frameworks and standards, along with the recommendations set out by the Task Force on Climate-related Financial Disclosures (TCFD), can be used together to provide a starting point for the development of global standards for sustainability-related financial disclosure.

The work could therefore serve as useful input for the Trustees of the IFRS Foundation, who have not been involved in the technical development of this paper, but who are currently consulting on the role that the IFRS Foundation could play by broadening its role beyond setting financial reporting standards.

The prototype was specifically constructed around the new concept of enterprise value, to enable thinking climate-relate information through the IASB’s conceptual framework.
example, it was suggested that the IASB should alter its conceptual framework to focus on "enterprise value creation" to ensure alignment with the envisioned standard. Additionally, recommendations were made to modify the conceptual framework's application of relevance and materiality to reflect how climate-related matters could affect enterprise value in the long term. The idea of enterprise value was proposed to enable the disclosure of a more robust insights into an entity's future financial performance and value.

The concept of enterprise value quickly transitioned from the report to practice. Late 2020, IIRC and SASB announced their intention to merge, with purpose to form a unified organization known as the Value Reporting Foundation with focus on providing information around enterprise value creation. Their acclaimed aim was to delineate the financially relevant enterprise value drivers and standards to be considered as part of financial reporting standard-setting. In March 2021, when announcing the establishment of the IISB, the IFRS Trustees confirmed that focus on developing the new climate standard and financial reporting will be on

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(Corporate Reporting Dialogue 2020a, p.15)

80 CDSB was later integrated into Value Reporting Foundation as well and in 2022, the new Value Reporting Foundation was consolidated into the IFRS Foundation.
the "enterprise value creation," further materializing the concept as a new critical tool accounting standard-setting would orient around.

In November 2021, at the COP26 Climate Conference in Glasgow, the Chair of the IFRS Trustees announced the prototype for the world’s first Climate Standard. By explicitly building on the TCFD’s framework, and the prototype prepared by the Big 5, it included for the first time the consideration of transition risks by a financial reporting standard-setter. In March 2022, the exposure draft for the world's first Climate Standard was made public. As a result, financial reporting became formally recognized it as a critical technology in the governance of the transition.

7.3. Discussion: Formatting reporting infrastructure for transition

In exploring the socio-technical construction of financial signification, this chapter has described how the TCFD framework, with its focus on transition risk, was instrumental in making climate transition a relevant accounting concern for the International Accounting Standards Board. Specifically, I argue this was possible by framing transition as a financial phenomenon as understood by the IFRS standards. In more detail, the chapter shows how this was achieved by reframing the qualitative limits of financial reporting - relevance, materiality, and faithful representation- that organize accounting rulemaking. While the three signifiers were once used to exclude climate-related issues from financial reporting, they eventually became critical in translating transition into value effects in the here and now.

Specifically, the chapter describes how this translation was mediated through the TCFD framework, and the figure of transition concerned investor, by directing the attention to three critical ways in which the TCFD’s influence manifested. Firstly, to maintain the relevance of
existing standards, IASB was explicitly tasked with articulating how its standards relate to the TCFD framework. In this context, financial reporting needed to be made relevant in light of the investor figure as framed by the TCFD recommendations now interested in the long-term value effects of climate change and the visioned transition to the low-carbon world.

In practice, however, this framing required transforming the standard setter's conceptual imaginary towards the idea of long-term value creation, while expanding the scope of financial reporting. Essentially, climate-related factors were now thought in relation to the notion of long-term value creation, acknowledging their potential financial impact even when falling outside the temporal frame of financial statements. However, to consider such future-oriented effects, material changes were needed eventually leading to the revision of the Management Commentary Practice statement. Through these adjustments, the Board explicitly communicated that financial reporting should be now thought in the context of long-term value creation and as a means to present a cohesive narrative about it.

This shift in the conceptual approach enabled thinking of transition as a relevant issue within financial reporting. However, as discussed in this chapter, the revision of the MCPS was not intended to have an immediate impact on the reported numbers or disclosures in the audited financial statements. After all, climate was considered financial only to the extent that its potential value effects were projected for the future and did not directly influence the production of financial statements at the present moment. The temporal nature of the value effects served as the primary rationale for denying their effects on the financial statements.

Therefore, the second framing concerns how TCFD enabled establishing effects in the financial statements by questioning their faithful representation. It did so, by affording substance to the new expectations of the reasonable investor, now understood to be interested in the information regarding the transition. In essence, it was argued that current statements were created with assumptions that overlook the financial impact of transitions, failing to meet the expectations of the reasonable investor. To re-instate faithful representation in financial statements, it became necessary to view transition as an economic event and adjust the assumptions guiding the production of information in audited financial statements.

In practice, the IAS 1 afforded framing transition as an economic event and qualitative factor prompting disclosure in financial statements. Accordingly, financial reporting becomes thought as a means to present the transition in words and numbers. In doing so, however, the numbers are expected to be consistent with the overall story the financial report tells, whose credibility is tested against the investor's reasonable expectations. Here, the faithfulness does not amount to the numbers' verifiability but how well they correspond to the expectations of the investor establishing a suitable basis for the investor dialogue and engagement.

Finally, the growing momentum surrounding TCFD, and the increasing regulatory measures related to transition exposed financial reporting's lack of material information for effectively governing the transition. This created an opportunity for more significant changes within the standard-setters' realm. The expanding focus on transition governance and the heightened interest in climate disclosures driven by the TCFD eventually led to a broadening of the standard
setter's conceptual framework. This resulted in the materialization of a new organizational actor (ISSB), the development of new conceptual tools, and the eventual creation of a new climate standard in the context of transition together formatting the wider reporting infrastructure explicitly being assembled to guide the management of the transition.

As such, TCFD coalesces the growing momentum of the "wider reporting space" to which the recommendations provided the basic form. Not only did it provide the form and grammar against which the reporting infrastructure was to be built upon, but it also constitutes the connective tissue across various actors, and different regulatory arrangements, as it becomes the form within which all developments need to mirror back to and map themselves against. By establishing the form for the emerging reporting infrastructure for the governance of transition it brings the well-fertilized landscape into the formation of a new accounting body, ISSB, to materialize side by the IASB. These developments in turn required IASB to start thinking its work in relation to new concepts, such as the “enterprise value creation” in order to be located within the same space with the ISSB while safeguarding its own boundaries of financial materiality. Especially the new concept of enterprise value creation comes to serve as the central guiding principle in the evolution and unification of financial reporting standard-setting.

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Ensuring materiality: material information for evaluating transition qualities and performance.

Financial reporting critical tool to articulate claims around transition and evaluate progress; TCFD provides form and grammar for the reporting infrastructure for the governance of transition.

Prototype for Climate Standard: International Sustainability Standards Board (ISSB); transition-related accounting objects (e.g., transition risk, transition plans, forward-looking Capex).

Connectivity (IASB/ISSB); Enterprise value; dynamic materiality.

Table 3: Translation of transition as a relevant accounting issue as part of IASB’s imaginary around financial materiality

To conclude, this chapter has delineated the qualitative transformation unfolding within accounting rulemaking, highlighting the central role financial reporting is now poised to play in the governance of the transition. In this light, the chapter navigates through the pivotal role of TCFD in reshaping the relational space where accounting objectives and subjects materialize. It does so by influencing the intellectual and material ecology of financial reporting while establishing a critical node in the evolving governance arrangements being formatted around the transition. Through TCFD, financial reporting is enrolled as a critical practice through which promises over transition becomes articulated and tested. Specifically, the recommendations bring to life an investor as a transition-concerned accounting user now interested in transition and its effects on long-term value creation. Through such figure, a new set of assumptions, narratives, and conceptual imaginaries used to frame financial value are brought to life while affording the more durable constructions of financial reporting - relevance, materiality, and faithful representation - with new significations. In doing so, TCFD enabled the materialization of various climate transition-related accounting objects while remaining within the limits of financial signification.
EPILOGUE: ENDING THE TRAGEDY OF THE HORIZON

It is November 2021, and we gather to hear Governor Carney speak for the very last time—or shall we say former Governor Carney. Indeed, today’s talk Carney articulates as part of his current role as the United Nation’s Special Envoy on Climate Action and Finance and as the Head of transition investing at the Brookfield Asset Management. This surprising (re)subjectification of the Central Banker into UN climate advocate perhaps makes now more sense in the light of the past empirical chapters. Also, the location of the speech seems appropriate given his new role—the COP 26 Climate Conference in Glasgow.

Specifically, it is the “Finance Day” of the climate summit, and a session, titled “a financial system for net zero” is about to begin. Carney, having been appointed as the main spokesperson for the finance agenda at COP26, is today providing the opening remarks for the session taking place in a room full of the “the money man and women”, as the session’s moderator aptly outlines before Carney takes the stage:

This meeting of COP 26 is indeed quite striking. In the past, these events were dominated by heads of state and environmental ministers, and a paper like the Financial Times tended to get its science team of environmental team to cover it. This year, however, the money men and money women, are in town, both in terms of finance ministers, the central bankers, the private sector financial representatives and investor. […]

Investor activist is no longer just hiding in the buses or chaining himself or herself to bulldozers - he is dominating the conversation, he is shaping financial markets, and again, judging from the readership of the Financial Times, he is increasingly on the minds of the word’s investor, financiers and business people.

Carney begins by outlining the purpose and goals set for financial sector in preparation to the COP26:

Our goal for the COP26 was to build a financial system where every financial decision takes climate change into account.

To that end, a little over a year ago we set out twenty-four major deliverables for COP26 to transform the information, the tools, and the markets at the heart of finance. And today, we are delivering them all.

Such grand words are not rarely spoken in places like COP. Yet, what is worth noting, is Carney’s assertive claim that the objective of building “a financial system where every financial decision takes climate change into account” is being delivered today. Such claim is backed by the fact that the “information, the tools and the markets at the heart of finance” have been transformed.

In outlining the deliverables accomplished today, Carney points out that a number of essential changes have been accomplished in transitioning the markets:
these seemingly arcane but essential changes to the plumbing of finance can move and are moving climate change from the fringes to the forefront and transforming the financial system in the process. And they are doing that because we now know that only mainstream finance can fund the estimated 100 trillion dollars of investment needed over the course of next three decades for clean energy future.

Among such “seemingly arcane but essential changes”, the role of disclosures constitutes the first place in his bullet list. Specifically, Carney argues that the world is now ready to push regulators and authorities to mandate the climate-related disclosures to ensure efficient transition:

This means mandatory climate disclosures based on the TCFD so that the financial institutions have the climate information they need to manage risks and seize the opportunities.

The speaker that follows Carney, gives substance to Carney’s vision – the Chair of the IFRS Foundation, Erkki Liikanen. As Mr. Liikanen is invited to the stage to give his keynote, the session moderator, in reference to Carney’s remarks, invites him explicitly to articulate, “How is the reporting infrastructure” going to fit in all this?

To play their role effectively in this transition, financial markets need good quality, comparable information, above all the effects of sustainability related risks and opportunities for making investment decisions. [

Two years before [the establishment of IFRS and IASB], Kyoto Protocol of Science in 1999 [was signed]. Back then, financial reporting, climate and sustainability disclosure did not meet. Today, they are the two sides of the same coin. Capital markets have the essential role to play in reaching net zero. But that can only happen when sustainability information is produced with the same rigor, assurance of quality and the global comparability as financial information.

In concluding his remarks, Mr. Liikanen announces that it is only matter of time, that the first Climate Standard for financial markets is ready:

The preparatory work has proceeded so far, that when this prototype will be passed to the new board, they will launch the consultation. My expectation is that second part of next year [2022] will be the year we have our first climate standard in the market.

Against such developments, Carney proudly concludes his speech by noting:

Finance is no longer a mirror that reflects a world that is not doing enough. It is becoming a window through which ambitious climate action can deliver the sustainable future that people all over the world are demanding.

It will help and end the Tragedy of the Horizon.
8. Discussion and contributions

This chapter presents the study’s main discussion and conclusions, and how the presented analysis contributes to existing accounting scholarship. First, I begin by reminding the readers of the overall framing of the study and how it is situated within the broader accounting literature interested in the financialization of reporting as part of a wider market governance nexus. After, I present the study’s primary conclusion concerning TCFD’s instrumental role in formatting what I name the agencement of transition stewardship while enacting the ontological making of the markets in transition. To give further substance to such an argument, I discuss the main findings from each chapter in light of such finding, after which I elaborate on some of the distinctive qualities of this agencement. In the final section, the ways the present study and the concept of agencement contributes to the existing studies on the financialization of corporate reporting are discussed. By deliberately articulating such contributions at the edge of the conceptual limits of each sub-literture, I foreground how the distributed, relational, and performative qualities of the agencement can enable one to reimagine these limits.

8.1. Studying financialized reporting at the financial markets – climate governance nexus

This thesis has explored the role of the TCFD framework in shaping the governance of climate transition in the post-Paris world. In doing so, the study is situated within a long-standing accounting scholarship that has conceptualized external corporate reporting as a distinctive governance mechanism critically shaping the broader governance arrangements of social and economic life. (Chapman, Cooper, & Miller 2009; Miller & Power 2013). Specifically, I have conceptualized the TCFD framework as a financialized technology (Chiapello 2020) for its explicit focus on financial risks for capital markets only in line with number of accounting studies exploring the intricate connections between external reporting and the broader dynamics of 21st-century financialized economies. In this literature, financialization of reporting has become a well-documented empirical observation highlighting the increasing dominance of financial rationale in both the language and logic of reporting. (Gleadle et al. 2014)

To gain a deeper understanding of these dynamics, in chapter 2 I have outlined four sub-streams that each describe how the financialization of reporting is understood occurring and the subsequent impacts it is seen to have on broader governance dynamics. Together, these studies foreground how all things financial (e.g., actors, logics, epistemes, stakeholders) have gradually colonized the grammar of reporting at the expense of alternative modes of governing rationales and interest. A recurring conclusion in this literature is that reporting is increasingly financialized affording the extension of financial markets and its logic rendering all things visible and calculable in financialized sense.

As a line of flight, this study uses these findings as a generative starting point rather than as an empirical finding. In other words, while what we might generally call as financialization indeed
influences the trajectory of events explored in the empirical chapters, this study takes such observed financialization as an initial standpoint and not as the explanatory finding. This shift moves the analytical emphasis from whether reporting becomes more or less financialized to an exploration of the inherent tensions within the financialized signification. As I have highlighted in chapter 2, the prevailing trend in critical accounting literature to attribute nearly all developments in accounting rulemaking to financialization, risks oversimplifying the multifaceted dynamics at play in an evidently financialized world. Specifically, it risks reducing finance as a totalizing logic through which any contemporary development can be explained. Such interpretations might hastily label the TCFD as just another manifestation of capitalist appropriation in its financialized form, leaving readers with a sense of inevitable finality, and lack of agency against this ever-expanding systemic behemoth.

In seeking to contribute to such literature, I propose that the critical inquiry needs to stay within the financialized signification to allow for a deeper understanding of the internal tensions and contestations that provide it with its force. Hence, rather than merely analyzing how the financialized gaze continues to suppress other modes of engaging with the world, scrutiny is needed on the arrangements affording the financialized gaze with power. In chapter 3 I have discussed how constructivist market studies (Çalişkan & Callon 2010; Çalişkan & Callon 2009; Callon 1998b; Frankel, Ossandón, & Pallesen 2019) offer a generative method for delving into the dynamic framings of financialized signification (Birch & Muniesa 2020; Muniesa et al. 2017; Muniesa & Doganova 2015). From this body of work, I have derived the main analytical concepts of financialized agencement and valuation device. These concepts have been used to orient the analytical focus towards specific aspects of the empirical context, enabling an examination of how the pressing issue of climate transition reformatizes distributed financial signification. Consequently, the primary research question this thesis has addressed is: How does the TCFD framework come to format financial signification in the context of climate transition?

8.2. Framing financialized agencing: making of transition stewardship

In answering the research question of how the TCFD framework shapes financial signification within the context of climate transition, the primary conclusion of this thesis is that the TCFD has been pivotal in the formation of what I term the agencement of transition stewardship while enacting the ontological making of the markets in transition. Through such an agencement, a new type of market actor is constructed and brought into life in the context of climate transition – an investor figure made concerned of and equipped to evaluate the financial value effects of transition. More so, as actors bring their worlds, the thesis posits that through transition stewardship, a new kind of market imaginary is being materialized made from new types of market subjects and objects in transition. Such an imaginary, in turn, gains realness through the emerging calculative infrastructure around the transition of which financial reporting and accounting standards come to constitute a critical node.
In the following sections, I discuss the main findings from each chapter in light of such an argument. In doing so, I suggest that the first chapter, which centers on the historical context of transition risk, lays the groundwork for transition stewardship. Hence, I argue that it's the organizing actions preceding the establishment of the TCFD that are crucial in understanding the momentum it has amassed. In chapter 6, the specific details and intricacies of transition stewardship become clearer by equipping it in a distinct way as the recommendations critically delineate the who, what, and how of transition risk. Lastly, the third chapter examines the influence this agencement yields, specifically its repercussions on accounting standard-setting. Within this chapter, we observe the establishment of a broader calculative infrastructure for the financial evaluation of transition that come to position financial reporting as an essential tool in the governance of transition.

**Figure 4: Making of transition stewardship throughout the empirical chapters**

8.2.1. Establishing the rudiments of the transition stewardship

The first empirical chapter explored the emergence of transition risk as a new type of financial concern and its broader implications for framing climate governance. Specifically, I used Mark Carney's influential Tragedy of the Horizon speech as a departure point, as it signified a critical juncture, emphasizing the urgency of market-wide regulatory action, which led to the creation of the TCFD Task Force. This examination of the historical trajectory of transition risk not only sheds light on the socio-material groundwork that set the stage for Carney's articulation but, more importantly, illuminates the establishment of the rudiments of the agencement of transition stewardship. Within the organizing script established through the speech, transition risk emerges as a critical object with the power to influence various developments along a distinctive trajectory.
To recapitulate the analysis presented in chapter 5, the first part of the chapter situated the new object of concern within the historical trajectory of governing and negotiating climate change. I undertook this to demonstrate how climate change has been consistently framed—and reframed—as an economic and, ultimately, financial issue, since it emerged as a global governance concern. Additionally, it was vital to explicitly highlight the ongoing entanglement of "markets" with the UNFCCC-led climate negotiations, emphasizing the effects this interplay has on shaping climate change governance as a distinct market-related issue. Consequently, the chapter traced the ongoing assembly formation (Callon 2009) that continuously negotiates new significations for markets and politics in climate change governance.

To delve deeper into such entanglements, I argued that in the late 1990s, notion of climate risk emerged as a critical node through which the nexus between climate politics and markets has been mediated. This emergence was essential because to frame climate as a financial concern, it needed to be framed as a risky object with potential financial value implications. Consequently, the second part of the chapter traced what I termed the “trajectory of climate risk” (Callon 2009; Latour 2007), illustrating the evolution of understanding climate risk as a financial concern. This discussion mainly revolved around debates on the location and timing of the risks and the differing opinions on responsibility for its management. In this context, I posited that the evolving climate risk agencement plays a pivotal role in understanding the historicity of transition risk as the overflows from previous frames of climate risk eventually resulted in the transcendence of transition risk as a new matter of concern.

In practice, I identified six critical frames that have shaped the trajectory of climate risk, each frame suggesting a different set of relations for its management and proposing a new way forward. In chapter 5, I discussed the dynamics of each frame in more detail and their increased entanglement with climate negotiations. What's important to note here is that each frame presents the issue of climate transition as a different kind of concern for the persona of the investor, shaping the understanding of how, when, and through what means transition is understood to put the financial valuations at risk and the expected effects. However, through each frame, the leading actor of the story – the investor – is gradually transformed as he becomes increasingly concerned by the overflowing issues arising from the preceding frames.

The evolution of the trajectory of climate risk, culminating in the emergence of the new issue of transition risk, mirrors the reciprocal dynamics of framing and overflowing (Callon 1998a; Callon et al. 2009). Along this trajectory, each frame introduces new issues and concerned groups, framing climate risk as a specific type of investor concern while also connecting these concerns to ongoing climate negotiations. As new frames emerge, they subsequently define new qualities and preferred solutions that the concerned figure of the investor should embody, being shaped by these emerging concerns. Therefore, by tracing the framing/overflow dynamics of climate risk and focusing on evolving investor concerns, my aim has been to illustrate the gradual assembly of a new investor persona, now deeply intertwined with the politics of climate transition.
In tracing the evolving framings around climate risk, I do not intend to imply that each frame singularly dictates the understanding of climate risk. Nor am I suggesting that each subsequent frame completely replaces its predecessors. Instead, table 2 drawn in chapter 5, and the trajectory it highlights, is best perceived as a continuous narrative around the financial impacts of climate transition from the investor's perspective. This narrative, however, becomes more intricate over time due to increasing overflows, leading to a denser web of connections as more actors become concerned with the associated risks. For example, in the chapter we see how climate change moves from being a non-financial concern affecting marginal ethical investor into a value-driving factor in the investment portfolios of major institutional investors. As these institutional actors become more entwined with the issue, new concerns arise, extending the management of such challenges beyond the capacity of any single entity and prompting even financial regulators to take such concerns seriously. Accordingly, as the narrative unfolds, each frame, and their respective scripts, grant the investor a unique form of agency as he faces the proliferation of new issues and learns to tackle them as part of new arrangements.

Through this trajectory, I argue that the rudiments of transition stewardship are being established – the socio-material foundations from which it became possible to articulate transition risk as a distinct concern affecting entire markets and a wide range of actors. In this backdrop, Carney’s speech serves as a moment of problematization (Callon 2009; Latour 1996, p.126), articulating and proposing a specific frame for the novel object of transition risk. This articulation scripts together market regulators, climate science, climate negotiations, institutional investors, policymakers, and various aspects of the financial architecture, making them explicitly concerned with the overarching issue of climate transition as a financial concern. While acceptance was not instantaneous, with many arguing Carney exceeded his remit as a central bank governor, the speech had enough impact to solidify the new concept of transition risk as a real concern just in time for the Paris Climate Negotiations.

In such sprouting arrangement, it is the figure of the investor, and his needs, that are brought to the front stage of the governance of climate transition. Consequently, the concerns over the financial value creation and management are made central concerns in the governance of transition through the notion of transition risk. Within this frame, the systemic quality of risks is emphasized, indicating that their management surpasses the capabilities of any individual entity and necessitates a collaborative approach involving policymakers and other market players. Given to its existence as separate issue, transition risk cannot no longer be tamed through existing governance arrangements but calls for new kinds of solutions. As Latour (2007, p.8) has noted, "each new issue deserves its own protocol because it has already overflowed the limits of the usual entanglements that we know how to care for." In this context, TCFD emerges as a solution, equipping this nascent agencement to optimally manage the associated risks.

8.2.2. Equipping transition stewardship

In chapter 6, I address the pivotal role transition risk plays in shaping the TCFD recommendations and their subsequent formatting effects. Specifically, I posit that these recommendations craft a distinct methodology for both understanding and managing the
financial risks stemming from transition. By delineating the “who,” “what,” “how,” and “when” of this risk, they solidify the essential frames that secure the object’s existence as a financial concern. Moreover, these frames are critical as they prioritize certain modes of action and capacities to materialize over others, thereby conditioning the production of acceptable statements about transition risk and its ensuing management.

As a critical finding, the chapter posits that a distinctive investor gaze forms the basis of the recommendations affording the primary orientation for their making. Such a figure is substantially different from the conventional homo economicus—a faceless, information-sensitive individual who embodies the principles of rational self-interest and subjective risk appetite investing on his own behalf in a diversified market. Instead, the TCFD portrays a more nuanced investor—a distributed entity, often managing money on behalf of others, while being deeply interwoven with the relational fabric of the markets. Such a figure is presumed to gravitate towards the "fundamental value of things," setting him apart from the speculative market actors who seem to get valuations wrong.

Furthermore, I highlight that this investor embodies unique user needs which do not simply manifest as the traditional buy, hold, or sell decisions often attributed to an investor's primary actions. Instead, this investor is characterized as a major financial institution that actively engages with portfolio companies, regulators, and various other market participants across the value chain of capital in the distributed management of financial value. In this setting, the concept of transition risk makes the investor acutely aware of the financial implications of transition, leading to a perceived necessity for a managed transition in which this actor plays an active role. Through this script, the investor is cast as a type of transition steward whose concerns over ensuring the optimal management of transition risk occasionally blur with the broader mandate to oversee the transition altogether.

As noted by Callon (2007, p.160), agencement refers not just to the power to give meaning to action, but also to the capacity to act enabled by the right kind of equipment. In the case of TCFD, such equipping is realized through the introduction of various tools for stewardship. For instance, key TCFD recommendations pertain to business model reporting and scenario analyses, which enable the disclosure and interpretation of new concepts such as the climate-resilience of business models and the credibility of transition plans. Consequently, existing investment objects are rendered commensurable in relation to the issue of transition, facilitating their financial evaluation based on transition-like qualities.

As deeply interconnected actors, equipping them necessitates alterations throughout the investment chain. Hence, the TCFD framework can be considered as a formatting valuation device (Doganova 2019) aimed for enrolling wider set of actors across this chain to establish the socio-material conditions for the agency of the transition stewardship to realize. Beyond portfolio companies, this extends to rating agencies, analysts, auditors, and consultants intertwined with the investor, and all who are expected to reorient themselves with the help of the TCFD framework. Hence, the framework can be seen as a formatting device with purpose to
reconfigure the socio-materiality of the distributed and collective financialized gaze conditioning the agency of transition stewardship.

In this arrangement, the role of the engaged transition steward, now made concerned by the transition performance of companies, is to evaluate progress by assessing the resilience, transformation capabilities, and credibility of transition plans of their investee companies. However, in such evaluation, potential value destruction can be offset against new investment opportunities to capitalize on the transition. For instance, while the concept of transition risk is pivotal in framing some investment objects as being at risk, potential value destruction can be balanced by the emergence of new value-creation opportunities. This requalification (Callon et al. 2002) from risky investment objects to value-bearing ones is actualized by new disclosures, such as forward-looking capital expenditure (Capex) or updated cash flow estimates based on a transition-validated business models.

Finally, by establishing ways of understanding transition risk, the recommendations engage in the requalification work through which market actors in transition are formatted, realizing Carney's vision of making the markets in transition to a two-degree world. In doing so, existing investment portfolios are transformed into investment objects in transition, whose performance, riskiness, and value-bearing qualities can now be assessed in relation to the grand issue of transition. Consequently, there is a temporal dimension to TCFD's efforts since managing transition is inherently a time-bound process wherein time is negotiated. By materializing the imaginary of “markets in transition", time is provided for some to move from here to there before potential risks are said to take hold. The newly qualified investment objects are then framed within the spatiotemporal context of "markets in transition", marking out the space where these entities may continue to exist, or disappear, as value bearing objects. The new accounting objects like forward-looking transition plans further materialize this spatio-temporal space while making it governable by those very same tools. Accordingly, the final empirical chapter has delved into how this world-building through the agencement of transition stewardship is further actualized via accounting standard-setting.

8.2.3. Formatting calculative infrastructure for the transition stewardship

In the final empirical chapter, I have described how the TCFD was critical in translating the issue of transition as a relevant accounting issue for the accounting standard-setter affecting the preparation of financial disclosures. This required reconfiguring the material basis that would enable constituting transition as an economic phenomenon with financial value effects. Specifically, the chapter argues that creation of such effects was achieved by reframing the qualitative limits of financial reporting - relevance, materiality, and faithful representation - that organize accounting rule making. While the three criteria were once used to exclude climate-related issues from financial reporting due to perceived absence of financial implications, they eventually became critical in translating transition with value effects in the here and now.

TCFD framework afforded this reframing in three critical ways. First, financial reporting needed to be made relevant in light of the investor figure embodied in the TCFD recommendations. To
do so, the issue of climate was first translated into a component of long-term value creation narratives with possible financial value effects in the future. In practice, this required transforming the conceptual imaginary of the standard setter to explicitly orient around the idea of long-term value creation and material changes, such as the revision of the Management Commentary Practice Statement that formats the production of qualitative disclosures as part of broader financial reporting. Through these changes, financial reporting becomes considered a means to present the unique story underpinning valuations as to reflect the long-term business drivers not yet captured by the financial statements.

However, climate was considered financial insofar as its possible value effects were located in the future leaving the core financial statements unaffected. To address this, it became essential to re-evaluate the faithful representation of these statements and their assumptions, to be in line with the expectations of the reasonable investor, as depicted through the TCFD. In practice, the IAS 1 became a tool to frame transition as a qualitative and economic factor that needs to be reflected both in words and numbers when preparing reports. Consequently, the numbers presented in financial statements are expected to be consistent with the overall story told by the financial report and whose faithful representation become tested against the reasonable expectations of the newly imagined accounting user interested in the transition performance of the companies.

Finally, the growing momentum around transition led to a proliferation of transition-related accounting issues that the existing accounting standards could no longer address adequately. Since the current standards weren't deemed sufficient in providing material information about the transition explicitly, there arose a need for more significant changes within the standard-setter’s purview. This evolution led to the emergence of a new organizational actor (ISSB) and to the introduction of a new climate standard with purpose to ensure the materiality of financial reporting in the context of transition while establishing the groundwork for the reporting infrastructure explicitly being assembled to guide the management of transition. In these developments, the TCFD's role was paramount. Not only did it provide the structure and language for building the reporting infrastructure, but it also acted as a connective tissue among various actors and regulatory frameworks, serving as the standard against which all developments are mirrored back to and mapped against.

To conclude, the TCFD recommendations became a critical force in reconfiguring the socio-materiality of financial reporting rulemaking concerning the issue of transition. Specifically, the recommendations introduced the new investor figure as a novel type of accounting user, now focused on transition and its impacts on long-term value creation. Through this figure, a new set of assumptions, narratives, and conceptual imaginaries that guide standard-setting are introduced. These in turn come to afford the more durable constructions of financial reporting - relevance, materiality, and faithful representation - new significations facilitating the materialization of various transition-related accounting objects while staying within the limits of financial signification.
8.3. Representing the agencement of transition stewardship in making markets in transition

The primary conclusion of this thesis is that the TCFD framework has been pivotal in the formation of what I term the agencement of transition stewardship, while also formatting ontological making of markets in transition. Critically, the concept of transition stewardship, as defined here, serves a dual function: firstly, it represents a unique, issue-centric assembly of elements in the making, oriented to facilitate a particular mode of financialized agency in relation to the issue of climate transition; secondly, it stands as a novel subject of financialized capitalism that is steadily emerging as a powerful organizing idea influencing the governance of transition. As such, the concept seeks to describe financial agencing, gaining durability and convergence by gradually bringing diverse activities into alignment (from accounting standard-setting to the Paris Climate Agreement, and from IPCC scenarios to strategic business planning and risk management), while giving rise to a new archetype of the financialized homo economicus; an investor figure, made concerned of, and equipped to evaluate the financial impacts of climate transition. Emerging from a complex network of relationships that shape its actions, this actor becomes the driving force in the ontological making of markets in transition, as visioned by the Governor Carney amid the Paris Climate Conference.

The empirical chapters detail the ongoing formation of the socio-material conditions that shape this actor's cognition, perception, and ability to act. These conditions serve as both the foundation and result, breathing life into such actorhood and enabling new types of actions that might previously have been deemed political, ideological, or irrational from a financialized perspective. For instance, consider how a central banker might now approach the topic of climate change, or how a regulatory body is able to justify the necessity to examine the investment portfolios of large institutional investors. Similarly, think about the ways investors are now compelled and even required to scrutinize the strategies and investments of major energy companies, particularly those claimed to be transition aligned.

As such, the thesis suggests that the agencement in formation comes to change the modus operandi of the more familiar investor figure by equipping it differently. This is in line with Callon (Callon 2007a, 2007b), who notes that when homo economicus shifts from more self-interested calculations to more altruistic ones, it is not that the actor returns to a truer nature of things, but simply shifts the configurations that frame the agency of such actorhood. However, while I refer to the figure of investor such an actor is not located within individuals, organizations, or any seemingly fixed or clearly bounded entity. Instead, the focus on agencement decenters attention from a singular entity, as the source of agency, to arrangements that condition and enable the capacity to act of distinctive actorhood. Hence, it is not some singular actor that acts, but as an ANT-like actor that comes to effectuate action for having an effect in the world.

Therefore, the agencement of transition stewardship does not result from subjecting pre-existing actors to new incentives, or by embedding them within new cultural or normative realms.
Rather, the transition steward resembles an ANT-like actor made up not just of human bodies but also tools, equipment, and technical devices. Hence, the investor figure, now made concerned of and equipped to manage the valuation effects of climate transition is not an actual entity existing out there in its pure form. Instead, it is a productive fiction constituting a powerful organizing idea now shaping not only accounting standard setting but also wider governance arrangements around climate transition.

However, by foregrounding the importance of this new investor figure as an imaginary that increasingly structures contemporary organizing, I am not suggesting that alternative figurations would be replaced (such as those emphasizing atomic individuals, subjective risk-takers, and entrepreneurial agents managing their own assets in a gambling kind of way). Rather, the purpose is to highlight the existence of alternative figuration with increasing organizing power that sensitizes to other types of dynamics, challenges, and constraints within the financialized frames. In this case, it situates the investor as a more engaged actor in the nexus of private/public; market/politics that the more atomistic figurations do not capture. Recognizing the varied facets of this figure is crucial because such figures aren't solely economic or market actors but social and political as their concerns and capacity to act increasingly shape the assembling of governance arrangements in financialized world.

Furthermore, I am not arguing that transition stewardship constitutes a dominant mode of agencing that can solely explain the resulting governance arrangements. Instead, it represents a distinct mode of agencing that is gradually taking shape and form with increasing effects and force to provoke change. For instance, in Chapter 6, while I suggest that a distinctive modality for the investor gaze was critical in framing transition-related disclosure recommendations, I am not positing that this is an inherent logic inscribed in those recommendations. Likewise, it's not that accounting standard-setting has now come to embrace a distinct accounting user figure at the expense of other user imaginaries. Rather, financialized corporate reporting forms a crucial node of financialized agencing guided by the imaginary of transition stewardship, but it shouldn't be reduced to serving any inherent logic or rationale. Hence, agencement is better thought of as a force that can be activated (e.g., in reference to the conceptual framework of the IASB or the TCFD framework), without making definitive statements about the effects it produces. How it remains enacted as part of various practices is still open for debate and controversy, to which critical inquiry should pay close attention to.

Nevertheless, through this agencing, financial reporting is enrolled as a critical practice through which promises over transition can be articulated and tested, and ultimately evaluated by the new kind of accounting user. In turn, the disclosures become less about the faithful presentation and verifiability of events of here and now, and the past, and more a site to constitute a material promises and enactment towards the future. As such, their usefulness or reliability does not depend on how well they predict the future uncertainties correctly, or whether the promises and imaginaries articulated become fulfilled (e.g., targets set in the name of reaching net-zero by 2030). What matters is the temporal enactment that facilities action, even if the valuation promises never actualize, but become continuously revised against the ever-receding value creation horizon. In the emerging calculative arrangements, disclosures form a durable node in
the nexus of promissory relations centered on the idea of long-term financial value creation. Such reporting ultimately orients towards the enrolment of the users that in turn are considered critical in the materialization of transition-related enunciations as the critical guardians for what may qualify as a valuable and worthy investment in the face of the transition.

Finally, as I have posited, the agencement of transition stewardship has been critical in enacting the ontological making of the markets in transition. In line with the market studies, the focus on agencement has rendered visible how making markets in transition real requires ongoing socio-technical agencing. Through the increasingly convergent and materialized calculative infrastructure, of which reporting forms a critical node, the idea of markets being in transition is provided with more realness through the constitution of subjects, objects, and the spatio-temporality of markets in transition. However, this is not to say that a well-defined plan to transition the markets has taken place as my interest has not been to evaluate whether the markets (proxied, for instance, by selection of companies, investment flows, etc.) are, or fail to, transition. Instead, by exploring the ontological making of the markets in transition I have described how such idea comes to be considered real for its increasing effects in the world. However, it is critical to point out that for some, such idea remains unreal, imaginary, false, very much delusional, something not to believe in. Yet, as this study notes, for critical sites and practices, like accounting rule making, such imaginary is now very real for its increasing reality effects in the world, affecting the sense of time, place, and governance solutions in a climate-changed world.

The following table presents some of the frames of this agencement brought forward through the TCFD and which have afforded realness to the increasingly shared sense that markets are being in transition. Such is not a list of the inherent qualities or attributes of some fixed assembly, but better thought of as widely used frames now being used with an increasing realness and force when thought in relation to one another. However, these frames remain contested, and sources of new concerns, in the ongoing search for practical solutions as the debate and controversy over the rules over the transition, the distribution of financial value and risks, and the kind of tools (net-zero, climate scenarios, temporality of transition) considered appropriate in its governance.

<table>
<thead>
<tr>
<th>Transition stewardship</th>
<th>Disentanglement from</th>
<th>Re-entanglement to</th>
<th>By means of TCFD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative script</td>
<td>market failure due to misguided valuation assumptions and lack of information</td>
<td>Alignment of the investment horizon with the transition-related information</td>
<td>Tool to ensure optimal management of transition risk to make markets in transition</td>
</tr>
<tr>
<td>Interessement to climate negotiations and governance</td>
<td>Investors distanced and disinterested actors</td>
<td>Investors as critical partners in the governance of transition</td>
<td>Transition risk: new calculative devices i.e., Paris-aligned scenario analysis, business model reporting</td>
</tr>
<tr>
<td>Investor persona</td>
<td>atomic entity/actor</td>
<td>Infrastructural &amp; distributed; entanglement with the wider investment chain (rankings, ratings, indexes, analysts, auditors, consultants, climate science etc.)</td>
<td>TCFD directed to enroll all actors across the investment chain required in the collective management of transition risks</td>
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<tr>
<td>Risk</td>
<td>Affects relative values of assets; can be managed by singular actors; probabilistic VaR-calculations</td>
<td>interconnected tail-risks: risk mapping from probabilities and plausible futures to imagining disruptive events and alternative futures; risk management collective effort including all actors across the value chain</td>
<td>Scenario planning; future-oriented, transition-related disclosures; Disclosures required by both financial and non-financial actors</td>
</tr>
<tr>
<td>Investor action</td>
<td>exit sensitive, speculative, short-term oriented (Tragedy of the Horizon)</td>
<td>Stewardship of long-term value; investor with optimal position and time horizon to evaluate and ensure long-term value management</td>
<td>TCFD equips and enables more rational and right kind of valuing; commensurability of transition like qualities; engagement efforts with portfolio companies and policymakers; enrollment to finance transition</td>
</tr>
<tr>
<td>Market regulatory action</td>
<td>Climate negotiations outside the purview of financial and market regulators (e.g., central banks, IOSCO, FSB, EFRAG, IASB, SEC etc.)</td>
<td>Transforming the financial market architecture to ensure transition aligned market structures; enrollment of private finance as critical partners</td>
<td>Policy action focused on ensuring the right investment conditions amid transition (e.g., mandating TCFD disclosures); TCFD oriented industry collaboration and collective orchestration of action through investor coalitions (e.g., GFANZ, Climate Action 100)</td>
</tr>
<tr>
<td>Accounting standards</td>
<td>Climate-related issues escape the purview of financial reporting</td>
<td>Long-term value creation, transition-related storytelling in words and numbers; translation of financial effects of transition into present valuations</td>
<td>Framing transition as a financially material issue from the perspective of financial reporting standard-setter by giving substance to the</td>
</tr>
</tbody>
</table>
Financial Reporting infrastructure | Does not enable knowing, measuring and management of financial effects of transition | Formation of the calculative infrastructure for transition based on TCFD; Financial reporting critical technology in the governance of transition | TCFD affords the form and grammar for the various developments unfolding

<table>
<thead>
<tr>
<th>Table 4: Re-entanglements of finance-climate governance nexus established through the TCFD framework as part of the agencement of transition stewardship.</th>
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<tbody>
<tr>
<td>In a sense, the agencing through the agencement of transition stewardship is affected and affects the evolving and complex processes now being designed, tested, and tweaked around the issue of transition, and number of new issues that result from this arranging. As part of such arrangements, the capacity to act results from number of relations arranged anew that afford certain type of capabilities and capacity to act materialize. In such case, it is not that a <em>specific someone</em> gets power to act over <em>the other someone</em>. Instead, the interest lays in the continuous reformatting of these relational processes that all come to format the field of potential anew, and from where new, and surprising effects and actions can emerge.</td>
</tr>
<tr>
<td>Notably, focus on agencement highlights the ways through which political agencies are forged and acquired over time and where the power to act is indeed an <em>outcome</em> of organizing, as Latour persistently insisted. Sometimes, these dynamics lead to a temporary assembly of actors, devices, and spaces that become the authoritative voice for specific concerns (e.g., the TCFD task force addressing climate and transition risks). However, as this collective experimentation continues, proposed solutions undergo scrutiny and debate from where new issues and assembly formations emerge as more actors become enrolled in this collective issue solving (e.g., the emergence of ISSB in establishing a separate standard for climate).</td>
</tr>
<tr>
<td>Against such background, agencement of transition stewardship is not some kind of break from history but something that has evolved and accumulated over time and only can illuminate its past once sufficient convergence of elements orienting around particular form occurs and is worth naming. Such formation does not have beginning nor an end, and hence, no exact origin or underlying principle exists to explain its evolvement. However, the form I have described in the study, has surfaced in a more forceful way in the years leading to and following the Paris Climate Agreement accumulating in the establishment of the new climate standard. The TCFD framework, the new Climate Standard are effects of such arrangements but cannot be reduced to them. They provide the engine for moving and coursing directions of relational arrangements</td>
</tr>
</tbody>
</table>
that remain always in making in the complex interplay of forces and actors as part of dynamic, non-linear, and multifaceted process.

8.4. Contributions to the research on corporate reporting and governance in a financialized world: unlocking the potentials of financialized reporting

Finally, we move on to discuss how does the analysis contribute to the existing studies interested in the financialization of reporting as discussed in chapter two. As I have noted, the existing literature has depicted financialization as a somewhat enclosing, progressively forward-moving force, where emancipatory possibilities always appear to lie beyond the financialized gaze. In what follows, I discuss how this study and the concept of agencement contributes to this literature with explicit focus on the conceptual limits of each sub-literature through which the spread and reinforcement of financialization is seen to occur: discursive frames, institutionalized meaning systems, political economy and macro-level forces, and epistemic foundations.

By centering the discussion on these conceptual limits, my purpose is to recognize both the solid frames of financial signification that arguably structure our collective existence, and their potential to alter the course of things without pre-set limits. For this reason, I purposefully highlight moments of possibility and openings without overlooking the rigidity of financialized frames. As I have previously contended, by representing financialization through the lens of an ever-expanding, continuous, and seemingly coherent rationale, the critical scholarship runs the risk of writing history of finance as all conquering, all knowing and invincible force leaving little space for agency. In what follows, I discuss how the distributed, relational, and performative qualities of the agencement of transition stewardship enables reimagining the conceptual limits present in each sub-literature.

8.4.1. From representational power to power of intervention

For over three decades, critical SEA literature has examined the potential of new reporting forms to instigate meaningful change towards more socially and environmentally just organizational practices. Owing to its dedication to emancipatory research and somewhat normative commitment to sustainability, this body of work has primarily focused on assessing how reporting either challenges or, more often, reinforces existing power structures, ideologies, and societal systems of oppression. While recognizing the potential for reporting to incite transformative change in theory, the research consistently posits that the predominance of business and financial frames results in the mere corporate co-optation of sustainability concerns (Gray 2010; Milne et al. 2009; Spence 2007, 2009; Tregidga et al. 2014) where almost all corporate efforts to incorporate the environmental agenda merely leads to the reproduction of capitalist hegemony.

In chapter two I have argued that these analyses are often underpinned by a reliance on the representational quality of reporting. This perspective aligns with much of accounting research, where the influence of accounting technologies is attributed to their ability to produce distinctive
representations, giving visibility to certain things at the expense of others. This representational quality of accounting, coupled with the prevailing approach to transparency, has led scholars to explore whether reporting can introduce "new visibilities" and "voices" with the potential to "disrupt and encourage possibilities for change" (Gray, Walters, Bebbington, & Thompson 1995 p.214). In practical terms, this perspective has manifested in endeavors to expand the scope of disclosures to encompass also non-financial matters. (See, Quattrone 2021, for similar argument) As several studies emphasize, the financialized capture is observed by the active exclusion of non-economic considerations, thereby stifling the potential for emancipatory change. (Milne & Gray 2013)

Agencement challenges the idea that emancipatory potential of reporting would solely rely on making non-financial issues knowable, in two critical ways. First, rather than seeing financial and non-financial matters as discrete things, agencement emphasizes the intricate ways through which this binary is mutually constituted challenging the rigid boundaries that often define these categories. For instance, in the present case, we observe how issues, previously considered political or non-financial are gradually established as having financial effects eventually affording changes in practices mobilized through the financial signification. Importantly, these translation efforts do not simply result in the appropriation of inherently political or non-financial issues. Instead, we observe how the translation process fundamentally reshapes practices, fostering different outcomes while facilitating new connections without pre-set limits. For example, although the IASB continues to assess accounting matters through the prism of financial materiality, it now considers factors such as the Paris Climate Agreement and the IPCC’s scenario analyses relevant with tangible financial effects that significantly influence the formulation of core financial statements. In a world where revising the fair value of assets—like those shown in the balance sheets of fossil fuel companies—could radically alter the business-as-usual approach of these entities, overlooking such implications due to concerns of "reproducing the capitalist hegemony" seems like a missed opportunity for scholars interested in the emancipatory potential of reporting.

Second, when the emancipatory power of reporting to bring about change is attributed to its representational power to bring visibility, such a process is perceived as predominantly epistemic. In essence, reporting could grant non-financial actors (e.g., workers and activists) agency if certain information and reality behind company’s true operations were rendered knowable as suggested studies such as the one conducted by Boiral (2013). In other words, it is often assumed that if greater transparency were provided on other than financial issues, non-economic stakeholders would possess increased agency to intervene and assert their influence over entities such as corporations as a result of increased knowledge. This perspective places reporting as a device bridging various pre-existing actors, functioning as an accountability tool that provides transparency.

In difference to such studies, the agencement enables thinking how the emancipatory potential of reporting to prompt transformative changes can rest on its ability to reconfigure and intervene existing arrangements on a performative and speculative rather than epistemic and representational way. Rather than fixating on the duality of reality and representation (Boiral
2013; Gray 2010), agencement emphasizes intervention, connection, and experimentation due to the performative quality of financial signification. Hence, agencement enables more interconnected view of reporting that acknowledges the complex web of relations and agencies at play, rather than a mere representational perspective that often assumes particular stakeholder relationships that become mediated through reporting. Whereas the common critique seems to suggest that if the reports were sufficiently truthful, change might be provoked (assumed changes within the readers mind, knowledge, perception of the firm) this study has focused showing how the power to make authoritative claims (e.g. climate risk is a systemic financial stability risk; balance sheet numbers are wrong) requires socio-material organizing of which reporting becomes entangles affecting “change” in a more distributed way.

Arguably, the somewhat excessive focus on the representational power of reporting is rooted in the dominant stakeholder-oriented viewpoint prevalent in this literature (Bebbington & Larrinaga 2014). As these studies often assume the existence of distinctive stakeholder groups (e.g., shareholders, customers, workers, and other stakeholders) with pre-defined interests, they are quick to problematize the prioritization of investors and the resulting emphasis on financial and economic concerns exclusively. However, by merely concluding that things are formatted in the interests of "capital markets", "investors", or some other capitalist signifier (Spence, 2007, 2009), the analysis risks presuming a somewhat unambiguous understanding of financial signification, overlooking potential to reconfigure the financialized structures that evidently surround us.

Therefore, I argue that for limits the empirical analysis often to the discursive frames presented in the reports, the nuances of financial signification remain undertheorized within this sub-stream. Accordingly, I propose that the notion of agencement can offer a generative way forward. In light of its performative, rather than representational quality, the distinction, and assumed gap between the representation and underlying reality becomes less of an interest. In practice, this enables decentering the analysis from the reports themselves, to the wider relational dynamics mobilized through disclosures and their potential to provoke transformative change by assembling things anew. Accordingly, the desired “change” does not follow from increased knowledge but by formatting connections and nodes through which material effects are being produced elsewhere in time and space, differently.

Importantly, the relational and distributed quality of agencement foregrounds how financial signification cannot be enacted by singular actors alone, such as corporations, by discursively framing things financial in reports. Instead, agencement foregrounds how the potency of such articulations depends on the agencement they manage to enact. For instance, in chapter 7 we see in greater detail how merely discursively translating climate change as financially material concern by some powerful actors by adopting the language of climate risk, lacked the power to alter established practices like accounting standard-setting. Instead, we observe years of organizing that has incrementally lent authority and vigor to the concept and established the material conditions to show its existence as a financial concern. TCFD framework was critical in acquiring momentum and direction for such organizing, but was only able to gather its force thanks to the organizing that had preceded it. Consequently, to make affective knowledge claims
through financial signification (with power to have an effect others), requires assembling heterogeneous set of things in an assembly – *agencement* – to give realness to such claims.

To conclude, whereas much of the literature problematizes financialized reporting for its representational quality for enabling “idealized version of the firm’s situation” (Boiral 2013, p.1036; Tregidga et al. 2014) or facades (Cho et al. 2015) agencement takes interest in reporting as a formatting device affording distinct mode of action and enrollment of actors. For instance, consider the type of arrangements that become possible by translating transition as a financial issue affecting both financial regulators and the preparation of company’s balance sheet. Or the kind of connections forged when framing matters through the lens of financial risk, with power to affect the existing, and often legally coded, governance dynamics. In such context, financialized reporting functions as a connected and entangled practice that may play a critical role in materializing transformative effects in the effectively financialized world.

8.4.2. From dominant meaning systems to socio-material entangling

The second sub-literature has investigated how specific norms, logics, and rationales come to shape new reporting rules and forms. These studies often restrict themselves to examining a particular regime (e.g. Bebbington, Kirk, & Larrinaga 2012; Chauvey, Giordano-Spring, Cho, & Patten 2015; Chelli, Durocher, & Fortin 2018; Larrinaga & Senn 2021; Senn & Giordano-Spring 2020) or field (e.g. Clune & O’Dwyer 2020; Etzion & Ferraro 2010; Humphrey et al. 2017; Levy et al. 2010) that either enable or constrain various institutional actors attempting to introduce new norms in their respective regimes and fields. In practice, this analytical focus is mainly concerned with understanding how actors converge on shared beliefs, expectations, and even internal morality regarding appropriate reporting practices. The often-implicit assumption underlying the critical analysis is that reporting could foster substantial change toward sustainability if it were to embody more sustainable norms, logics, and rationales.

In difference, this study challenges the idea that actors merely need to adopt a more *sustainable* meaning system, as the force of an agencement to instigate change cannot be solely reduced to an internal morality or normative framework. Hence, the purpose has not been to identify the shared meaning systems that become institutionalized in and through reporting. Rather, the interest was in exploring how reporting can afford agency that requires collective action, yet cannot be simply attributed to a shift in dominant normative frameworks (Bebbington et al. 2012; Larrinaga & Senn 2021) or prevailing institutional logics (Humphrey et al. 2017). Instead, studying the *process of agencing* pertains to the work of reconfiguring the socio-material basis for action.

In other words, agencement emphasizes the continuous remaking of socio-materiality, foregrounding how the capacity to act and imbue actions with meaning is a practical achievement that requires material, textual, and other investments (Callon 2005, p.4). For instance, as discussed in chapter 7, the increased likelihood to write down the value of carbon-intensive assets does not arise from people adopting more sustainable values, but rather from altering the durable material realities that frame financial signification. Similarly, the central
banker’s, the FSB’s, and IASB's initiation into considering climate transition as a relevant issue, as part of their situated practices, isn't due to an inherent change in their overall institutional logic or normative system. Instead, it stems from alterations in the socio-material reality they find themselves increasingly entangled with and compelled to respond to. Consequently, this study illustrates how the potential to enable transition-related modes of action from the perspective of finance (be it in corporate planning, reporting, standard-setting, or central bank governing) cannot explained away by the transformation of dominant shared meaning systems but necessitates the reconfiguration of the material foundation for financial signification.

For this reason, the emergence of the TCFD framework and its subsequent influence on accounting rule-making cannot be adequately explained through the process of gradual normativity production, as depicted by Bebbington et al. (2012) where innovations are slowly adopted, fostering a convergence of practices around established expectations, norms, and values (Larrinaga & Senn 2021, p.139). Instead, the stability of an agencement, marked by its durability and variance, is better understood through the notion of *convertibility* and the degree of *irreversibility*, as outlined by Callon (1990). For example, consider the gradual organizing necessary to make transition risk as a real concern that can have an effect on number of practices from accounting standard-setting to corporate planning. Or, the work required to shape the investor's needs in a manner that makes the use of Paris-aligned scenario analysis in corporate planning justifiably for financial reasons only. These processes account for the gradual convergence that gradually gains also degree of irreversibility – that is, it would require now more efforts to prove, for instance, that transition risk is *not* a financially material risk to be considered.

Therefore, the elements that grant durability to the agencement of transition stewardship, affording the capacity to act, are not made of coherent set of values, conventions, or norms shared by actors situated within a specific regime or field. Neither is such convergence established in the name of some shared mutually agreed goal. Thus, the transition stewardship agencement evolves by gradually bringing heterogeneous activities into relation with one another - like accounting standard-setting, adherence to the Paris climate agreement, implementing IPCC scenario strategies in business planning, and risk management. In this instance, the TCFD framework can be seen as crystallizing a set of general rules and grammar that foster a more coordinated alignment of elements - not a coherent meaning system of normative framework. This eventually solidifies the degree of irreversibility of transition risk as a real financial concern, moving it away from being a controversial topic, and establishing a more firm and enduring method to understand it. However, it does not predict the ensuing developments in this dynamic field where new issues continually arise and are subject to debate.

Accordingly, agencement offers an alternative representation of the “individual-human agent embedded in institutions, conventions, personal relationships or groups sharing identical values” (Callon, 2005, p.5) by shifting the analysis from individual actors to distributed and less centrally hierarchical organizing. Instead, as Callon (2005, p.6) suggests, over time, "an increasing number of heterogeneous actors participate in the creation of this web," including civil society actors, the accounting profession, regulators, and investment analysts. However, as
he points out, none of these are "reducible neither to intermediaries nor to manipulators" but can be better thought of as "professionals of entangling." (Ibid) This decentralizes the analysis from pre-determined fields or regimes foregrounding how existing material conditions can be engaged, reformatted, and requalified, fostering the emergence of new capacities and potentialities. Consequently, agencement prompts consideration not merely of institutional actors (Brown et al. 2009; Canning & O'Dwyer 2016; Clune & O'Dwyer 2020; Humphrey et al. 2017) altering their respective fields, but rather directs attention to collective organizing that does no respect pre-set field boundaries.

Critically, agencement challenges the spatial imaginary prevalent in these studies facilitating a more topologically diverse analysis. For instance, while Humphrey et al. (2017) discuss the reciprocal relationship between the notion of "long-term investor" and the disclosure conventions propagated through Integrated Reporting (see also, Flower 2015), their analysis seems to be restrained within seemingly coherent reporting field governed by a dominant meaning system of the period. In difference, agencement brings attention to the gradual emergence of new assemblies of authority around distinctive issues that acquire force and power, and their subsequent spatio-temporal formatting (e.g. TCFD Task Force and the spatio-temporal space of “markets in transition”). Hence, agencement foregrounds the evolution of mutual adjustments and formatting that occur through numerous iterations, bringing into existence new spaces where distinct subjects (investors) and objects (companies in transition) can emerge yet that cannot be reduced to pre-existing fields or regimes.

This more topologically sensitive analysis pivots from viewing reporting as a unified field. Rather, it attunes to variety of arrangements assembled around particular issues, and how reporting becomes affected by them. Think about the gradual proliferation of calculative agencies around the issue of transition risk and the simultaneous formatting of both the need for disclosure and the distributed and collective evaluating apparatus being assembled (distributed investor figure). From this perspective, reporting is not the center of analysis, but an entry point to the wider issue-centric agencement in formation affecting “the inventive and creative capacities of actors who are prompted to devise appropriate solutions” (Callon 2009, p.545).

In light of this, the current study seeks to challenge the assertion made by Brown and Dillard (2014, p.1123), and echoed by several critical scholars, who contend that business-friendly frames “have been relatively successful in achieving incremental changes within existing systems but failed to provide the more fundamental challenges to established assumption, structures, processes, and techniques required for sustainability transitions, such as the dominance of capital markets perspectives in mainstream accounting standard-setting”. Specifically, it challenges the viewpoint that envisages change as a somewhat linear progression, where minor disruptions are inevitably outweighed by systemic perpetuation. In contrast, agencement enables taking relationality seriously and dismissing a linear model of change characterized by binary outcomes of progress/retreat or successful/unsuccessful transformations. Instead, it posits that minor adjustments and frictions play a pivotal role in creating conditions conducive to novel and divergent ways of arranging things anew, thereby expanding avenues, and fostering potentials for change. In the present study, this is apparent in
the rapid evolving of reporting rulemaking around the issue of transition, spurred by years of efforts encapsulated in these seemingly minor modifications, as particularly highlighted in chapter 7.

Consequently, through the lens of agencement of transition stewardship, numerous organizing efforts have now coalesced into a dynamic force that neither propels us forward nor pulls us back in a strict sense but plays a critical role in arranging things anew. This force instigates tilts, engenders frictions, induces overflows, and reconfigures flows in a manner that does not adhere to a linear trajectory, yet can potentially facilitate cascading alterations in the current course of things. This process is not driven by the slow establishment of a standardized normative frameworks and goals to be embraced by the masses, but by molding the relational fields and currents in a way that enables financial signification to be affected for instance by the biophysical conditions of the planet.

8.4.3. From the suppression of politics to the moments of politicization

The third sub-literature has provided profound insights into the intricate relationship between corporate reporting and broader financialized governance infrastructures, conceptualizing it a pivotal mechanism for advancing the expansion of financial markets. (Arnold 2009b, 2009a, 2012; Botzem & Quack 2009; Djelic & Sahlin 2009; Mehropouya & Salles-Djelic 2019) In this literature, financialization of reporting predominantly unfolds within the regulatory space of reporting rulemaking, an arena heavily influenced by powerful groups striving to acquire and retain economic control. (Baudot & Robson 2017; Miller 2008) Research in this area often examines the macro perspective, placing reporting in the broader institutional landscape of the financialized world economy and its transnational governance arrangements that have been shaped by neoliberal policy reforms in recent decades. (Arnold 2009, 2012; Botzem & Quack 2006, 2009; Cooper & Sherer 1984; Djelic & Sahlin 2009; Mehropouya & Salles-Djelic 2019; Perry & Nölke 2006) Such developments have seen to influence the mezzo level of accounting rulemaking, fostering a technocratic focus on it that persistently strips debates around standard-setting of its intrinsic socio-political qualities (Botzem & Quack 2006; Young 2014). In what follows, I discuss how the present study nuances these findings.

The concept of "agencement" challenges the conventional spatial framework of regulatory space, typically categorized into macro, mezzo, or micro-levels (Baudot & Robson 2017; Robson & Young 2009). Many analyses, particularly those focusing on macro-level perspectives, argue that the dynamics of reporting rulemaking are primarily shaped by entrenched meta-institutional forces such as financialization. These forces are viewed as nearly unchangeable and form the "background conditions" (Djelic & Sahlin 2009) or governance debates without the possibility of questioning them (e.g., ideals like market transparency, efficiency, and competitiveness used to frame policy debates). Consequently, actors attempting to counter these well-established frames and forces unintentionally reinforce them, solidifying what is metaphorically called an "institutional cage" (Djelic & Sahlin 2009). The common critique suggests that the well-institutionalized financialized transnational governance milieu
depoliticizes and confines debates to subtle nuances or "minor variations," limiting the space for more radical shifts. (Djelic & Sahlin 2009, p.197-198)

This study nuances these macro-level accounting histories such as the ones presented by Arnold (2012), and Mehrpouya and Salles-Djelic (2019). It does so by taking less interest in identifying the seemingly a-political and taken for granted meta-forces driving contemporary developments, and instead, accentuates how specific issues can render existing arrangements problematic. Through this issue-centric approach, the present case describes various moments of politicization, where to politicize is to open something for controversy by questioning existing frames (Callon 2009; Callon et al. 2009; Latour 2007; Muniesa 2010; see also, Young 2014) even when the events under scrutiny are expressly stated to occur outside of policy spheres and within markets.

Specifically, we see several instances of politicization enacted through financial signification that render existing boundaries of markets/politics problematic. As a result, increasing number of actors are made concerned by the pressing issues and eventually enrolled to devise solutions. For instance, the evolving figure of an investor eventually enabled framing climate transition as a possible systemic risk affecting the central bankers and other regulators, and after, also made it a relevant accounting concern for the IASB. However, the enrollment of these entities is not just a reflection of the financialization of the inherently political matter of climate transition. Once entities like the central banks or accounting standard-setter were made concerned over the issue of transition, this in fact resulted in the possibility to further problematize the existing set of relations constituting such actors (including their identity, roles, and authoritative position, essentially, their ability to act).

This focus adds depth to existing macro-level analyses as we arguably once again navigate the realm of the "New Financial Architecture" (Arnold 2012) where the issue of market transparency emerges as an "intellectual technology" of financialization (Miller & Rose 1990; see also, Mehrpouya & Salles-Djelic 2019) To make things worse, standardized reporting is being championed as the solution, potentially overshadowing alternative policies envisioned by different stakeholders and critical scholars. Yet, in the present study, such developments do not culminate in an unequivocal dominance of one actor over others. Rather, it fuels the ongoing formation of a public made concerned (Callon et al. 2009; Latour 2007) now including those previously disinterested in matters like challenges faced by financial institutions in divesting from carbon-intensive industries or the accounting treatment of oil and coal reserves. Hence, the complex problematization of transparency does not simply make something pre-existing visible to a pre-existing public. For instance, while the financial service industry has been placed at the front stage of climate governance in the name of optimal capital allocation, this move has incited a surge of debates and controversies surrounding the industry's valuation methods in a climate-changed world, rather than simply promoting its growth and further financial liberalization.

To elaborate further, in line with the analysis provided by Mehrpouya and Salles-Djelic (2019, p.24-28), this study also suggests that the issue of transparency is fundamentally about the
"reconfiguration of governance problem sites and solutions," the "liquidation of global market governance," and the "redistribution of actorhood in global governance." Similarly, we also see the rising role of investor scrutiny and a broader "expansion of roles attributed to investors and financial markets as bearers of superior knowledge" (Ibid) in global governance. Yet, this study adds layers of complexity to such findings. For instance, while issues are depicted emanating from a "lack of transparency" — a perception that hampers efficient capital allocation by investors — a closer scrutiny reveals that the suggested arrangements, and their impact on redistributing actorhood (agency) across institutions, do not lead to a mere increase power of certain actors. Instead, they foreground the intricate processes through which the main actor of investor himself is placed under the scrutinizing gaze of the financial signification in the name of ensuring prudent management of financial value. In this scenario, it is particularly the investment portfolios of large institutional investors that are criticized for their opacity and lack of transparency, and the kind of calculative tools and imaginaries used, gradually requalifying the investor-investment complex anew in the context of transition.

Accordingly, studying the process of agencing of financial signification enables exploring the socio-material changes needed to alter it through the process of requalification (Callon et al. 2002). While the investor’s gaze remains a pivotal technology, the intriguing aspect lies in analyzing how the emerging agencement influences the criteria for qualifying something as a financially viable investment. For example, in chapter 5, we observe how spatial and temporal dimensions of financial risk are contested. Additionally, in chapter 6, we see how the TCFD framework becomes critical in the socio-technical process of (un)making economic assets (Birch 2017; Birch & Muniesa 2020; Langley et al. 2021) by reframing the method of understanding the value and riskiness of assets. Agencement allows for tracing the imaginaries and tools that frame this financialized gaze, and shape the controversies over what qualifies as an object worthy of investment and care in the climate-changed world.

Finally, if we are interested in discerning how certain issues are deemed relevant for accounting standard-setting (Baudot & Cooper 2021; Young 1995, 2006, 2014; Young & Williams 2010) and identifying the key actors with the expertise to define them (Pelger & Spieß 2017), the concept of agencement serves as a tool to probe the necessary arrangements that wield influence in accounting standard-setting. Analytically, agencement facilitates the description of the diverse constellation of elements required to influence standard-setting and through which reporting is made problematic. For instance, consider the extensive efforts undertaken to actualize the concept of an investor mindful of the financial implications of transition (Chapter 5 and 6), and to embed these implications within the temporal framework of accounting standards (chapter 7). Here, the problematizing did not originate from a unified effort propelled by distinct groups with shared interests. While the types of actors highlighted by Pelger and Spieß (2017) were undoubtedly pertinent to such arrangements (for instance, as we see from the membership of TCFD) the focal point of interest shifts to examining the wider set of elements giving force to problematizations that transcend pre-definite set of actors and their interests.
8.4.4. From epistemic capture to framing financialized modes of action

The final strand of literature that this study contributes to has explored the gradual transformation of accounting rules and conventions. These studies highlight that both the intellectual grammar of financial reporting and the conceptual framework of standard-setters increasingly align with the world depicted by financial economics. (Himick & Brivot 2018; Mennicken & Power 2015; Murphy et al. 2013; Power 2010; Pucci & Skærbaek 2020; Williams & Ravenscroft 2015; Zhang & Andrew 2014, 2022) In this context, financial reporting is viewed as a technology translating the ideals of financial economics into tangible and manageable financialized objects. Thus, reporting functions as a tool in a broader financialized toolkit, promoting the expansion of financialized approaches to interacting with the world. This shift has led many studies to argue that the recent focus of accounting standard-setting, primarily addressing the needs of capital markets over broader societal concerns, is emblematic of financialization. (Chiapello 2016)

In practice, this body of literature primarily seeks to discern whether accounting conventions have become aligned with the episteme of financial economics. For instance, shifts in key terminology have argued to present a critical indication of such epistemic capture. For instance, Zhang and Andrew (2021) posited that the transition from "reliability" to "faithful representation" in the IASB’s conceptual framework effectively removed the potential to challenge fair values outside the gaze of capital markets as these values are now evaluated from the perspective of the "markets". However, this study offers a nuanced perspective on such argument, noting how the very gaze of this “market” can be reconfigured and reframed and thus challenging the valuations. Accordingly, I suggest that the qualitative aspects of accounting, such as faithful representation (or relevance and materiality), should be analyzed in the context of specific issues and their corresponding agencements and not merely reduce them to a singular logic alone. This rationale forms the basis of chapter 7, where I delineate how these qualitative characteristics of reporting, when thought in relation to distinctive agencements can indeed be challenged; for example, by questioning the capability of existing standards to facilitate the faithful presentation of carbon-intensive assets.

Similarly, the gaze of the investor remains often under analyzed even if its portrayal as the primary user, accompanied by the emphasis on investor’s valuation needs as the central objective of standard-setting, emerges as a significant indication of financialization within this literature. This study challenges this limited view of the user, proposing that it is more appropriately analyzed as a part of an agencement as such figure is never a singular nor an abstract imaginary figure. This finding is pivotal as much of the existing literature overlooks the nuanced dynamics of the investor’s ecology. For instance, as part of transition stewardship, the investor figure is a more distributed actor its identity and needs crafted by a more expansive calculative infrastructure being assembled to manage transition risks. Consequently, the user isn't merely a fictitious artifact made up by the standard-setter (Ruff 2022; Young 2006). Neither is it a mere "idealized economic actors, mythical individuals who populate the world of positive economics" (Williams & Ravenscroft 2015, p.771). Rather, the user figure gradually
given force to affect standard-setting has socio-material bearings, made real through the emerging calculative infrastructure and market imaginary around transition risk.

Accordingly, the investor figure of transition stewardship isn't merely a product of theoretical conjectures or mere blind commitment to unambiguous epistemic ideal types. Instead, it emerges from arrangements, as reporting issues are increasingly made intertwined with things like climate scenarios produced by the International Energy Agency, Climate Agreements, and other transition-related issues. Moreover, while the standard setting continues to orient around the needs of such user, those needs are not unambiguous. Consider, for instance, the figure of a large, structurally bound institutional investor whose modes of acting are constrained by various existing market arrangements in need of reconfiguring to enable restructuring of investment portfolios. Consequently, the changes in accounting rulemaking are driven more by the complex practical and infrastructural adjustments necessary for reconfiguration, rather than a straightforward commitment to financial economics by the standard-setter.

In a sense, the concept of agencement underscores the intricate web of relations that necessitate examination when analyzing shifts in accounting rulemaking. For instance, the sequential removal and subsequent reintroduction of the concept of "stewardship" (Pelger 2016, 2020; Zhang & Andrew 2022) in the IASB's conceptual framework becomes intriguing when viewed in relation to process of issue-centric agencing, rather than merely attributing such changes to the assumed general logic of financial economics. While Zhang and Andrew (2021) posit that the IASB's reintroduction of the concept was a financialized endeavor for it serving "the needs of long-term investors", these modifications become even more compelling when linked to the wider arrangements afforded through such changes around specific issues. Hence, in contrast to their argument that weaving in stewardship into the purpose of financial reporting does not substantially alter their core aim but rather re-couples it with the capital market-focused direction of the new conceptual framework, I posit a different view. I contend that such a modification might yield profound ramifications depending on how it becomes incorporated within the practices afforded through reporting (e.g., justifying the demand for management to embrace bolder transition strategies, net-zero targets, and changes in the business model in the name of long-term value creation, and so forth).

As such, the study of agencement enables tracing the “muddled reality” faced by the standard-setter, where no concept has a fixed meaning but is always tied to broader contexts in which they find relevance (Williams and Ravenscroft 2015). This aligns with Edgley's (2014) study, which shows how accounting concepts follow diverse trajectories "relative to certain conditions, events, [and] actors" (Edgley 2014, p.255). The notion of agencement extends this understanding, as it emphasizes trajectories related to distinct issues, reporting becomes entangled with, and the modes of action enabled through changes in the grammar of accounting rulemaking. Accordingly, the agencement of transition stewardship constitutes a distinct "assemblages of factors, actors, powers, and events” (Ibid, p.256) that shape the trajectory of how accounting concepts are enacted, which includes notions like the user, stewardship, materiality, faithful representation, and relevance, as elaborated upon in chapter 7.
Finally, this study responds to Himick and Brivot (2018) who lament the lack of empirical studies on the “micro-dimension” of standard-setting, as compared to those addressing macro-level transformation, expressing the need to understand the processes underpinning the financialization of accounting and to identify the key players driving these changes (p. 40). I argue that the concept of agencement facilitates navigating this micro-macro binary in a manner that allows for a detailed examination of the intricacies of standard-setting, while also connecting observed changes to these broader “macro-level” transformations. As elucidated in the empirical chapters, influential actors, such as the G20 Finance Ministers, central bankers, and the FSB, are critical in giving force in making accounting standards problematic. This is in line with Pucci and Skærbæk’s (2020) assertion that “influential actors such as the G20 and the Financial Crisis Advisory Group can effectively problematize the need for change” (p. 16). However, this study reveals that these actors are not merely the source of change; rather, they are components of a broader agencement that legitimizes specific issues requiring solutions. In other words, the study illustrates how these actors are framed, enrolled, and mobilized by others, establishing them as critical nodes in the trajectory of issues like climate risk, which ultimately influence the trajectory of accounting standard-setting.

Consequently, the shifts observed in standard-setting are not simply the product of a cohesive epistemic community unified by a shared commitment to financial theory, as was the case with Himick and Brivot (2018) and Pucci and Skærbæk (2020). Rather, these changes are driven by the need to align standard-setting with an agencement that has grown in prominence. In the context of transition stewardship, this includes distinctive elements such as the user as a transition steward, wider transition related calculative infrastructure, and the evolving imaginary of markets being in transition. This agencement, fortified through collective and distributed organizing, has progressively brought into being with increasing force to affect change, rendering notions of transition risk and its financial implications as palpable realities. While the tenets of financial economics, such as those associated with the efficient market hypothesis, play a pivotal role in the standard-setting world, the emphasis on agencement repositions the analysis in a generative way; rather than exploring the extent to which financial theories are realized, the focus on agencement brings attention to the kind of arrangements and modes of action that are being configured through financialized scripting.
9. Practical implications and concluding remarks

This final chapter concludes the thesis by discussing the relevance and importance of the study, while exploring directions for future research. To do so, I will begin by taking the reader on a brief journey through the emerging ecology of transition stewardship to highlight the concept’s usefulness in making sense of the current developments unfolding. Following this, I will delineate future research avenues by directing the reader's attention to prevalent issues now arising from the frame of transition stewardship. Finally, I conclude by underscoring the imperative need to engage with financialized issues in a both financialized and climate-changed world.

9.1. Looking at the world through the lens of transition stewardship

The map, the markers, the layout of the path are, of course, different, but once they are aligned with one another they establish a certain continuity. Moreover, in case of uncertainty, the steps of countless hikers who had gone before or the little piles of fresh donkey manure would add a welcome confirmation of the circuit I was to follow. […] although I was unquestionably enjoying the privilege of being “outdoors” […] I was definitely inside a network whose walls were so close together that I chose to lean on them every ten minutes or so, verifying whether the map, the markers, and the approximate direction taken by other hikers were indeed in correspondence, forming a sort of coherent conduit that would lead me up to the Pas de l’Aiguille. […] If you doubt that I needed to stay within a network (“Don’t leave the marked trails”), you are welcome to go get lost up there in my wake, some foggy day when you can’t see the tips of your shoes. […] (I haven’t yet acquired a GPS, which would end up making me so thoroughly surrounded that I wouldn’t even have to look at the landscape “outside” to know where I am; it would be enough to keep my eyes fixed on the screen, like totally blind yet perfectly oriented termite.

Bruno Latour 2013, p.75-76

It is a loop: we are directed by what is in front of us; what is in front of us depends on how we are directed. […] A path, remember, can be what you follow in order to reach somewhere. How do you know which way to go? What are you hoping for in going for?

Sara Ahmed 2017, p.48

It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots; what thoughts think thoughts; what descriptions describe descriptions,
what ties tie ties. It matters what stories make worlds, what worlds make stories.

Donna Haraway 2016, p.12

The purpose of this research has not been to explicitly develop recommendations for practice and policymaking. Nor has it aimed to provide an exhaustive historical account, nor definite answers, that would settle all the issues once and for all. Instead, the primary objective has been to forge new approaches to comprehend and interpret the ongoing developments, thereby potentially offering fresh perspectives to think about the role of reporting in the governance of climate transition. Considering such purpose, the primary conclusion of this thesis revolves around the proposition that the concept of agencement of transition stewardship offers a new framework for contemplating developments within the climate governance-markets nexus. Consequently, to evaluate the “usefulness”, I propose it is critical to assess how well, or badly, the concept can orient the analytical gaze of future research, and other interested actors, towards new issues rendered visible through it.

However, before foregrounding some of those issues, let’s first look at the kind of world building transition stewardship can be understood bringing into life. This brief walk through the imaginary of transition stewardship, and its increasingly livable ecology seeks to show how it is currently being mobilized and translated, imbuing the sense that we are truly in a moment of transition. In doing so, my purpose is to leave the reader with a feeling that would further emphasize the significance and practical implications of the study and its findings. That is, to provide answer to the famous “so what” question posed to any researcher.

To view the world through the lens of transition stewardship, one only needs to observe how this concept is currently being put into practice by various actors. For instance, when you visit the websites of prominent financial institutions, it becomes evident that the process of subjectification around the idea of stewardship has become firmly established. Take any major financial institution, be it asset owners or manager, and you will likely find that active stewardship is presented as a potent solution for driving the transition to a low-carbon world. Similarly, most of them advocate being members of influential investor coalitions with the goal of advancing the transition to net zero, often citing TCFD disclosures as one of the tools within their stewardship toolbox.
Moving forward, it is evident that the subject of stewardship is well coupled with the numerous pledges, commitments, transition plans, and transformation initiatives of companies increasingly made across various sectors. Whether it is fossil fuel companies, automobile manufacturers, retail giants, or transportation companies, you will find that in just few years, virtually every major corporate entity has made commitments to transition their operations toward Paris set and Net Zero goals, often accompanied by a comprehensive list of related narratives, targets and initiatives. As a result, we now live in a world where a wide range of actors—governments, cities, businesses, influential individuals, and organizations—are all setting their sights on achieving ambitious transition targets.

Furthermore, as we have discovered throughout the study, the process of transition cannot be effectively enacted, managed, or evaluated without the necessary calculative equipment. Tools are required to ensure that we have a clear understanding of our current state—where we are now—and where we intend to go, providing the essential signposts that guide us towards the direction in which we wish to proceed. Hence, not surprisingly, as various transition commitments and plans have proliferated, so too has the broader calculative infrastructure related to transition. This expansion encompasses the development of various tools designed to evaluate, measure, and monitor progress toward transition goals. It has also given rise to a range of "Paris Aligned" investment products, like the Bloomberg Paris-Aligned indices and benchmarks, which are designed to “to allow investors to pursue a net-zero emissions strategy”\textsuperscript{81}.

Finally, upon finalizing the writing of my analysis, the following picture was shared on my Twitter feed—a screenshot from the Bloomberg terminal, that showcased a comprehensive array of climate and transition-related metrics for display. These metrics were designed to evaluate a company's management of transition and included factors such as whether the company had adopted TCFD-aligned metrics and disclosures, whether it had a climate change policy in place, and whether its emission reduction plans were validated by Science Based Targets or were on a promising path to achieve Net Zero emissions by 2030.

However, witnessing this fast-mushrooming ecology of transition stewardship evoked conflicting feelings. On one hand, I was astounded by the extensive development of this broader calculative infrastructure that had now been layered onto these metrics and screens designed to assess progress in the context of transition. Surely, in the desire to make transition governable, these developments speak of progress. Reflecting on the contentiousness surrounding the term transition as financial market concern just a few years ago when the TCFD recommendations...
were being drafted, it is clear that the markets are indeed undergoing some kind of transformation.

However, on the other hand, I can't help but also notice other accounts, numbers, and signposts - a growing body of research indicating that we are nowhere near reaching the targets set in Paris, as alarmingly, despite all the celebrated "progress," global emissions continue to rise. In summarizing the state of scientific understanding, in April 2022, the United Nations Secretary-General characterized the most recent IPCC report as a “litany of broken climate promises”, “a file of shame, cataloguing the empty pledges that put us firmly on the track towards unlivable world”, “on a fast track to climate disaster”

In light of these accounts, I cannot help but recall Bruno Latour's remarks and wonder, whether this progress is merely making us totally blind, yet perfectly oriented termites, afraid of the disorientation in the face of the Tragedy of the Horizon that scientific accounts continue to portray, all while calling for drastic action.

9.2. Directing the critical gaze in the world of transition stewardship

Whenever I have explained the focus of my research, I have often encountered questions like: "So, what's your assessment? Are we making progress? Are the measures being taken leading to the desired change?" Providing a straightforward answer to such questions has proven challenging. First, for the obvious lack of qualifications to do so. In the light of this thesis, I am only able to discuss the implied progress in terms of changes in momentum and material realities surrounding reporting infrastructure and the financial discourse related to transition.

Yet, even when narrowing the focus, giving a clear-cut response remains elusive. However, if there is one seeming contradiction I have learnt to embrace over the past years, it is this: Things are changing at an unprecedented pace, exceeding the expectations of many; Things are not changing nearly fast enough. This contradiction leaves one in a precarious position, teetering on the edge between perpetuating existing destructive patterns, while striving to drive transformative change. However, it is precisely from such a paradox that I propose the implications of this study for future research, policy, and practice can be derived and articulated.

Financialization of climate governance and climatizing financial governance through transition stewardship

The first implication relates to the main argument defended in this thesis, which underscores the importance of engaging with the phenomenon of financialization from within the financial signification rather than dismissing it as a mode of knowing from the outset. As I have emphasized, while there is a valid case for advocating alternative, non-financial evaluative methods, and approaches, it is essential to acknowledge that in today's financialized world, addressing issues through financial imagination is an important mean of effecting change. In the current case, this becomes evident in how the mobilization around transition-related financial

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82 The United Nations’ Secretary General, Antonio Guterres, in an accompanying video message to the IPCC’s sixth assessment report in April 2022.
risks has successfully driven significant changes in established material, institutional, and legal conditions that are often coded around financialized frames.

As I have previously emphasized, interrogating financial signification does not imply confining pre-existing, inherently non-financial issue within some predefined boundaries of "private" or "the market." Rather, in alignment with Callon's (2009) perspective, as conveyed in the opening quote of this thesis, it is essential to interrogate various financialized frames without merely naming them and assigning them with blame. This approach helps us avoid overlooking critical sites and nodes through which meaningful change can be realized, such as financial reporting standards, financial institutions, and the narratives and calculations that shape stories around financial value creation. If anything, this study has highlighted the plasticity of financialized frames that constitute the investor’s gaze, and the possibilities for its transformation, that can lead to both the creation and destruction of financial value and problematize existing governance arrangements. Importantly, such formatting does not involve a single entity gaining power over another. Instead, there is an ongoing formation of subjects and objects affected by the financialized gaze enacted through distributed and relational arrangements.

In this light, it is important not to view the developments described throughout this thesis as a one way "financialization of climate governance," even though acknowledging and voicing such observation is crucial. Yet, here, too, contradictory statements can be true: Climate governance is being financialized, taking attention away from alternative policy solutions; Financial governance is being climatized, opening path for new policy solutions given that the emerging new issues, overflowing from the evolving arrangements, continue to be engaged, experimented, and further problematized.

**Engaging and experimenting with financialized issues**

This leads to a second implication related to the benefits of engaging in issue-centric inquiry. Specifically, I propose that paying attention to the dynamics of issue formulation and the simultaneous emergence of concerned groups provides a useful approach for tracing how new assemblies of political authority come to acquire force and power in the governance of transition. In the light of the findings of this study, I argue that it is important to pay attention to the issues that surface as part of the agencement of transition stewardship. After all, when a frame is established, it gives rise to a multitude of novel questions and concerns. Consequently, I suggest that these emerging concerns stemming from the framing of transition stewardship offer valuable threads for practitioners, policymakers, and future academic research to follow and engage with.

But what are the specific issues that emerge through the agencement of transition stewardship? What are the new matters of concerns, and the corresponding concerned groups, that warrant attention? Instead of providing definitive answers to these questions, I would like to draw attention to the types of issues that arise if we trace the trajectory of transition risk a little longer through the lens of transition stewardship.
The first issue that naturally arises concerns the actual implementation of stewardship practices, which are now widely endorsed by financial institutions and increasingly recommended by policymakers as effective means to direct capital toward green investment. Or, as learned in this study, to transform and transition existing businesses to align with the goals of the Paris Agreement and other transition objectives. Regarding these issues, I propose that an interesting avenue for future research is to focus on the collective efforts mobilized under the banner of stewardship.

In practice, two noteworthy examples of such efforts come to mind: Climate Action 100+ and the Glasgow Financial Alliance for Net Zero (GFANZ). The former, established in 2017 around the time when the TCFD recommendations were made public, was until recently the world’s largest investor-led initiative aimed at ensuring “the world’s largest corporate greenhouse gas emitters take necessary action on climate change” (Climateaction100.org). As part of their three-point engagement agenda, one of the key objectives was to require investee companies to disclose “enhanced corporate disclosure and implement transition plans to deliver on robust targets”, as to be “in line with the financial recommendations of the Task Force on Climate-related financial disclosures” (Ibid).

In a similar vein, the Glasgow Financial Alliance for Net Zero, co-chaired by Mark Carney and supported by influential figures like Mike Bloomberg and Mary Schapiro, was established in 2021 during the COP 26 at Glasgow as a continuation project of the TCFD. It has since become the world's largest coalition of financial institutions committed to transitioning the global economy to net-zero greenhouse gas emissions. However, this initiative has not been without controversy, with some, including the UN, advocating for a more explicit link to COP climate targets. Conversely, several prominent financial institutions have left or threatened to leave the initiative due to concerns about potential litigation risks associated with overly ambitious decarbonization goals.83 Within this context, intriguing questions arise also regarding the role of reporting in these stewardship efforts: What is the role of disclosures in these engagement efforts? How do new transition-related accounting objects factor into these engagements? How are they evaluated, and what are their effects? Furthermore, how is relevant accounting information established and deemed relevant as part of these arrangements?

Secondly, another significant issue revolves around the evaluation of the new transition-related disclosure objects and their interconnectedness with financial reporting items and financial planning. In this context, critical gaze could place attention to the evolving calculative infrastructure designed to assess the progress around transition, along with the role played by accounting information and reporting in this process. Furthermore, the inquiry into these systems could go beyond mere considerations of “credibility” and “accuracy” of the produced transition-related narratives, accounts, and numbers. Rather, they could shed light on the intricate power dynamics unfolding within the realm of transition governance that may be

---83 See, for instance, Morris, S., Bryan, K., & Walker, O. (2022, September 21). US banks threaten to leave Mark Carney’s green alliance over legal risks. Financial Times. [https://www.ft.com/content/0affebaa-c62a-49d1-9b44-b9d27f0b5600]
displayed through the reported information. For example, an article in the Financial Times articulates a critical concern that underpins these unfolding dynamics84:

Global banking executives have been put in an uncomfortable position by the climate crisis. For decades, some of their most important relationships have been with leading figures in the fossil energy sector and carbon-intensive industries. Rather than cut these clients adrift and leave them to be eaten alive by a new generation of clean tech companies, it’s far less awkward to keep the money flowing under the banner of transition finance.

This is a term that’s now used mainly to refer to funding for highly polluting companies, rather than for the energy transition as a whole. It raises the question of what sort of transition we are imagining here. One in which the energy system of 2060 is dominated by all the same energy giants, just without the carbon emissions? Or one in which many of these businesses have faded away, replaced by a new generation of companies ruthlessly focusing on low-carbon innovation. […] The debate is worth having.

Similarly, during writing down these reflections, I was struck by an event hosted at the Southbank Center in London. This venue, primarily known for its cultural events, featured none other than Mark Carney himself to discuss the state of transition from the perspective of financial markets. During this event, Carney highlighted several critical issues currently play, one of which pertains to how financial reporting serves as a window into evaluating the transition performance of companies and the dynamics unfolding around such management. Using fossil fuel companies as an illustrative example, Carney argues that based on current numbers, these firms are not allocating nearly enough of their overall cash flow toward transition efforts reflecting their current lack of capacity to transform their business models fast enough. Yet, in doing so, he notes out the many shades that managing transition risks can look like that is not necessarily limited to the goal of transforming “dirty” assets into “clean” ones:

And that’s the strategic choice they are facing […] And there is a perfectly rational thing to do, which is to say, I am an oil company, and I am not going to be able to transition. So, I am just going to wind it down, and I am going to give the money back over time, while let other people invest in and build out the energy of the future.85

In these instances, intriguing questions arise regarding the role of reporting in assessing the progress of managing such transformations towards Paris-aligned future, or conversely, managing the winding down of industries and businesses. Such choices critically prompt considerations about the management of such processes, and how "the money is given back in time" to relevant actors, to borrow Carney's words. These questions extend to matters of justice,

particularly concerning the welfare of workers and local communities, which bring forth a whole new set of considerations when discussing the "stakeholder relationships" mediated through financialized reporting. Hence, scrutiny is now necessary regarding the narratives surrounding transition, the assumptions underpinning them, and the future scenarios they are based upon.

Finally, as a third signpost, I would like to highlight an issue related to the collective management of financial value amid transition. This issue is crucial, as it has potential to defy conventional distinctions between public and private sector actors, or markets and states, giving rise to new dynamics in the financialized governance architecture. This phenomenon is now explicitly driven by policymakers, ranging from the United States to Europe, who advocate for the “mobilization of private capital” as a solution to finance the development of a low-carbon world and the necessary infrastructure it entails and the role of government ensuring the conditions for the mobilization.86

Scholars outside the field of accounting studies have raised concerns about this approach, particularly regarding the concept of “derisking” in the context of transition, when referring to government actions aimed at making investment projects more appealing to private investors. This can include providing guarantees or financial incentives to encourage private capital to invest in projects that might otherwise be considered too risky. Critics, such as Daniela Gabor (2021; Dafermos et al., 2021), argue that this approach could lead to governments assuming the burden of private risks while the benefits primarily accrue to private investors, effectively shifting the financial burden and risk from private investors to taxpayers. Yet, such issue is seen to open new openings as well. As governments have become publicly acknowledged as the necessary partner in investment in the midst of transition, such discussions have generated new issues regarding the role of state that could possibly also lead to what Gabor has named “big green state” 87. This, unlike the pure derisking role, could involve in sift in economic governance paradigms involving large public investments instead of merely placing the private financial institutions as the main stewards of transition financing. In all cases, however, interesting dynamics are unfolding about the shared stewardship in the attempt to decarbonize economies.

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86 See, for instance, the European Commission’s website on Derisking investments” in the context of energy transition stating that since the EU lacks sufficient funds to cover investment necessary to transition “ setting favorable framework conditions is necessary to ensure private financing supply to investments in energy efficiency of buildings, industry, transport and other sectors. This process takes place in the broader context of the EU policy focus on Sustainable Finance and the development of the Strategy for Financing the Transition to a Sustainable Economy, which also covers the financing framework for energy efficiency investments.” (European Commission, 2023) [https://energy.ec.europa.eu/topics/energy-efficiency/financing/de-risking-investments_en]; Also, the interview “Defining Bidenomics” with Daniela Gabor, Ted Fertik and Tim Sahay (2023) on Polycrisis Newsletter under Phenomenal World speaks on the same idea in the US context. [https://www.phenomenalworld.org/interviews/bidenomics/].

In this context, climate-related disclosures, particularly those adhering to the TCFD framework, are portrayed as a "derisking tool" (Dafermos et al. 2021). This perspective suggests that disclosures, by aiding the evaluation of companies' willingness, capabilities, and progress in transformation, might defer policymakers from implementing stricter measures against environmentally unsustainable companies and industries. This delay is assumed to occur when companies demonstrate sufficient commitment to transition and transform. In this scenario, financialized reporting serves as a crucial platform where these visions and commitments are expressed, showcased, and assessed.

Choosing to focus on the issue formation to which reporting becomes entangled positions reporting not at the center of the analysis but as an entry point for tracing and analyzing the broader relational field it enacts. In doing so, it offer a fertile ground for accounting scholars to study various issues that may, at first glance, seem to exist seemingly outside the conventional reporting landscape and its associated institutions. Once these issues are identified and followed, the framework employed in this study provides a practical approach to engaging with the financialized formatting acquired through reporting. This is especially critical during times when financial value creation, and its protection, has become the issue around which much of the social and political organizing now orients around.

**Mobilization of financial signification as a political technology**

From these observations, the third and final implication emerges, highlighting how this study emphasizes understanding financial signification as a political technology central to much of the current social and political organizing. In this context, the concept of transition stewardship can be viewed "as a technique to identify the true value of things", and as "a method to decide which things should be financed and which should not" (Muniesa & Doganova 2020, p.105).

Consequently, the issue of financial signification is not merely a technical concern affecting the limited number of seemingly bounded market actors. Instead, as this study has rendered visible, the concern of framing things financial in the climate-changed world comes to operate with vast legitimation powers (Muniesa 2017, p.446).

Through this approach, it becomes evident that the issue of financial signification, with its distributed and collective enactment, extends beyond being a technical concern limited to a seemingly bounded group of market actors. In other words, the task of financial evaluation is not solely confined to the traditional world of financial markets, and its singular, powerful actors often broadly labeled as investors. Rather, in the interconnected world of financialized governance arrangements, financial signification unfolds along a wide range of distributed and collective practices all taking part in this process while altering, materializing, questioning, and speculating the frames through which financialized gaze can be enacted.

Reporting stands as a crucial node within these arrangements, as valuing something involves a set of socio-technical activities like accounting, as well as factors such as laws, regulators, and standards that collectively shape the understanding of the financial effects of transition. Hence, while at first, the act of evaluating transition related financial risks and opportunities might be thought to be limited to the assignment of value by singular actors based on their interests,
principles or risk appetite, the thesis shows how financial valuation is always a collective endeavor rooted in material reality. For being a practical achievement, it necessitates establishment of material conditions that enable the constitution and articulation of specific claims over others.

Consequently, this study emphasized how the act of signifying things financially exerts significant political influence in today's financialized world. This influence is particularly prominent in the governance of transition, where the assignment of financial value intersects with critical, even existential concerns, involving questions of ownership, time, the future (who has the right to exist, who is granted the time to transition, and at whose cost), and control. This is especially the case when financial techniques play a decisive role in determining "what should be done and what should exist." (Muniesa 2017, p. 447, see also Doganova & Muniesa 2020) becoming the driving force behind the orderly promotion of collective worth, shaping “not only economic conduct but the orientation of the transformation of the world altogether” (Muniesa 2017, p. 445). As a result, financial signification emerges as the primary method through which societies respond to the most pressing issues of our time, including the climate crisis.
References


Baudot, L., & Cooper, D. J. (2022). Regulatory mandates and responses to uncomfortable knowledge: The case of country-by-country reporting in the extractive sector. *Accounting,


Czarniawska, B. (2014b). *Social Science Research. From field to desk*. SAGE Publications Ltd.


has met Him, but everybody talks about Him”: The power of myths in the adoption of management innovations. *Accounting, Auditing and Accountability Journal, 31*(5), 1349–1380.


Accounting, Organizations and Society, 34(6–7), 810–825.


Power, M. (2010). Fair value accounting, financial economics and the transformation of


Appendices

Appendix 1: Interviews

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<td>Interview 34</td>
<td>General figure / investor spokesperson</td>
<td>Apr-21</td>
<td>25:00 min</td>
<td>Zoom</td>
</tr>
</tbody>
</table>

**Notes:**

All interviews have been recorded and transcribed.

The names, and detailed description of the professional profiles, have been anonymized for reasons of confidentiality.
Appendix 2: List of primary documents used in chapter 5


Carbon Tracker. (2011). *Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble ?*


Carbon Trust. (2006). *Climate Change and shareholder value*.


de Boar, Y. (2007). Investment and financial flows to address climate change.

Demerse, C. (2009). *Climate Change at the G8 Leaders’ Summit in L’Aquila, Italy*.


Harvard University; CERES. (2004). Sustainability and Risk : Climate Change and Fiduciary Duty for the Twenty-First Century Trustee.


Innovest. (2002b). *Climate change and the financial services industry: module 2 - A blueprint for action*.
UNEP FI Climate Change Working Group.


UNEP FI. (2005a). 0.618.. CEO briefing.


UNEP FI. (2006). Declaration on Climate Change by the Financial Service Sector.


## Appendix 3: Primary video and audio material used in chapter 6

<table>
<thead>
<tr>
<th>#</th>
<th>Event</th>
<th>Type</th>
<th>Location</th>
<th>Date</th>
<th>Length</th>
<th>Title of video</th>
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<tr>
<td>V2_1</td>
<td>TCFD Plenary Session</td>
<td>Recording of live event</td>
<td>Tokyo</td>
<td>Mar-16</td>
<td>38:00</td>
<td>Curtis Ravenel, Masaaki Nagamura, &amp; Wim Bartels - Background and Remit of the TCFD</td>
</tr>
<tr>
<td>V_2</td>
<td>TCFD Plenary Session</td>
<td>Recording of live event</td>
<td>Tokyo</td>
<td>Mar-16</td>
<td>04:48</td>
<td>Mary Schapiro, Former Chair of the US SEC &amp; Secretariat, Task Force of Climate-related Financial Disclosures</td>
</tr>
<tr>
<td>V2_3</td>
<td>TCFD Plenary Session</td>
<td>Recording of live event</td>
<td>Washington</td>
<td>Mar-16</td>
<td>34:27</td>
<td>TCFD Washington Plenary - Panel Session with Task Force Members 5 May 2016</td>
</tr>
<tr>
<td>V2_4</td>
<td>TCFD Plenary Session</td>
<td>Recording of live event</td>
<td>Washington</td>
<td>May-16</td>
<td>33:37</td>
<td>TCFD Washington Plenary - Panel Session with Financial Sector 5 May 2016</td>
</tr>
<tr>
<td>V2_5</td>
<td>TCFD Plenary Session</td>
<td>Recording of live event</td>
<td>Washington</td>
<td>May-16</td>
<td>28:43</td>
<td>TCFD Washington Plenary - Mark Lewis Keynote 5 May 2016</td>
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<tr>
<td>V2_7</td>
<td>TCFD Plenary Session: Exploring risks &amp; opportunities on the way to a low carbon economy</td>
<td>Recording of live event</td>
<td>New York</td>
<td>Jul-16</td>
<td>54:28</td>
<td>TCFD New York Event - Panel on Scenario Analysis</td>
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<tr>
<td>V2_8</td>
<td>TCFD Plenary Session: Exploring risks &amp; opportunities on the way to a low carbon economy</td>
<td>Recording of live event</td>
<td>New York</td>
<td>Jul-16</td>
<td>60:01</td>
<td>TCFD New York Event - Panel on Transition Risk</td>
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<tr>
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<td>TCFD Plenary Session: Policy and Corporate perspectives on Climate Disclosures</td>
<td>Recording of live event</td>
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<td>11:30</td>
<td>TCFD Paris Event - Introduction to the FSB Task Force on Climate-related Financial Disclosures</td>
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<td>TCFD Plenary Session: Policy and Corporate perspectives on Climate Disclosures</td>
<td>Recording of live event</td>
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<td>Sep-16</td>
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<td>V2_11</td>
<td>TCFD Plenary Session: Policy and Corporate perspectives on Climate Disclosures</td>
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<td>Sep-16</td>
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<td>TCFD Paris Event - Panel The Business Perspective on Climate-related Disclosure Chair</td>
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<td>V2_12</td>
<td>TCFD Plenary Session: Policy and Corporate perspectives on Climate Disclosures</td>
<td>Recording of live event</td>
<td>Paris</td>
<td>Sep-16</td>
<td>43:01</td>
<td>TCFD Paris Event - Panel The Policy Perspective on Climate-related Disclosure</td>
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<tr>
<td>V2_13</td>
<td>TCFD Plenary Session: Facing Climate-related risks &amp; opportunities - the need for disclosure</td>
<td>Recording of live event</td>
<td>Amsterdam</td>
<td>Oct-16</td>
<td>44:53</td>
<td>TCFD Amsterdam Event - Introduction to the TCFD</td>
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<tr>
<td>V2_14</td>
<td>TCFD Plenary Session: Facing Climate-related risks &amp; opportunities - the need for disclosure</td>
<td>Recording of live event</td>
<td>Amsterdam</td>
<td>Oct-16</td>
<td>11:02</td>
<td>TCFD Amsterdam Event - Welcoming Remarks</td>
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<tr>
<td>V2_17</td>
<td>FSB TCFD Webinar: Recommendations overview</td>
<td>Webinar</td>
<td>Online</td>
<td>Jan-17</td>
<td>55:12 min</td>
<td>TCFD Recommendations Report Overview Webinar 24 January 2017</td>
</tr>
<tr>
<td>V2_18</td>
<td>Presentation from, and interview with, a member of the TCFD Task Force</td>
<td>Webinar</td>
<td>Online</td>
<td>May-17</td>
<td>39:57 min</td>
<td>Webinar: Task Force on Climate-related Financial Disclosures</td>
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<tr>
<td>V2_19</td>
<td>TCFD recommendations launch video by Michael Bloomberg</td>
<td>Video message</td>
<td>Online</td>
<td>Jul-17</td>
<td>01:36 min</td>
<td>TCFD - Michael R. Bloomberg Recommendations Report Launch Video Message</td>
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<tr>
<td>V2_20</td>
<td>Introduction to the FSB Task Force on Climate Related Financial Disclosures</td>
<td>Video introduction</td>
<td>Online</td>
<td>Jul-17</td>
<td>04:49 min</td>
<td>Introduction to the FSB Task Force on Climate-related Financial Disclosures (1)</td>
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<tr>
<td>V2_21</td>
<td>FSB TCFD Webinar: Final Recommendations Report Overview</td>
<td>Webinar</td>
<td>Online</td>
<td>Aug-17</td>
<td>36:00 min</td>
<td>TCFD Final Recommendations Report Overview Webinar 9 August 2017</td>
</tr>
<tr>
<td>V2_22</td>
<td>Keynote from, and interview with, a member of the TCFD Task Force</td>
<td>Webinar</td>
<td>Online</td>
<td>Nov-17</td>
<td>26:09 min</td>
<td>Keynote: The FSB's Task Force on Climate-related Financial Disclosures</td>
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<td>V2_24</td>
<td>TCFD Scenario Analysis Conference</td>
<td>Recording of live event</td>
<td>New York</td>
<td>May-18</td>
<td>18:49 min</td>
<td>TCFD New York Event - Overview of the TCFD Recommendations</td>
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<tr>
<td>V2_25</td>
<td>TCFD Scenario Analysis Conference</td>
<td>Recording of live event</td>
<td>New York</td>
<td>May-18</td>
<td>75:15 min</td>
<td>TCFD New York Event - Practical Application of Scenario Analysis in the Financial Sector</td>
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<tr>
<td>V2_26</td>
<td>TCFD Climate Leadership Webinar</td>
<td>Webinar</td>
<td>Online</td>
<td>Aug-18</td>
<td>51:24 min</td>
<td>Climate Leadership Webinar - How You Can Support the TCFD</td>
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</tbody>
</table>
Appendix 4: List of primary documents used in chapter 7


Guthrie, L. (2016). Mapping the sustainability reporting landscape. Lost in the right direction? Thinking Ahead. ACCA.


Hoogervorst, H. (2017a). IASB Chair’s speech: The times, they are a-changin ‘ at Accountancy Europe Conference, Brussels.


Hoogervorst, H. (2020). IASB Chair’s keynote at the IFRS Foundation Virtual Conference.


IFRS Foundation. (2021a). Climate-related Disclosures Prototype. Developed by the Technical Readiness Working Group, chaired by the IFRS Foundation, to provide recommendations to the International Sustainability Standards Board for consideration.


IFRS Foundation. (2021c). IFRS Foundation Trustees announce strategic direction and further steps based on feedback to sustainability reporting consultation. Retrieved from https://www.ifrs.org/news-and-
events/news/2021/03/trustees-announce-strategic-direction-based-on-feedback-to-sustainability-reporting-consultation/

IFRS Foundation. (2022a). *Comparison [Draft] IFRS S2 Climate-related Disclosures with the TCFD Recommendations.*


## Appendix 5: Primary audio material used in chapter 7

<table>
<thead>
<tr>
<th>Event</th>
<th>Video/Audio</th>
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<td>London</td>
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<td>Wider Corporate Reporting and decision to update Management Commentary</td>
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<td>London</td>
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</table>
2004

1. Martin Grieger
   Internet-based Electronic Marketplaces and Supply Chain Management

2. Thomas Basbøll
   LIKENESS
   A Philosophical Investigation

3. Morten Knudsen
   Beslutningens vaklen
   En systemteoretisk analyse af moderniseringen af et amtskommunalt sundhedsvæsen 1980-2000

4. Lars Bo Jeppesen
   Organizing Consumer Innovation
   A product development strategy that is based on online communities and allows some firms to benefit from a distributed process of innovation by consumers

5. Barbara Dragsted
   SEGMENTATION IN TRANSLATION AND TRANSLATION MEMORY SYSTEMS
   An empirical investigation of cognitive segmentation and effects of integrating a TM system into the translation process

6. Jeanet Hardis
   Sociale partnerskaber
   Et socialkonstruktivistisk casestudie af partnerskabsaktørers virkelighedsophattelse mellem identitet og legitimitet

7. Henriette Hallberg Thygesen
   System Dynamics in Action

8. Carsten Mejer Plath
   Strategisk Økonomistyring

9. Annemette Kjærgaard
   Knowledge Management as Internal Corporate Venturing

10. Knut Arne Hovdal
    De profesjonelle i endring
    Norsk ph.d., ej til salg gennem Samfundslitteratur

11. Søren Jeppesen
    Environmental Practices and Greening Strategies in Small Manufacturing Enterprises in South Africa
    – A Critical Realist Approach

12. Lars Frode Frederiksen
    Industriel forskningsledelse
    – på sporet af mønstre og samarbejde i danske forskningsintensive virksomheder

13. Martin Jes Iversen
    The Governance of GN Great Nordic
    – in an age of strategic and structural transitions 1939-1988

14. Lars Pynt Andersen
    The Rhetorical Strategies of Danish TV Advertising
    A study of the first fifteen years with special emphasis on genre and irony

15. Jakob Rasmussen
    Business Perspectives on E-learning

16. Sof Thrane
    The Social and Economic Dynamics of Networks
    – a Weberian Analysis of Three Formalised Horizontal Networks

17. Lene Nielsen
    Engaging Personas and Narrative Scenarios – a study on how a user-centered approach influenced the perception of the design process in the e-business group at AstraZeneca

18. S.J Valstad
    Organisationsidentitet
    Norsk ph.d., ej til salg gennem Samfundslitteratur
19. Thomas Lyse Hansen  
*Six Essays on Pricing and Weather risk in Energy Markets*

20. Sabine Madsen  
*Emerging Methods – An Interpretive Study of ISD Methods in Practice*

21. Evis Sinani  
*The Impact of Foreign Direct Investment on Efficiency, Productivity Growth and Trade: An Empirical Investigation*

22. Bent Meier Sørensen  
*Making Events Work Or, How to Multiply Your Crisis*

23. Pernille Schnoor  
*Brand Ethos*  
*Om troværdige brand- og virksomhedsidentiteter i et retorisk og diskurstheoretisk perspektiv*

24. Sidsel Fabech  
*Von welchem Österreich ist hier die Rede?*  
*Diskursive forhandlinger og magtkampe mellem rivaliserende nationale identitetskonstruktioner i østrigske pressediskurser*

25. Klavs Odgaard Christensen  
*Sprogpolitis og identitetsdannelse i flersprogede forbundsstater*  
*Et komparativt studie af Schweiz og Canada*

26. Dana B. Minbaeva  
*Human Resource Practices and Knowledge Transfer in Multinational Corporations*

27. Holger Højlund  
*Markedets politiske fornuft*  
*Et studie af velfærdens organisering i perioden 1990-2003*

28. Christine Mølgaard Frandsen  
*A.s erfaring*  
*Om mellemværendets praktik i en transformation af mennesket og subjektiviteten*

29. Sine Nørholm Just  
*The Constitution of Meaning – A Meaningful Constitution? Legitimacy, identity, and public opinion in the debate on the future of Europe*

2005

1. Claus J. Varnes  
*Managing product innovation through rules – The role of formal and structured methods in product development*

2. Helle Hedegaard Hein  
*Mellem konflikt og konsensus – Dialogudvikling på hospitalsklinikker*

3. Axel Rosenø  
*Customer Value Driven Product Innovation – A Study of Market Learning in New Product Development*

4. Søren Buhl Pedersen  
*Making space*  
*An outline of place branding*

5. Camilla Funck Ellehave  
*Differences that Matter*  
*An analysis of practices of gender and organizing in contemporary workplaces*

6. Rigmor Madeleine Lond  
*Styring af kommunale forvaltninger*

7. Mette Aagaard Andreassen  
*Supply Chain versus Supply Chain Benchmarking as a Means to Managing Supply Chains*

8. Caroline Aggestam-Pontoppidan  
*From an idea to a standard The UN and the global governance of accountants’ competence*


10. Vivienne Heng Ker-ni  
*An Experimental Field Study on the
11. Allan Mortensen
*Essays on the Pricing of Corporate Bonds and Credit Derivatives*

12. Remo Stefano Chiari
*Figure che fanno conoscere l’itinerario sull’idea del valore cognitivo e espressivo della metafora e di altri tropi da Aristotele e da Vico fino al cognitivismo contemporaneo*

13. Anders McIlquham-Schmidt
*Strategic Planning and Corporate Performance*
An integrative research review and a meta-analysis of the strategic planning and corporate performance literature from 1956 to 2003

14. Jens Geersbro
*The TDF – PMI Case*
Making Sense of the Dynamics of Business Relationships and Networks

15. Mette Andersen
*Corporate Social Responsibility in Global Supply Chains*
Understanding the uniqueness of firm behaviour

16. Eva Boxenbaum
*Institutional Genesis: Micro – Dynamic Foundations of Institutional Change*

17. Peter Lund-Thomsen
*Capacity Development, Environmental Justice NGOs, and Governance: The Case of South Africa*

18. Signe Jarlov
*Konstruktioner af offentlig ledelse*

19. Lars Staehr Jensen
*Vocabulary Knowledge and Listening Comprehension in English as a Foreign Language*

20. Christian Nielsen
*Essays on Business Reporting*
Production and consumption of strategic information in the market for information

21. Marianne Thejl Fischer
Egos and Ethics of Management Consultants

22. Annie Bekke Kjær
*Performance management i Proces-innovation – belyst i et social-konstruktivistisk perspektiv*

23. Suzanne Dee Pedersen
GENTAGELSENS METAMORFOSE
Om organiserings af den kreative gøren i den kunstneriske arbejdspromisk

24. Benedikte Dorte Rosenbrink
Revenue Management
Økonomiske, konkurrencemæssige & organisatoriske konsekvenser

25. Thomas Riise Johansen
*Written Accounts and Verbal Accounts*
The Danish Case of Accounting and Accountability to Employees

26. Ann Fogelgren-Pedersen
*The Mobile Internet: Pioneering Users’ Adoption Decisions*

27. Birgitte Rasmussen
Ledelse i fællesskab – de tillidsvalgtes formyende rolle

28. Gitte Thit Nielsen
Remerger – skabende ledelseskræfter i fusion og opkøb

29. Carmine Gioia
A MICROECONOMETRIC ANALYSIS OF MERGERS AND ACQUISITIONS
30. Ole Hinz  
*Den effektive forandringsleder: pilot, pædagog eller politiker?*  
*Et studie i arbejdslæderes meningstilskrivninger i forbindelse med vellykket gennemførelse af ledelsesinitierede forandringsprojekter*

31. Kjell-Åge Gotvassli  
*Et praksisbasert perspektiv på dynamiske læringsnettverk i toppidretten*  
*Norsk ph.d., ej til salg gennem Samfundslitteratur*

32. Henriette Langstrup Nielsen  
*Linking Healthcare*  
*An inquiry into the changing performances of web-based technology for asthma monitoring*

33. Karin Tweddell Levinsen  
*Virtuel Uddannelsespraksis*  
*Master i IKT og Læring – et casestudie i hvordan praksis kan forbedre praksis i virtuele læringsmiljøer*

34. Anika Liversage  
*Finding a Path*  
*Labour Market Life Stories of Immigrant Professionals*

35. Kasper Elmquist Jørgensen  
*Studier i samspillet mellem stat og erhvervsliv i Danmark under 1. verdenskrig*

36. Finn Janning  
*A DIFFERENT STORY*  
*Seduction, Conquest and Discovery*

37. Patricia Ann Plackett  
*Strategic Management of the Radical Innovation Process*  
*Leveraging Social Capital for Market Uncertainty Management*

2006
1. Christian Vintergaard  
*Early Phases of Corporate Venturing*  

2. Niels Rom-Poulsen  
*Essays in Computational Finance*

3. Tina Brandt Husman  
*Organisational Capabilities, Competitive Advantage & Project-Based Organisations*  
*The Case of Advertising and Creative Good Production*

4. Mette Rosenkrands Johansen  
*Practice at the top – how top managers mobilise and use non-financial performance measures*

5. Eva Parum  
*Corporate governance som strategisk kommunikations- og ledelsesværktøj*

6. Susan Aagaard Petersen  
*Culture’s Influence on Performance Management: The Case of a Danish Company in China*

7. Thomas Nicolai Pedersen  
*The Discursive Constitution of Organizational Governance – Between unity and differentiation*  
*The Case of the governance of environmental risks by World Bank environmental staff*

8. Cynthia Selin  
*Volatile Visions: Transactions in Anticipatory Knowledge*

9. Jesper Banghøj  
*Financial Accounting Information and Compensation in Danish Companies*

10. Mikkel Lucas Overby  
*Strategic Alliances in Emerging High-Tech Markets: What’s the Difference and does it Matter?*

11. Tine Aage  
*External Information Acquisition of Industrial Districts and the Impact of Different Knowledge Creation Dimensions*
A case study of the Fashion and Design Branch of the Industrial District of Montebelluna, NE Italy

12. Mikkel Flyverbom
Making the Global Information Society Governable
On the Governmentality of Multi-Stakeholder Networks

13. Anette Grønning
Personen bag Tilstedevær i e-mail som interaktionsform mellem kunde og medarbejder i dansk forsikringskontekst

14. Jørn Helder
One Company – One Language?
The NN-case

15. Lars Bjerregaard Mikkelsen
Differing perceptions of customer value
Development and application of a tool for mapping perceptions of customer value at both ends of customer-supplier dyads in industrial markets

16. Lise Granerud
Exploring Learning
Technological learning within small manufacturers in South Africa

17. Esben Rahbek Pedersen
Between Hopes and Realities: Reflections on the Promises and Practices of Corporate Social Responsibility (CSR)

18. Ramona Samson
The Cultural Integration Model and European Transformation. The Case of Romania

2007

1. Jakob Vestergaard
Discipline in The Global Economy Panopticism and the Post-Washington Consensus

2. Heidi Lund Hansen
Spaces for learning and working
A qualitative study of change of work, management, vehicles of power and social practices in open offices

3. Sudhanshu Rai
Exploring the internal dynamics of software development teams during user analysis
A tension enabled Institutionalization Model; “Where process becomes the objective”

Ej til salg gennem Samfunds litteratur

5. Serden Ozcan
EXPLORING HETEROGENEITY IN ORGANIZATIONAL ACTIONS AND OUTCOMES
A Behavioural Perspective

6. Kim Sundtoft Hald
Inter-organizational Performance Measurement and Management in Action
– An Ethnography on the Construction of Management, Identity and Relationships

7. Tobias Lindeberg
Evaluative Technologies
Quality and the Multiplicity of Performance

8. Merete Wedell-Wedellsborg
Den globale soldat
Identitetsdannelse og identitetsledelse i multinationale militære organisationer

9. Lars Frederiksen
Open Innovation Business Models
Innovation in firm-hosted online user communities and inter-firm project ventures in the music industry
– A collection of essays

10. Jonas Gabrielsen
Retorisk toposlære – fra statisk ’sted’ til persuasiv aktivitet
11. Christian Moldt-Jørgensen
   Fra meningsløs til meningsfuld evaluering. Anvendelsen af studentertilfredsheds-målinger på de korte og mellemlange videregående uddannelser set fra et psykodynamisk systemperspektiv

12. Ping Gao
   Extending the application of actor-network theory
   Cases of innovation in the telecommunications industry

13. Peter Mejlby
   Frihed og fængsel, en del af den samme drøm?
   Et phronetisk baseret casestudie af frigørelsens og kontrollens sam eksistens i værdibaseret ledelse!

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