ÖKONOMIE UND GESELLSCHAFT

Jahrbuch 38:
Sustainable Finance Beyond Market Utopias: Towards a Sociopolitical Approach

Ulrich Klüh, Lisa Knoll, Daniel Mertens and Silke Ötsch: Introduction

Natascha van der Zwan: Embedding Sustainable Finance: A Governance Perspective

Dominik von Gehlen: Compliance without Transformation: Sustainable Investment Networks and the Dilution Ecological Impact

Joscha Wullweber, Nicolás Aguila, Janina Urban, Paula Haufe, Simon Schairer and Riccardo Baioni: Bankability and the Green Transition. Rethinking Financial Governance for Net Zero

Katharina Dittrich, Julius Kob and Matthias Taeger: Governing by Knowledge: The Quasi-infrastructural Role of Knowledge Production in Green Finance

Kenneth Amaeshi: Financing Sustainability or Making Finance Sustainable in Africa: Implications for Financial Institutions. A Reflection through the Africapitalism Lens

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Eve Chiapello: From the Financialization of Climate to the Climatization of Financial Circuits

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Sustainable Finance Beyond Market Utopias: Towards a Sociopolitical Approach

Edited by
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Sustainable Finance Beyond Market Utopias: Towards a Sociopolitical Approach

Introduction

Ulrich Klüh, Lisa Knoll, Daniel Mertens and Silke Ötsch

Abstract

Sustainable finance has generated considerable optimism among policymakers, industry representatives, and the economic mainstream. However, its achievements remain limited. Private capital flows have not been significantly redirected, financing gaps persist, and climate-damaging investments continue largely unchecked. This volume argues that these shortcomings are not merely technical but sociopolitical, rooted in a market-centred paradigm that treats sustainability primarily as an information problem to be addressed through disclosure, risk assessment, and voluntary investor action. Drawing on Polanyi's critique of market utopias, the contributions show how this approach can marginalize questions of justice, power, democratic decision-making, and the role of the state. They also examine how shared assumptions about markets and sustainability are reproduced across finance, public administration, politics, consulting, and academia. Moving beyond diagnosis, the volume develops a sociopolitical approach informed by institutional logics, political economy, and financialisation research, combining qualitative, comparative, and conceptual methods. Empirical chapters trace how sustainable finance operates in practice, revealing persistent problems of knowledge production, depoliticization, and asymmetric power among actors. Building on these insights, several

contributions sketch alternative, more transformative models – ranging from differentiated public financing and democratic ecological planning to institutional re-embedding and Global South perspectives – reimagining sustainable finance as a politically contested, rather than purely market-driven, endeavour.

1. Market Utopias in Sustainable Finance

1.1 From Optimism to Disillusionment

When we began our research on sustainable finance in 2022, expectations among the financial and economic research community, financial sector representatives and policymakers were highly optimistic. Driven by warnings from the Intergovernmental Panel on Climate Change (IPCC), the climate protests of Fridays for Future, and the electoral successes of the Green Party and other self-styled progressive and sustainability-oriented political forces, "smart framework-setting" was expected to channel private capital into economic sectors and activities with superior environmental or social performance. Policymakers, regulatory authorities, and much of mainstream economics put trust in a combination of CO_2-pricing, transparency regarding the environmental impact of economic activities and financial products, as well as refined risk assessments, disclosure obligations, and moderate incentives for private investment. The widespread assumption was that better information would enable market actors to make more sustainable investment decisions, and that financial markets would thereby gradually become an instrument of, or even a driving force for, socioecological transformation.

Today, this optimism has given way to disillusionment. Progress toward the ecological realignment of the financial system remains limited, while political support for environmental, social, and governance (ESG) criteria and sustainable finance initiatives has waned. In many countries and across the political spectrum, resistance to corresponding regulation is mounting. In some cases, this resistance has even taken the form of an 'anti-ESG' culture war. This is not to say that sustainable finance has produced no institutional change whatsoever, nor that all regulatory measures have proven entirely ineffective. Rather, as of yet, the dominant approaches have neither achieved a large-scale

redirection of private capital flows, nor closed the financing gap for socioecological transformation, nor meaningfully curbed climate-damaging investment.

In this volume, we argue that the limited achievement of established sustainable finance strategies was, in key respects, foreseeable – and that the established sustainable finance community, located predominantly within finance and economics, shares responsibility for this outcome by nurturing hopes in a market-centric approach bound to fail. This responsibility, we suggest, stems from the evolution of sustainable finance as a field that tries to preserve the belief in capitalism's ability to solve the climate crisis and neglects sociopolitical processes. This belief has shaped the mode of intervention and created systematic blind spots and epistemic fallacies in climate change governance. We argue that these limitations cannot be understood merely as epistemic or technical shortcomings that could be remedied by better information or more refined instruments of reporting. The shortcomings also reflect the structural and institutional arrangements surrounding sustainable finance and their strategic selectivity (Sum/Jessop 2013). These arrangements shape what is considered relevant knowledge, which activities appear bankable, and whose interests and forms of expertise influence policy.

1.2 The Making of a Market-Centred Paradigm in Sustainable Finance

The title *Sustainable Finance Beyond Market Utopias* alludes to Karl Polanyi's critique of the idea that society can be organised around a self-regulating market. From a Polanyian perspective, economies are embedded in social and political institutions; treating market exchange as if it could independently organise economic life obscures those institutional foundations (Polanyi 2001 [1944]). Applied here, the market utopia is the expectation that integrating sustainable criteria within financial market frameworks would spread sustainability in the sense of a trickle-down effect in the economy and society. The implementation of such concepts took place gradually.

The antecedents of sustainable finance include Socially Responsible Investment (SRI) and ethical investment campaigns. These traditions treated investment as a means of expressing social and political

commitments, not merely as a way to manage financially material risks (Van der Zwan, this volume). Within the framework of the United Nations – in cooperation with private financial and economic actors – further building blocks of a financial system were created to promote sustainability. In this process, the UN shifted the focus from Socially Responsible Investment (SRI) to the assessment of ESG factors, whereby the emphasis shifted from the moral evaluation of corporate activities toward financial risks and return opportunities. The development of ESG around the 2000s was central to this translation (Clapp/Helleiner 2025; Sharma/Babic 2025). Sustainability entered mainstream finance, but largely in a form that could be incorporated into existing risk–return calculations rather than treated as a mandate to decide democratically which activities should be financed or phased out. This market-centred logic is also visible in the EU's 2018 Action Plan on Sustainable Finance. The Plan sets frameworks and disclosure obligations while leaving considerable responsibility for investment decisions and their ecological consequences to market actors.

Applied here, the Polanyian market utopia refers to the expectation that, once investors receive adequate sustainability information, market choices will reliably align capital allocation with ecological and social objectives. The shift from an ethical investment project to a market-centred paradigm is therefore better understood as a process of selective incorporation (Van der Zwan, this volume; Ötsch et al. 2025). Sustainability concerns gained access to financial institutions, but their meaning and influence were increasingly shaped by ESG metrics, risk assessment, disclosure, and voluntary investor action. This incorporation is selective in the sense that sustainability tends to matter only insofar as it can be reconciled with financial performance; however, this is not inevitable, since public and mission-oriented investment can be tied to substantive conditions and directed towards societal goals rather than subordinated to private investors' risk-return criteria (Chiapello, this volume; Mertens/Stockmann 2026; Kattel/Mazzucato 2018).

The forms that sustainable finance take, however are "products of real contestation" over sustainability and climate change (cf. Bryant/Webber 2024: 160). This is evident not only in the political struggles over divestment or the designation of assets as 'low' or 'high-carbon' (Langley et al. 2021), but also reflects the fact that markets are not being neutral allocation devices, but moral constructions (Fourcade/Healy 2007). In this sense, the choice of relegating the control over

investment to a specific set of financial actors and market mechanisms is itself a political project (Mertens/Van der Zwan 2026).

This is why we refer back to Polanyi's idea of market society as a utopia. In Polanyi's words, "the idea of a self-adjusting market implied a stark utopia. Such an institution could not exist for any length of time without annihilating the human and natural substance of society; it would have physically destroyed man and transformed his surroundings into a wilderness" (Polanyi 2001 [1944]: 3). According to him, since market-centred visions of organising society always evolve around efficiency and "improvement", rather than legitimacy and "habitation", they were always bound to remain unfinished, face political resistance and, ultimately, fail (see also Westra 2026). When viewed through this lens, visions of sustainable finance as a market-based paradigm are not merely technically flawed but structurally predisposed to generating the kind of backlash and contestation that sustainable finance received (see e.g. Knoll, this volume). Polanyi's concept explains why a programme based on market self-regulation is inevitably constrained by the limits of social and ecological "embeddedness". However, it does not elucidate the specific institutional mechanisms through which this utopian vision manifests particular blind spots.

1.3 Blind Spots of the Market-Centred Paradigm

Read as a Polanyian utopia, visions of sustainable finance as a market-based paradigm entail several concrete blind spots. At their centre lies a supply-side prerogative, which prioritizes financial products, investor decisions, and market information over societal needs and political decision-making. The strong dominance of financial market perspectives, with their inherent economistic premises, has contributed to the inadequate consideration of societal dynamics and social inequalities. Differences in income, wealth, emissions responsibility, and scope for action remain insufficiently addressed. Yet climate policies do not affect all groups equally (Chancel et al. 2025; Chancel/Mohren 2025). This is not merely a normative shortcoming: research on societal acceptance shows that approval of climate policy requires fairness, trust in political institutions, and opportunities for democratic participation (Evensen et al. 2018; Komendantova 2021; Ryghaug et al. 2018). A policy that ignores distributional differences therefore risks not only exacerbating

social inequalities but also undermining its own legitimacy and fuelling political backlash.

A second blind spot concerns power. The extent to which economic elites, financial investors, and technology corporations shape political priorities, regulation, and public investment often remains underexamined (Klüh/Sturn 2027). This also raises the question of whether public subsidies and de-risking instruments genuinely contribute to socioecological transformation or instead stabilise existing power and ownership structures, with public funds securing private returns, while democratic control and redistribution fall by the wayside (Downey/Blyth 2025).

A third blind spot concerns the role of the state. Sustainable finance initiatives rest on the assumption that the state should play a subordinate role vis-à-vis the private economy, limited to merely correcting market outcomes. Given the scale and long-term nature of the transformation required, this assumption is questionable. Mission-oriented policy conceives of the state not simply as a mechanism for correcting market failures, but as an actor that formulates societal goals, shapes and plans markets, and coordinates long-term investment (Mazzucato 2015). This requires the public sector to develop its own dynamic capabilities, as well as institutional capacities for planning, governance, and democratic control (Kattel/Mazzucato 2018, Mertens/Stockmann, this volume). The common criticism that the state is overly bureaucratic therefore falls short: What rather matters is the type of bureaucracy (see Knoll, this volume), who plans, whose interests are considered, and under what democratic rules planning takes place (see Klüh et al., this volume).

A fourth blind spot concerns path dependency. Existing infrastructures, investments, and institutional routines can permanently lock economies into either low-emission or emission-intensive technologies (Seto et al. 2016). Even already developed fossil fuel reserves significantly exceed the carbon budget compatible with the 1.5°C target; therefore, new investment in renewable energy alone is insufficient as long as fossil fuel extraction structures persist (Trout et al. 2022).

1.4 Strategic Selectivity and the Epistemic Community of Sustainable Finance

These blind spots and tendencies, we argue, constitute a form of "strategic selectivity" (Sum/Jessop 2013): institutions are never neutral arenas but systematically privilege certain strategies, actors, and time horizons over others. Polanyi's concept of market utopia and Sum and Jessop's notion of strategic selectivity operate at different, complementary levels. Polanyi diagnoses the utopian character of the overarching project of market self-regulation, while Sum and Jessop's concept allows for the analysis of the concrete institutional mechanisms through which this project is reproduced in day-to-day governance.

Applied to sustainable finance, the blind spots identified above constitute precisely such strategic selectivity. They privilege those transformation projects considered investable, capable of generating returns, and compatible with the expectations of private capital providers, while projects with high societal benefit but low or uncertain immediate profitability fall out of view (Wullweber et al., this volume). Even political decisions to end environmentally harmful activities tend to be replaced by the expectation that different price signals, transparency rules, and investment incentives will gradually redirect capital. This market-centred strategy does only insufficiently address public regulation, democratic planning, and a needs-based determination of transformation. Furthermore, large and important parts of the economy are much less capital-market intensive than usually presumed. It is thus questionable whether a strategy centred around capital markets helps to transform large parts of the economy at all (Braun 2022; Philipponnat 2024). The strategic selectivity of dominant sustainable finance policies thus lies in presenting a specific, market-conforming approach to the transformation as universally valid, while marginalising more comprehensive concepts of public, needs-based, and globally just financing.

Crucially, this selectivity does not rely solely on shared convictions; it is also sociologically reproduced. Much like the period preceding the global financial crisis, a similarly self-reinforcing community of economists, regulators, and financial-industry representatives shared largely unexamined assumptions about market efficiency – assumptions that were only dramatically questioned later (Engelen et al.

2011). In the field of sustainable finance, one can observe the formation of a relatively insulated epistemic community (Golka 2024; Tischer/Ferrando 2024; Seabrooke/Stenström 2023). Actors from finance, public administration, politics, consulting, and academia share core assumptions about how financial markets function and how sustainability policy should be designed – specifically the notion that private capital markets are fundamentally efficient coordination mechanisms that merely need to be nudged towards sustainable investment through better information, limited regulation, transparency, and targeted nudging (Ahlström/Monciardini 2022; Engelen et al. 2012). This perspective narrows sustainable finance down to a technical governance problem.

The self-reinforcement of this epistemic community, however, does not rely solely on shared convictions. It is also stabilised through institutional access, professional routines, expert committees, and the privileged status granted to certain forms of knowledge (Kob et al. 2025). Alternative perspectives – such as those emphasising public investment, redistribution, binding regulation, monetary policy, labour interests, or democratic planning – are not necessarily explicitly excluded. They frequently remain present but are kept outside the arenas in which political problems are defined, standards developed, and instruments selected (Ötsch 2024). The selection of policy measures is therefore not neutral: it follows theoretical interpretations, normative assumptions, and the interests of those actors who possess the necessary resources and institutional access.

2. Beyond Market Utopias: Towards a Sociopolitical Approach

With this book, we aim to move beyond the narrow framework of sustainable finance market utopias. In doing so, we contribute to the ongoing debate on alternative and distinct frames within the sustainable finance landscape (Dimmelmeier 2023). We argue that a productive way to explore alternative frames is through a sociopolitical approach. Our intention is not merely to criticise established perspectives on sustainable finance; rather, we aim to contribute to analysing the phenomenon within its broader societal context and to identify openings for rethinking it beyond the market-centred paradigm outlined above.

A sociopolitical approach to sustainable finance starts from the assumption that market framing is only one of several possible framings. The contributions of this book are grounded in theories that emphasise the plurality of institutional formats and logics within economies (Thornton et al. 2013; Thornton/Ocasio 1999; Hall/Soskice 2001). These theories reject a state vs. market-divide in economic thought and instead treat economic, social, and political values as inseparable and historically specific (Friedland/Alford 1991; May et al. 2024). In particular, economic worth depends on social processes of evaluation (Stark 2009; Boltanski/Thévenot 2006), and its distribution is shaped by configurations of social and political power (May et al. 2024).

To substantiate this approach, the chapters of this book draw on different strands of sociology, political science, and heterodox economics, including diverse theoretical approaches on financialization (Epstein 2005; Chiapello 2015; Mader et al. 2020). These perspectives are not merged into a single unified theory. Their shared function, rather, is to expose the limitations of an analysis centred narrowly on a framing of sustainable finance as market-making, and to provide first building blocks of a more holistic sociopolitical approach (see also Kob et al. 2025).

The institutional logics perspective (used, for example, in the chapter of Mertens/Stockmann and the chapter of Knoll) asks which distinct rationalities are at work within a given social field. In the field of climate finance, market logics, political logics of legitimation, ecological problem framings, organizational routines, and civil-society conceptions of social justice all converge. These logics can complement one another, but they can also collide. Sustainable financial practices thus do not simply emerge from the implementation of an overarching political goal; rather, they result from processes of negotiation among actors with divergent interests and differing notions of legitimacy, within concrete institutional and economic fields.

Political economy complements this perspective by examining power, ownership, distribution, and the historically grown institutional conditions of economic action – for example, to envision new architectures of democratic planning, as discussed by Klüh et al. (this volume), or to emphasise alternative versions of institutional embeddedness, as illustrated by Van der Zwan (this volume). It reveals that financial and economic actors do not operate on an equal footing, and that sustainability regulation can either reproduce or transform existing

power asymmetries. Knoll (this volume) shows how a financialized perspective fails to address the needs of industrial transformation in the regional economy. The pertinent question, therefore, is not only which rules formally apply, but who participates in shaping them, who is able to interpret them, and who possesses the resources to influence their implementation and application.

Financialisation research directs attention to how societal problems are translated into financial categories. Climate change is framed as a risk, an investment opportunity, a financing gap, or a market failure. This translation can enable political action, but it can equally displace alternative problem framings. Chiapello (this volume) shows that the focus on sustainable securities diverts attention from existing structures of unsustainable finance: green financial flows become more visible, while the continuation of fossil fuel-based and resource-intensive investments is far less systematically addressed. She also develops a generalised framework that can serve as an analytical tool to understand the potential of alternative, more transformative forms of finance, as discussed by Klüh et al. (this volume).

Empirically, grasping this plurality of social and economic realities requires a correspondingly plural methodological toolkit, drawn primarily from qualitative social research: network analysis (von Gehlen); (discourse-)institutional analysis (von Gehlen; Van der Zwan); expert interviews and participatory observations (Gehlen; Klüh et al.; Knoll; Mertens/Stockmann; Ötsch, Wullweber et al.); regional field study (Knoll); ethnographic methods (Dittrich et al.); organizational analysis (Mertens/Stockmann); the socio-economic modelling of green democratic planning (Klüh et al.); and the Delphi method combined with interviews and document analysis (Ötsch). This methodological diversity generates analytical value precisely because different methods reveal distinct dimensions of the same underlying problem: interviews capture interpretations and strategic self-representations; ethnographic research reconstructs practices and routines; organisational analyses expose institutional contradictions; comparative studies demonstrate how strongly sustainable finance depends on national political economies and institutional traditions; and heterodox economics, combined with financialisation research, facilitates the development of new financial mechanisms and institutions.

3. Sustainable Finance: Limits and Alternatives

The theoretical perspectives outlined above are borne out by the contributions to this volume. On the one hand, these contributions empirically trace, across different institutional settings, how sustainable finance operates once it moves from regulatory design into everyday financial practice – transitioning from a "theory of change" of an epistemic network to reality (notably in the chapters by Dittrich et al.; von Gehlen; Mertens/Stockmann; Knoll; Ötsch; and Van der Zwan). This type of analysis reveals three closely related sets of problems. First, problems of knowledge, that is, how sustainability is understood, measured, and acted upon (section 3.1). Second, problems of depoliticization, namely the tendency to use sustainable finance to disguise structural and systemic problems that have caused the very problems it claims to solve (section 3.2). Third, problems of political implementation, concerning how sustainability regulation interacts with existing power relations, profit imperatives, and institutional path dependencies (section 3.3). We argue that all these problems are not incidental flaws that better design could easily rectify; rather, they are structural features of a policy paradigm that treats sustainable finance primarily as an information deficit to be closed, rather than as a political and economic order to be transformed.

On the other hand, the contributions outline or develop alternative, radicalised forms of finance that transcend the existing policy paradigm and its structural features (notably the chapters by Amaeshi; Chiapello; Klüh et al.; and Wullweber et al.). These alternatives aim to genuinely transform the political and economic order in a manner consistent with social and ecological realities. They all build upon elements of current financial systems and on the realities of current approaches to sustainable finance (section 3.4). Based on these, they develop new models of genuinely transformative finance (section 3.5). These models are based on broader conceptualisations of sustainable finance derived from the more empirical analyses and integrate the specific conditions under which sustainable finance evolves in the Global South (Amaeshi), consider the complex assemblages that characterise "transformative financial circuits" (Chiapello), align with the necessity of democratically planning the transition towards sustainability (Klüh et al.), and, more generally, acknowledge the need to

strengthen the role of public funds and state intervention in the transformation process (Wullweber et al.).

3.1 Sustainability, Information Production and Orders of Knowledge

Much of the regulatory architecture of sustainable finance rests on the assumption that climate-related knowledge, once produced and disclosed, will more or less automatically translate into more sustainable financial decisions. Dittrich et al.'s contribution to this volume shows how fragile this assumption is in practice. The authors describe climate-related knowledge production as *quasi-infrastructural*: it is meant to function as a taken-for-granted foundation of financial decision-making, yet at the time of their study, it had not been fully integrated into routine financial practice. Knowledge is expected to shape decisions, but it remains fundamentally non-binding – it neither prescribes specific measures nor concrete target pathways.

This lack of binding commitment is compounded by a striking indeterminacy of goals. References to "net zero by 2050," "real-world impact," decarbonisation, or the mobilisation of capital for the transformation recur throughout the field, yet it remains unclear who exactly is supposed to bring about which changes, by when, and through which concrete mechanisms (Dittrich et al., this volume). This openness follows directly from a market-oriented understanding of environmental governance, in which better and more accessible information is assumed to lead to more efficient financial decisions, which in turn will automatically redirect capital from emission-intensive toward low-emission activities (ibid.). As critics of climate risk modelling have argued more generally, this assumption tends to underestimate the depth of uncertainty involved. Climate-related risks are not simply difficult to price but are frequently characterised by genuinely Knightian uncertainty that no amount of additional data can fully resolve (Bolton et al. 2020).

The effect of this arrangement is to hand the actual steering of capital flows to the market itself. Financial actors thereby acquire far-reaching authority over the speed and form of the transition, as well as over which regions, groups, or economic sectors benefit or suffer losses (Dittrich et al., this volume). This authority is further amplified by the

considerable discretion financial actors retain in utilizing climate-related knowledge: portfolio managers and other decision-makers can choose which data, models, and instruments to employ, which to disregard, and how to interpret the results. Knowledge, in other words, is not a neutral or solely technical support system. Its production, selection, and formatting co-determine which problems become visible, which goals count as relevant, and which actors gain influence over the shaping of the financial sector (ibid.).

Dittrich et al. identify two problematic consequences of this arrangement. First, knowledge is naturalised as the primary lever for changing financial behaviour. Second, the prioritisation of financial actors in defining and governing the relationship between nature and finance is thereby entrenched rather than questioned. When desired environmental outcomes fail to materialise, this is typically interpreted within the paradigm itself as a deficiency of "better" or "more" knowledge – an interpretation that forecloses attention to alternative modes of governance, such as binding regulation, political mandates, or shifts in underlying values and norms (ibid.).

Von Gehlen's analysis of the EU Action Plan on Sustainable Finance corroborates this diagnosis at the level of regulatory design. The Action Plan treats sustainability primarily as an information problem, in which regulation relies on improved disclosure and information flows rather than on binding ecological outcomes or clear limits on permissible investment (von Gehlen, this volume). As a result, the regulatory framework remains principles-based, leaving market actors considerable latitude in interpretation and implementation.

Wullweber et al. shift the focus of the diagnosis from information to bankability. Their central thesis is that the main obstacle to redirecting capital does not lie in insufficient information but in the fact that many green projects simply do not offer a sufficiently attractive risk-return profile from the standpoint of private investors – whereas climate-damaging, emission-intensive activities frequently remain profitable and comparatively low-risk, and therefore continue to attract financing (Wullweber et al., this volume). The authors argue that existing instruments of sustainable finance regulation, such as disclosure requirements, stress tests, taxonomies, voluntary approaches, and selected risk-mitigation measures, have not fundamentally altered financing conditions. They have neither substantially improved the bankability of green activities nor sufficiently curtailed the financing of emis-

sion-intensive ones. Current EU policy, they conclude, is therefore insufficient to redirect the capital flows required to meet climate targets (ibid.).

Returning to von Gehlen's contribution, it adds an additional layer to this picture by tracing how regulation has reshaped the meaning of sustainable finance for the actors involved. Under the pressure of an expanding regulatory framework, sustainable finance has been reinterpreted from a voluntary investment opportunity to a compliance and regulatory risk. Consequently, financial actors concentrate primarily on developing regulatorily defensible procedures and evidence, rather than on maximising the ecological quality of their investments. This reinterpretation manifests, among other things, in the relocation of sustainability expertise to legal and compliance functions, and in growing reticence among some actors to make public sustainability claims at all.

Mertens and Stockmann (this volume) observe the same reinterpretation inside state-owned investment banks. In their account, regulation is the principal engine of organisational change. Sustainability units, materiality analyses, and impact measurement projects emerge because reporting frameworks require them, and management boards reason along the boundaries of obligation. Yet, although instruments such as SDG mapping have become mainstream practices that facilitate internal mobilisation, methodologies diverge so widely that figures are barely comparable across institutions. More importantly, they do not influence allocation decisions. Knowledge production here is neither absent nor merely ceremonial. It is organisationally real and, at the same time, disconnected from decisions about where money actually goes.

Knoll (this volume) contributes to this discussion by revealing how a narrow notion of sustainable information is confronted by a logic of production. Actors consider the actual documentation-based approach to sustainability as 'theoretical', whereas their experience with sustainable investments is far more technical and product-oriented, grounded in value chain relations. Sustainable transformation in industrial firms is bound to the establishment of alternative business models, which they need to co-create with their customers and through addressing complex, 'wicked' problems, rather than merely completing abstract and multiple data forms – often criticised as a 'ticking-the-box practice'.

3.2 Disguising Structural Problems: System Logics Left Unchallenged

The cumulative effect of these dynamics, as Chiapello (this volume) suggests, is that existing sustainable finance changes financial markets only superficially, because it slots climate protection into the pre-existing logic of return, risk, and competition rather than challenging that logic itself. Thus, a second recurring finding across the volume's chapters concerns the systematic way in which sustainable finance, as currently practised, avoids confronting the deeper structural logics of the financial system. Chiapello's contribution argues that sustainable finance promises that financial engineering and new green products can enable ecological change without altering the underlying economic and financial order. More conflictual questions – such as those regarding structural reform of the financial system or about the limits of economic growth itself – are thereby pushed into the background.

This avoidance operates on several levels simultaneously. Sustainable financial products focus primarily on 'green' investments, while the still-dominant volume of harmful investment activity receives comparatively little attention. Capital therefore does not automatically exit fossil or resource-intensive sectors; instead, sustainable finance tends to develop alongside conventional finance rather than displacing it. This parallel, rather than substitutive, growth is reinforced by the fact that financial decisions continue to be governed by the principle of risk-adjusted return – a constraint that both Wullweber et al. and Chiapello identify as the decisive bottleneck that sustainability criteria have, so far, largely left untouched.

A further structural limitation lies in where sustainable finance actually takes place. Much sustainable investment activity occurs on secondary markets, where existing securities are resold between investors; companies do not receive new capital directly through such transactions. Direct financing of the real economy occurs primarily through primary markets – the issuance of new shares or bonds. Insofar as sustainable finance is concentrated on secondary-market trading, its capacity to genuinely reallocate capital toward the real economy is correspondingly limited.

Mertens and Stockmann (this volume) show that this avoidance is not confined to private finance. Their study of the German system of state-owned investment banks examines institutions wholly owned by

the state, which are therefore not governed by the risk-adjusted return principle in the same way as commercial actors. They identify the same additive, rather than substitutive, pattern that permits continued lending to carbon-intensive sectors. The constraints producing this outcome are structural rather than attitudinal: second-tier on-lending through commercial house banks and the fiscal subordination of promotional budgets prevent public ownership from translating into steering capacity. The implication for the argument pursued here is considerable. Where the state builds market-mimicking institutions to operate within markets, it reproduces within them the very limitations that market-based governance was supposed to overcome – which suggests that the sociopolitical critique of sustainable finance cannot stop at the boundary of private capital.

Voluntary self-regulation compounds these limitations. Chiapello's discussion of green bonds is particularly instructive: the commitment to use proceeds for green projects is frequently not an enforceable contractual obligation but rather a voluntary pledge and an informational category. The principal sanction for non-compliance is little more than the possibility that investors may sell their holdings. More broadly, European sustainability regulation, according to Chiapello, largely follows a nudging logic as it informs and guides investors without fundamentally compelling them to invest in sustainable products. The core operating principle of financial markets – orientation toward return and competitive advantage – remains thereby untouched.

Van der Zwan's account of transnational private governance points in the same direction and provides a term for this pattern. Participation in global sustainable finance initiatives confers reputational benefits while leaving obligations revocable at will – an arrangement she characterizes as organised hypocrisy. Notably, this is not a consequence of insufficient governance. The proliferation of initiatives and their considerable overlap create conditions for venue shopping, whereby actors select the initiative imposing the lowest costs while maximizing benefits (Van der Zwan, this volume). The rapid collapse of the Net Zero alliances after 2025 appears, on this reading, less as a departure from sustainable finance and more as a revelation of how shallow the underlying commitment had been.

3.3 Actors and Their Asymmetric Influence and Involvement

These dynamics are reinforced by pronounced asymmetries of power among the actors involved in shaping sustainable finance. Ötsch's contribution shows that civil society proposals have frequently failed to become durably and effectively institutionalised. Compared to financial institutions, civil society organisations possess less capital, fewer organisational resources, and a more limited capacity to set the political agenda. If the financing of sustainability is primarily to occur through the level of financial products, the influence of civil society is limited. Moreover, collaboration with financial actors can lead NGOs to increasingly adopt the language and logic of the financial sector itself – raising the risk that fundamental critique of the financial system is gradually displaced by incremental, system-compatible reform (Ötsch, this volume).

The unequal distribution of influence documented by Ötsch is not confined to civil society. Trade unions, too, exert only limited influence over the integration of sustainability logics into financial systems and the broader economy – despite the fact that the socioecological transformation directly affects employment structures, working conditions, and regional economic bases (ibid.). Mainstream approaches favoured by policymakers, such as the promotion of financial literacy may be politically convenient, but they do not address these asymmetries. If sustainable finance is to be more than a market-conforming reform agenda, policymakers need to take the concerns of civil society and organised labour seriously and integrate them structurally into sustainable finance strategies, rather than treating them as external stakeholders to be consulted retrospectively.

The same asymmetry recurs inside financial institutions themselves. Mertens and Stockmann (this volume) document this phenomenon in institutions that might be expected to be exempt. Sustainability and climate questions are regularly discussed in the supervisory and advisory boards of German state-owned investment banks, however, with few exceptions, climate actors (such as environmental organizations, think tanks, and regional climate initiatives) are absent from these bodies. Meanwhile, the economic stakeholders who are present tend to advocate for proportionality and for relief from reporting requirements rather than for greater ambition. In this light, Van der Zwan's contribution (this volume) shows how some European pension funds are

governed by boards that include representatives of active members, retirees, and sponsoring employers, while their investment committees define investment policy. Representational governance of this kind does not guarantee more sustainable investment, but it permits a closer alignment between a fund's investments and the preferences of those on whose behalf it invests. Through this sort of 'embeddedness', it privileges voice over exit as the mechanism through which disagreement is expressed.

An unequal involvement in sustainable finance regulation can also be observed among industrial SMEs. Knoll (this volume) shows how sustainable finance systematically fails to meet the requirements of SMEs, both in terms of finance and documentation requirements, which are perceived as a detached bureaucracy with limited impact on their sustainability performance. The rather confident appraisal of a 'powerful' financial market capable of changing and transforming the economy must be questioned in the case of SMEs, which do not depend on capital markets for their sustainable investments (Braun/Deeg 2020; Rossmann et al. 2026). Taken together, these contributions indicate that asymmetric influence and involvement are issues of institutional design and structural power rather than individual goodwill.

3.4 What Sustainable Finance Nevertheless Achieves

None of this implies that sustainable finance has been entirely without effect. Chiapello's contribution identifies the real, albeit modest, consequences it has produced. Sustainable finance responds, in the first instance, to a genuine societal demand among investors, financial-sector employees, and political actors alike to support sustainability without sacrificing financial returns. In doing so, it generates something akin to a "moral return": individuals gain the impression that their investments are doing good (Chiapello, this volume).

Beyond this psychological effect, sustainable finance has given rise to new metrics, reporting standards, labels, ratings, auditing procedures, and entire professional occupations. Sustainability considerations have thus become institutionally visible and are built into financial decision-making processes – even where they do not yet displace the underlying logic of return. Sustainable finance has also created its own social and professional milieu, in which financial actors, NGOs, regula-

tory bodies, and civil society groups collaborate. Through this milieu, climate change and biodiversity loss have become established as legitimate topics within the financial sector itself (ibid.). These achievements indicate that sustainable finance is not simply a smokescreen; it has produced new infrastructures of knowledge, new professional identities, and new arenas of contestation. However, they also underscore the central argument of this volume that institutional visibility and discursive legitimacy are not equivalent to structural transformation. The task, therefore, is not to dismiss these achievements but to ask what further institutional and political conditions would be necessary to convert them into more substantial change.

Klüh et al. build on this insight. Starting from the observation that a consequential transition towards sustainability is likely to require strengthening and expanding the role of democratic planning, they look for relevant current and past institutionalizations of political forms of "finance as planning" (Sorg 2025). As an analytical framework, they use Chiapello's model of "transformative financial circuits", as it begins with existing institutionalisations and has a strong infrastructural core. They combine this with the types of localised forms of decision-making in complex actor networks 'on the ground' that have proven crucial in enabling actual transformations, and outline multilevel governance structures that link more centralised political and more decentralised operational actions. They find elements of these structures in the political economies of France and Germany, and argue that the Chinese development experience shows that combining these elements can be a powerful tool to steer sustainable economic development and a radical alternative to current implementations of sustainable finance. We turn to these alternatives next.

3.5 Alternatives: Rethinking Knowledge, Policy, and Global Justice

The volume's contributions extend beyond diagnosis. Several chapters put forward concrete proposals for moving beyond the market-centred paradigm critiqued above. These proposals differ in scope and instrument but converge on a shared conviction: sustainable finance must be actively shaped by public policy, rather than being left to correct itself through improved market information.

Wullweber et al. (this volume) propose a differentiated policy framework built on distinguishing between categories of bankability, as not every green project requires the same policy instrument. Green projects that are not yet bankable need state instruments that either reduce their risk or increase their expected returns. For climate-damaging activities that are bankable, the logic must be reversed: their risk-return profile needs to be actively worsened to make them less attractive to investors – for instance through higher capital requirements for both banks and non-banks. For green activities that will likely never become bankable under a private-market logic, Wullweber et al. argue for direct public financing on a significant scale – potentially including expanded public borrowing, additional taxation, and a "Green Golden Rule" that would partially exempt climate-related investment from deficit and debt calculations. They further propose a Carbon Wealth Tax, that would tax not current emissions or consumption but the returns generated by carbon-intensive capital – revenue that could finance green investment while simultaneously shifting capital allocation towards sustainable assets. What is required, in sum, is a coordinated combination of financial, monetary, fiscal, and industrial policies: financial-policy measures alone cannot transform the productive economy; they must be complemented by public investment, industrial strategy, and sustained societal pressure (Wullweber et al., this volume).

The regional field study from Knoll (this volume) resembles these findings. Knoll argues for the need to ground sustainable finance within the realities of the regional economy. Industrial transformation requires technical knowledge and understanding for the complexities of product value chains, which cannot be grasped by isolated items of information. Formats of sustainable evaluation need to become much more technical and aligned with industrial processes. Furthermore, small and medium-sized and family-owned firms tend to finance their investments from own funds and profits, and do not use capital markets or strategic investors (Rossmann et al. 2026). Reporting requirements alone are thus not sufficient to steer green markets. Misaligned with industrial processes, and without green demand-side politics, they do increase frustration and anti-bureaucracy critique within industrial economies.

Chiapello arrives at a structurally similar conclusion via a different route. Rather than focusing on individual green financial products, she argues that attention should shift to entire financial circuits – the inter-

connected flows of money between the state, banks, firms, and households, together with the legal, accounting, and institutional rules that structure these flows (Chiapello, this volume). "Climatizing" financial circuits means embedding climate considerations simultaneously across a wide range of domains: lending practices and money creation, tax policy, subsidies and guarantees, public development banks, industrial and regulatory policy, accounting and valuation standards, and the design of financial institutions themselves. This is not merely an abstract proposal: because all financial circuits are ultimately interconnected, redirecting flows towards sustainability requires coordinated intervention at numerous points across all these domains. While countless actors from a wide variety of organisations and governance levels contribute to these interventions every day, public actors play a pivotal role in coordinating them. Rather than treating sustainable finance as an isolated field centred narrowly on financial institutions such as asset managers or banks, transformative financial circuits place public institutions and regulatory architectures centre stage. This takes up a recurrent theme of the initial research project: To question the exclusion of instruments such as non-financial environmental regulation, (redistributive) taxation, or public debt from the realm of sustainable finance.

Building on Chiapello, Klüh et al. (this volume) explore how transformative financial circuits might operate in practice, particularly within the EU context. As outlined above, their analytical framework integrates Chiapello's concept with the literature on democratic ecological planning. Consistent with this discourse, they argue that transformative circuits would need to encompass elements that enable more centralised planning of economic activities. Such planning would ensure that planetary boundaries are respected in a socially acceptable way, by prioritising the climate-neutral production of basic services for the public. In line with Sorg (2025), they argue that some institutions within the current financial system could be integrated into multilevel governance structures that translate these central directives into tangible transformations on the ground. Furthermore, drawing on the literature concerning actor networks in sustainability transformations, they emphasise the role of local institutions in bringing finance "down to earth" (Knoll et al. 2025).

Van der Zwan's proposal operates at a different level from those discussed so far. Rather than reconfiguring fiscal and monetary instru-

ments or building planning capacity, she asks how the governance of existing financial institutions might anchor them more firmly within the social and political contexts in which they operate – what she terms "type 2" embeddedness, as distinct from the "type 1" embeddedness of a global marketplace constituted by transnational rule-making (Van der Zwan, this volume). According to her chapter, private regulation can complement, rather than substitute for, public governance, and representational governance can give beneficiaries a voice in investment policy. Finally, control over the investment chain can restore to investors the discretion that intermediaries – above all the handful of asset managers who dominate the global market – currently exercise on their behalf.

Mertens and Stockmann (this volume) reinforce the emphasis on institutional embedding within the public financial sector. Their analysis points to leverage points rather than a fixed programme: for sustainable finance to generate meaningful climate impact, climate goals must be more clearly defined, consistently measured, and durably embedded in governance structures, business models, and financing decisions. Impact measurement must be connected to allocation decisions; governance boards should be opened beyond elite stakeholders; and strict conditionalities attached to equity endowments, grants, and loans. None of this, they stress, can be achieved by the banks alone. The entire public economic and financial apparatus must be aligned with a coherent transformation strategy.

Ötsch's contribution pushes this argument furthest, proposing a fundamentally broader conception of sustainable finance itself. Rather than orienting sustainable finance primarily around financial products and their market logic, financing should be oriented around the material and social requirements of the transformation. Such a broader conception of finance would need to encompass public financing, alternative forms of ownership and provisioning, and community-based models. Because structural change inevitably produces winners and losers, this reorientation also requires political negotiation and mechanisms for democratic conflict resolution (Ötsch, this volume).

Finally, Amaeshi's contribution insists that any rethinking of sustainable finance must seriously consider the specific conditions of the Global South, rather than wholesale adoption of Northern models – a concern that resonates with a broader literature on climate and energy justice. This literature has repeatedly warned that transition frame-

works designed in and for the Global North risk perpetuating colonial patterns of resource extraction and conditionality when applied elsewhere (Newell 2021; Bracking 2019). African states face a pressing dilemma: they must meet urgent energy needs without further intensifying global warming. Amaeshi argues that a sustainable energy transition must therefore reflect African developmental contexts rather than simply adopting frameworks designed for the Global North. His central argument is that Africa does not require an energy transition that merely fulfils international climate targets or externally imposed ESG requirements. Instead, what is needed is an Africa-rooted, just, and holistic transformation that links climate protection with energy access, poverty reduction, employment, technological self-determination, and social inclusion. In this vision, financial institutions should not merely finance sustainability elsewhere but should reorient their own operations towards sustainability and the genuine needs of African societies (Amaeshi, this volume).

Taken together, these alternative proposals share a common premise that runs throughout the entire volume: sustainable finance cannot be reformed from within its own market-centred logic. What is needed instead is a shift in perspective – from optimising financial products towards shaping the material, distributive, and democratic conditions under which finance operates. Pursuing this agenda will require sustained collaboration between financial economics, political economy, sociology, and development studies, and a willingness to treat power, distribution, and democratic legitimacy not as afterthoughts to sustainable finance, but as its central analytical concerns.

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Embedding Sustainable Finance: A Governance Perspective

Natascha van der Zwan

Abstract

As a global phenomenon, sustainable finance is politically constituted by a patchwork of private governance initiatives alongside public regulatory frameworks that prioritize the disclosure of information over environmental or social impact. The embedding of sustainability in global elite-driven, market-reinforcing institutions has made sustainable finance largely ineffective and vulnerable to greenwashing. In this chapter, I propose a different kind of institutional embedding of sustainable finance, one that revolves around three governance mechanisms grounded in the distinct socio-political context of local or national political economies. Focusing specifically on European institutional investors, I maintain that the creation of complementarities between 1) public and private regulation, 2) internal voice mechanisms within financial institutions and 3) control over the investment chain can create a sustainable finance that is more attuned to societal needs and can be held accountable. It is this kind of sustainable finance, I argue, that constitutes a meaningful alternative to the current ESG-dominated form which has proven incapable of withstanding adverse political circumstances.

1. Introduction

Anno 2026, sustainable finance seems to have lost its momentum. Once the poster child of the European Commission and embraced by the world's largest institutional investors as the financial sector's response to the Paris Agreement, it has now been swept up in the "anti-woke" movement following the U.S. presidential elections of 2024. In the wake of this political shift, large financial organizations have flocked out of global initiatives such as the Glasgow Financial Alliance for Net Zero, while the European Commission has set in motion deregulatory efforts to 'simplify' sustainability disclosure requirements. Important financial trendsetters such as BlackRock's Larry Fink are simply not talking about sustainable finance anymore (Stenström 2026).

The anti-ESG[1] backlash gives the impression that sustainable finance was but a temporary blip on the radar of the financial system. In this chapter, I want to argue against such a perception. Specifically, I maintain that the anti-ESG moment is particularly telling from the perspective of a global finance that is largely disconnected from the socio-political context in which many European financial institutions operate. Instead of mourning the demise of sustainable finance, I propose a perspective that emphasizes the *embeddedness* of financial institutions in their socio-political context. Drawing on institutionalist political economy, I define embeddedness as the way in which "institutions or structures of a country or a region are integrated into a social configuration" (Hollingsworth/Boyer 1997: 2). In the remainder of this chapter, the focus will be on governance arrangements as one type of social configuration that establishes this embeddedness of financial institutions.

Proposed by Karl Polanyi to describe the ways in which the economy is regulated by social institutions, embeddedness has become a core concept in studies of economic sociology and political economy. Scholarship on 'embedded liberalism' has, for instance, identified the international trade regime associated with the Bretton Woods system (1944-1976) and the post-war welfare state as institutional mechanisms to keep unfettered global markets in check (Ruggie 1982). The deregulatory wave of the late 1970s onwards has sometimes been seen as a disembedding of global financial markets from national institu-

[1] ESG stands for "environmental, social and governance" and is sometimes used synonymously with sustainable finance.

tions (e.g. Kus 2024). Yet, others maintain that the notion of an unchecked global marketplace is a contradiction in terms (e.g. Block 2007): even global markets are regulated by institutional frameworks, albeit ones that differ from national trade barriers or social protections. Yet, while nation-states embed global markets in the sense that their political actions have created them, they fall short in a second notion of embeddedness, namely whereby markets are aligned with the social and political goals of the societies in which they are positioned (Caporaso/Tarrow 2009).

Consistent with the first definition of embeddedness, sustainable finance in its global incarnation lives up to the image of an embedded marketplace constituted by politics. Its most dominant ideational foundation (ESG) emerged out of a global international organization; transnational bodies such as the Taskforce for Climate-Related Financial Disclosure (TCFD) and the Science-Based Targets Initiative (SBTi) have issued new regulatory standards; and transnational political entities such as ASEAN or the European Union have introduced sustainability frameworks that regulate cross-border financial flows. Still, global sustainable finance cannot fully escape the imagery of footloose capital. Private rule-making remains voluntary and therefore non-committal, public rules revolve around market disclosures rather than market restrictions and ESG as dominant ideational framework supports profit-making over societal impact. In this context, greenwashing has become widespread (e.g. Abouarab et al. 2025; Dempere et al. 2024; for an ontological perspective, see Lagoarde-Ségot 2024).

In this chapter, I argue in favor of a different kind of embeddedness for sustainable finance, one that cuts against the grain of political isomorphism or economic self-servedness. Instead, I propose to apply the second, thicker notion of embeddedness to sustainable finance, one that emphasizes its positioning in local social and political contexts (Caporaso/Tarrow 2009). I call this 'type 2 embeddedness'. The perspective I take is one of *governance*, defined here as the horizontal or vertical steering mechanisms that exist in the state's shadow of hierarchy (Scharpf 1994). My focus is on three governance mechanisms that already exist in the world of finance, but that are still insufficiently mobilized to align financial outcomes with social or political needs: private governance (Section 3), internal governance (Section 4) and governance of the investment chain (Section 5). In particular, I argue that the establishment of complementarities between these three gover-

nance mechanisms can connect investment practices to local contexts. They do so by connecting investment objects to local needs, establishing implementation pathways and by introducing accountability (Section 6). In what follows, I will support my argument with illustrative examples from European institutional investors. But first, I will introduce the often-dominant perspective of sustainable as product of global institutions and markets (Section 2).

2. The Global Governance of Sustainable Finance

In its broadest sense, sustainable finance refers to "the processes of taking environmental, social and governance (ESG) considerations into account when making investment decisions in the financial sector, leading to more long-term investments in sustainable economic activities and projects" (European Commission 2026). Its popularity notwithstanding, ESG remains a fairly thin interpretation of sustainable finance. Rather than being associated with a particular investment strategy (e.g. impact investing) or investment outcome (e.g. nature conservation), it reflects a particular attitude towards the investment process. Concretely, ESG stands for the integration of environmental, social or governance in the risk analyses that guide the investment process. This is consistent with dominant forms of financial regulation, whereby not the outcomes of the investment process are regulation (e.g. is there profit or loss?) but the ways in which risks are managed during the investment process itself (Lundberg 2026; Van der Zwan/Golka 2024).

Yet what the ESG-oriented definition of sustainable finance does not account for, is the fact that the very processes that define sustainable finance are as much social and political as they are financial. In fact, the notion of sustainable finance as ESG grew out of the conscious efforts of global economic and political elite actors to make sustainability compatible with the risk-return considerations of the financial sector. In 1992, following the publication of the influential Brundtlandt report which placed the idea of sustainable development high on the political agenda, representatives from thirteen global banks joined the UN Environment Programme (UNEP) to issue a statement on the "innovative financing for sustainability":

> "We, members of the financial services sector, recognize that sustainable development depends on a positive interplay between economic and social development and environmental protection, in order to balance the interests of current and future generations. We further recognize that sustainable development is the collective responsibility of government, the business community, and individuals. We are committed to collaborating with these sectors within the framework of market mechanisms to achieve shared environmental goals."

This collaboration continued in a number of global initiatives, such as the UNEP Insurance Initiative and the Financial Institutions Initiative. Following the launch of the Global Compact in 2000, eighteen global financial firms answered UN Secretary-General Kofi Annan (1997-2006)'s call to further develop sustainable finance. The resultant *Who Cares Wins* (2004) report launched the concept of ESG and the notion of environment, social and governance criteria as guiding principles for financial investment (Pollman 2024).

In other words, the embrace of ESG by global financial firms was by no means automatic. According to Elizabeth Pollman (2024: 14), "the strategic framing of putting E, S, and G together was not inherently sticky; it was amplified through a number of UN initiatives and institutional support that helped spread the term through the global investment community to investors and shareholders around the world". Of major importance, Pollman notes, was the contribution of the UNEP FI Asset Management Working Group in commissioning law firm Freshfields Bruckhaus Deringer to further study the legal implications of ESG integration into actual investment policies. The resultant Freshfields report made a case for the legal compatibility between ESG integration and investors' fiduciary duties, drawing on a perceived positive connection between ESG and investment performance (UNEP Finance Initiative 2005). To further embed ESG in the institutional architecture of global finance, UNEP FI and UN Global Compact jointly established the Principles of Responsible Investment (PRI), a new private regulatory initiative for institutional investors (Pollman 2024).

Today, the PRI is the largest transnational initiative for sustainable finance (Van der Zwan/Van der Heide 2026). With a substantive focus on responsible investing, it is also one of the most broadly oriented. This is no coincidence: the PRI aspires to be a "big tent" organization, under which as many financial institutions as possible can align them-

selves. It is at the center of a "patchwork" of transnational initiatives developing standards for sustainable finance (Pouliot/Thérien 2023; see also Van der Zwan/Van der Heide 2026). It is joined by several dozens of other global or regional sustainable finance initiatives: Renckens and Elliott (2026) count no fewer than 111 established between 2000 and 2020. These initiatives vary in terms of content (e.g., transition finance, biodiversity finance) and function. They range from standardizing bodies (Glasgow Financial Alliance for Net-Zero) and technical organizations (Partnership for Biodiversity Accounting Professionals) to pressure groups (Climate Action 100+). In addition, the initiatives serve a range of goals, including identifying problems and solutions, establishing rules for participating organizations, providing support for compliance with these rules, promoting transparency and accountability, and facilitating knowledge sharing and mutual learning.

What unites these initiatives is that they are all examples of so-called private governance. Private governance refers to the development of voluntary regulation by non-state actors. Private regulatory efforts can produce different types of outcomes, such as non-binding rules, product standards or best practices. Contrary to public rules created by state entities, private rules are voluntary in nature. They are only binding, as long as private actors commit to them. Where public binding rules for sustainable finance do exist, they revolve largely around the public disclosure of ESG criteria. Case in point are the different non-financial disclosure directives (CSRD, SFDR) that are part of the EU's Sustainable Finance Action Plan. Corporate disclosure is consistent with the efficient market hypothesis, which posits that investors will make optimal decisions as long as they have complete market information (Bryant/Webber 2024). Neither public rules nor private regulation therefore forcefully steer investors towards the actual realization of sustainable outcomes.

The success of sustainable finance should therefore be seen in the ways in which it has made the idea of sustainability compatible with the core tenets of global finance. Mainstream principles of global finance revolve, for instance, around risk-return considerations. To make sustainability compatible with finance, environmental and social factors have been reconceptualized as risks to be managed through the investment process. According to Parfitt (2024), the effect of this 'riskification' of sustainability is ultimately financial. Sustainability

has been turned into an object of profitability: "It enables investors to price ESG risks and to apply their own assessments about which risks are likely to be the most costly and which opportunities are likely to be most profitable" (Parfitt 2024: 224). As Parfitt (ibid.) notes, ESG is largely about managing the way climate change – and other societal developments – impacts the profitability of finance (single materiality) rather than the financial sector's own impact on climate (double materiality).

The marketization of sustainability extends beyond investors' risk management. The regulatory emphasis on disclosure over impact has fostered the emergence of a veritable industry around the provision of ESG information such as ESG data, indices and ratings (Dimmelmeier 2024; Fichtner et al. 2024). Yet in the absence of a globally agreed-upon definition of what constitutes a sustainable asset or regulatory oversight, the products delivered by companies providing these ESG tools vary considerably. This means that one information provider might label a particular asset as sustainable, while the other provider does not. In addition, dedicated ESG products such as ESG indices do not always differ substantially from their non-ESG counterparts (Fichtner et al. 2024). Moreover, as Barta (2026) notes for the case of rating agencies, these types of financial intermediaries tend to operate on short-termist time horizons: they penalize states and firms for current costs incurred as a result of climate adaptation or mitigation efforts, but they do not discount the long-term losses incurred by climate change. Taken together, the markets for ESG information reinforce rather than challenge the market-driven orientation of global sustainable finance.

Beyond sustainable finance as an elite project, rooted in global markets and transnational institutions, we can envision a different imaginary of sustainable finance, one that is anchored in the social and political contexts of local and national political economies. This alternative imaginary of sustainable finance is not a pure counterfactual, but rather is rooted in a historical lineage of ethical and social investing that predates ESG. Examples of this historical lineage include the ethical investment campaigns by US-based new social movements of the 1960s and 1970s and the union-led social investment movement in France (King/Gish 2015; Crifo/Mottis 2016). These examples illustrate the second type of embeddedness, as discussed by Caporaso and Tarrow (2009), whereby market actors are positioned within local so-

cial and political contexts. Local embeddedness can be established in different ways, as also evidenced by other contributions to this volume. Drawing on previous research (Golka/Van der Zwan 2025; Van der Zwan/Golka 2024; Van der Zwan/Van der Heide 2026), the focus is here on specific governance arrangements. In what follows, I will present three kinds of governance arrangements that create policies, implementation pathways and accountability mechanisms between institutional investors and the social and political contexts they are supposed to serve: private regulation, internal voice mechanisms and investment chain control.

3. Private Regulation to Complement Public Governance

In the previous section, I have presented the private governance of sustainable finance as a transnational phenomenon connecting participants from global political and business elites. But of course, those investors involved in transnational governance initiatives are not solely global actors, they themselves are rooted in local and national politico-economic contexts. Still, there is unevenness in the countries and regions from which these investors originate. Elliott (2024) notes, for example, that the United States and the United Kingdom in particular have a high number of financial businesses participating in transnational private governance initiatives. This picture is partially confirmed by Van der Zwan and Van der Heide (2026). While investors from the Anglo-American world participate more frequently in a single global sustainable finance initiative, they observe that investors in European and Asian economies – such as the Netherlands, France, and Japan – have the highest number of simultaneous participations. In other words, whereas Anglo-American investors are often only members of the Principles of Responsible Investment, investors from various European and Asian countries are more frequently affiliated with multiple private governance initiatives.

To better understand the origins of differences between investors from different countries, the academic literature on substitution versus complementarity offers a solution (see Fransen 2013 for an overview). Some researchers have found that private governance develops more frequently in countries with limited government intervention, weak trade unions, and a competitive market for corporate control (Matten/

Moon 2004; Kinderman 2020). In these contexts, private governance replaces public regulation. Others argue that the development of private governance actually builds upon existing national institutional capacities for coordination (Gjølberg 2009, 2010). According to this logic, private governance is an extension of public forms of coordination: more restrictive forms of market regulation support compliance with global standards, while more collaborative labor relations make companies more receptive to stakeholder engagement.

In the case of sustainable finance, complementarity appears to prevail. Research shows that institutional investors active in this domain of private governance have a stronger vision on sustainability (Hoepner et al. 2021), but are also more frequently confronted with government regulations or pressure from societal actors (Yan et al. 2019). These factors are related to the degree of coordination of the economy. In comparative political economy, the term 'coordinated political economy' refers to economic systems in which market participants make use of non-market forms of coordination with other market participants, such as participation in political decision-making, professional networks, or collective labor agreements (Hall/Soskice 2001). Here, forms of coordination relate not only to alignment between social partners but also to cooperation between and within pension funds. It is not surprising that countries where consultation and cooperation are a central part of the governance culture produce financial organizations that also perpetuate this culture at regional and global levels (Van der Zwan/Van der Heide 2026).

Consider, for instance, the emergence of national multi-stakeholder agreements on sustainable finance that have emerged in the wake of the 2015 Paris Agreement. Like many other European governments, for instance, the Danish and Dutch governments gave a legal foundation to the Paris Agreement's goal of limiting global warming to 1.5 degrees Celsius compared to pre-industrial levels by passing national Climate Acts that formalize the goal of reaching climate neutrality by 2050 as well as intermediate targets (a 70% GHG reduction by 2030 for Denmark versus a 49% reduction by 2030 for the Netherlands). To implement the Danish Climate Act, the Danish government then created thirteen public-private climate partnerships (*klimapartnerskaber*) across industries, among which finance. Participating actors in the climate partnership for the financial sector include the interest organizations for the insurance and pension industry (*Forsikring og Pension*)

and for the banking, mortgage and investment fund industry *(Finans Danmark*) (Klima-, Energi- og Forsyningsministeriet 2026). The Dutch government set up a similar initiative, in the form of a Climate Commitment for the Financial Sector (*Klimaatcommitment voor de Financiële Sector*). The Climate Commitment brings together 55 financial institutions to annually report on the carbon intensity of their investment portfolios, to develop action plans for carbonization and to jointly develop common metrics to measure climate impact (Klimaatcommitment Financiële Sector 2026).

The Dutch and Danish public-private partnerships represent a different kind of private governance than described above. While participation in the initiatives remains voluntary, they are less open-ended due to their linkage with public regulation. In both countries, the national Climate Act states the reductions in greenhouse gas emissions that the country needs to achieve and by which year. The public-partnerships were initiated by the national governments to create specific implementation pathways within the highest-emitting sectors of the economy. The partnerships therefore combine the formalization of public regulation with the more flexible nature of private policy-making. Participants are held accountable for the outcomes of the public-private partnerships, but they don't have to approach their participation as purely individual market actors: they may use the partnerships for collaboration and learning with other market actors. While the public-private partnerships are still ongoing, mid-term evaluations for the Dutch Climate Commitment indicate that Dutch pension funds are increasingly tracking their carbon emissions (data cover 85% of the portfolios of the participating funds) and their approach to portfolio decarbonization has resulted in annual reductions of GHG (KPMG 2025). Improving data quality on portfolio emissions remains a focal point in coming years (ibid.).

4. Representational Governance for Stakeholder Voice

Internal governance refers to the way in which a financial institution is managed and operated. Financial institutions show a great variation in terms of their internal governance. Some financial institutions, such as commercial banks, are organized as for-profit enterprises with managerial tasks and decision-making power concentrated in the hands of

executive managers and boards of directors. Clients of these banks typically have limited say in the operation of those institutions. Should they disagree with the corporate strategy/behavior of their bank, they can simply leave and take their business elsewhere. Other financial institutions do provide more say for beneficiaries to shape the policies of these institutions. Pension funds are a good example. In many European pension systems, pension funds have boards of trustees that include representatives of the beneficiaries of the fund. Those representatives are important decision-makers: they can decide on a range of things, from benefit adjustments to investment policies.

Representational governance is an important mechanism through which financial institutions like pension funds can be embedded in society. Many Dutch pension funds, for instance, have a management board that consists of representatives of the fund's active members (employees), retirees and the sponsoring employers. The board's investment committee is responsible for defining the fund's investment policies. Funds with such board structures also have advisory councils, consisting of members (active and retired) and employer representatives. While representational governance is by no means a guarantee that pension funds choose more sustainable investment policies, it does allow for a closer alignment between a fund's investments and the preferences of its stakeholders. In the Dutch pension sector, this is expressed in the ways in which pension funds connect their sustainability policies to the sectors in which they operate. Healthcare fund PFZW, for instance, has selected SDG 3 (Good health and well-being) as core focus for its investments, while retail fund Detailhandel focuses on SDGs 8 (Decent work and economic growth) and 12 (Responsible consumption and production) (PFZW 2026; Pensioenfonds Detailhandel 2025). In 2026, metal and electronics pension fund PME excluded the gambling industry from its investment portfolio, after member surveys indicated that a large majority of beneficiaries found this industry harmful to society (PME 2026).

Of course, the type of representational governance that characterizes some European pension funds is not possible for every financial institution. After all, a commercial bank is unlikely to opt for a governing board run by representatives of its clients. Still, there are other models imaginable through which clients or beneficiaries can gain a say in the operations of financial institutions that go beyond the mere possibility of exiting. Sustainability-oriented bank Triodos, for instance, has an

advisory council dedicated to sustainability issues, the Triodos Bank Impact Collective. The advisory council brings together representatives from the bank's core stakeholder groups, such as its clients, its shareholders and NGOs. Focusing on five transition-related topics (energy, food, resources, well-being and society), the advisory council offers advice to the bank's Executive Board (Triodos Bank 2026). Where such a council is equipped with advisory rights that are taken seriously by the executive board, it offers an important avenue for clients to use their voice rather than the traditional route of exiting the bank in case of disagreement (Hirschman 1972; for an overview of recent scholarship on the democratization of finance, see Downey/ Eich 2026).

But prioritizing voice over exit is not only an important governance mechanism for members or clients. It can also serve the financial institutions themselves. Especially in the current moment of strong politicization of sustainable finance, voice as a governance mechanism can be a useful tool for financial institutions to deal with growing public scrutiny. On the one hand, financial institutions are facing social movement activism around issues such as climate change or international conflicts (Gunningham 2017). On the other hand, they are faced by groups of politicians and citizens that outwardly reject the "woke" idea of mobilizing finance for non-financial purposes (Harmes 2025). Such public debates can be difficult to navigate for financial organizations that are used to organizing their decision-making procedures around risk-return considerations.

5. Taking Control over the Investment Chain

A final governance element pertains to the organization of the so-called investment chain. The investment chain refers to the constellation of financial intermediaries that connect an investor (e.g. a pension fund or a sovereign wealth fund) to the organizations or activities that are invested in (e.g. a company) (Arjaliès et al. 2017). The composition of the investment chain differs per investor. Some investors might carry out more investment activities in-house, while others delegate such activities to external parties. Some investors might invest in different kinds of asset classes, each requiring their own intermediaries, while others concentrate investments in a single asset class. Finally,

investors with representational governance will have an additional upstream layer to their investment chain, represented by their beneficiaries who also have a say over the organization's investment activities (see previous section). For a typical Dutch pension fund, for instance, we have identified four types of financial intermediaries in the investment chain: asset managers, fiduciary managers, overlay managers and investment consultants (Golka/Van der Zwan 2025). Other investors, however, might have other kinds of intermediaries as part of their investment chain, depending on the sector or country they are located in.

The composition of the investment chain matters for the question of embeddedness, because it implies that investors do not have full control over the investment process. Each financial intermediary within the chain has some degree of discretionary power over the services they provide for the investor. Asset managers provide a poignant example, as they are considered to be particularly powerful financial actors. Asset managers are hired by investors to carry out their investment activities for them. Their considerable influence over the investment process stems from three sources. First, save for very large institutional investors with considerable resources, most investors are not able to purchase a tailor-made investment approach from their asset managers (called a mandate). As a result, their assets will be invested as part of a larger pool with other investors' assets (Golka/Van der Zwan 2025). Second, asset managers are providers of passive investment funds that allow investors to invest across the entire market at low fees but without their own direct control over these investments (Fichtner/Heemskerk 2020). Finally, the global market for asset managers is dominated by three large firms: BlackRock, State Street and Vanguard, or the Big Three. The strong concentration of the global market for asset management means that the Big Three's investment practices set the tone for the entire market (Braun 2021).

The powerful role of asset managers in existing investment chains has important implications for sustainable finance. So far, the sustainability performance of the Big Three asset managers has been less than impressive. The Big Three continue to invest in fossil fuels (Glowik et al. 2024), often oppose environmental shareholder resolutions at annual shareholder meetings and show limited differentiation between their ESG and non-ESG funds (Baines/Hager 2023). In its 2025 responsible asset management benchmark, moreover, ShareAction (2025) finds the

Big Three at the bottom of its ranking of large asset managers with none of them having achieved the desired standards in the areas of climate, biodiversity or social issues. In other words, the concentration of asset ownership in the hands of large asset managers has stymied progress in sustainable finance beyond the actions of individual investors.

Yet, the power of the Big Three asset managers might be waning among asset-owners with stronger sustainability commitments. In 2025, several large European pension funds ended their contracts with the Big Three, because of the latter's declining sustainability performance. Dutch pension funds PME and PFZW withdrew EUR 5 billion and EUR 248 billion respectively from BlackRock, while UK pension fund People's Pension and Danish pension fund AkademikerPension ended their contracts with State Street. After withdrawing GBP 28 billion in assets, a People's Pension representative motivated the fund's choice by referring to its priorities in "sustainability, active stewardship and long-term value creation" (McDougall et al. 2025). In the case of PME and PFZW, a preference for active investment over passive investment also played a role. Both funds considerably decreased their investment universe, from several thousand to several hundred investee firms, to be better able to select investee firms that were compatible with the funds' sustainability policies (PFZW 2026; PME 2026).

While the European pension funds mentioned above left the Big Three for other private asset managers based in Europe, there is no particular reason why asset managers need to be large for-profit corporations. In 2024, Lenore Palladino proposed a public asset manager to invest U.S. pension funds' assets (Palladino 2024). According to Palladino, a public asset manager has several advantages. First, a public asset manager can avoid conflicts of interest, because it is not dependent on the fee-generating business of the companies it owns shares in. Second, a public asset manager can align the allocation of its assets with society's common interests, including the state's industrial policy goals and international climate commitments. Third, a public asset manager can provide a strong political counterweight to the lobbying power of private finance (ibid.). Like private financial institutions, a public asset manager requires a governance structure organized around voice to realize a 'type 2' embeddedness that provides both representation *and* accountability.

6. *Beyond Hypocrisy*

In this chapter, I have presented an alternative perspective on sustainable finance that moves beyond a conceptualization rooted in transnational institutions and global markets. Instead of this 'type 1' perspective on embedding sustainable finance, I have proposed to consider sustainable finance from an embeddedness 'type 2' perspective. In this more localized understanding of embeddedness, sustainable finance anchored in the social and political context in which financial actors are situated. While this kind of embeddedness can be achieved through different kinds of mechanisms, this chapter has emphasized the role of governance: private governance to harmonize implementation, representational governance to voice preference and provide legitimacy, and investment chain control to provide accountability. Taken together, such mechanisms have the potential to weather the "anti-ESG" storm currently affecting global financial markets.

After all, given the many national and transnational initiatives established over the past two decades, it is remarkable how quickly the momentum around sustainable finance has disappeared. The collapse of the Net Zero initiatives for banks, insurers, and financial service providers, in particular, has caused a great deal of controversy. After US President Donald Trump entered the White House for the second time in January 2025, and a new anti-ESG wind began blowing with him at the federal and state levels, many (particularly American) participants in the Net Zero initiatives proved unwilling to continue their cooperation. In the Financial Times, the outgoing chairman of asset manager Aberdeen stated: "Our sector made a huge mistake… It became a marketing gimmick: let's tell everyone that we are going to save the world" (Mundy 2025).

Yet, rather than viewing the dismantling of the Net Zero initiatives as a move away from sustainable finance, it might be more indicative of a limited commitment by large financial institutions to begin with. In the late 1990s, international relations scholar Stephen Krasner (1999) used the term organized hypocrisy to describe the gap between nation-states' rhetorical commitments at the international level and their lack of implementation at the national level. The term organized hypocrisy can also be applied to global sustainable finance platforms such as the Net Zero initiatives. After all, participants can gain reputational benefits from participation, but at the same time can withdraw

from their obligations at any moment. It is no coincidence that the largest participants in global initiatives are also some of the most criticized investors. Take, for example, an organization like BNP Paribas, a bank that is both celebrated for its sustainability performance but is simultaneously one of the 'dirty dozen' when it comes to fossil fuel investments (Rainforest Action Network et al. 2025). Therefore, social science scholars of finance are using the concept of organized hypocrisy, initially meant for nation-states, to describe investors' sustainability commitments (e.g. Hakelberg/Schaub 2018; Nägele/Thiemann 2025; Weaver 2008).

The connection between organized hypocrisy and socio-political embeddedness is a complicated one. After all, organized hypocrisy in the area of sustainable finance has not been caused by a *lack* of governance initiatives. In fact, some scholars have shown how organized hypocrisy is made possible by the high number of transnational initiatives around sustainable finance (Kaplan/Levy 2025), and in particular their high degree of overlap (Renckens/Elliott 2026). Precisely when there is no government to provide direction, it is important that collective initiatives have an effective division of labor. Where multiple initiatives within the same policy domain coexist, their effectiveness is challenged (ibid.). For example, when one initiative is perceived to impose particularly strict private rules, market actors can be motivated to create less strict competing initiatives. In that case, participants will engage in venue shopping for initiatives that impose the lowest possible costs while maximizing benefits (ibid.).

Now that Europe has also proven not immune to the above developments (see the Omnibus Simplification Initiative), the question remains whether the types of governance mechanisms described above can offer an alternative to organized hypocrisy. From a substitution perspective, private forms of coordination may well compensate for a lack of government action, but preventing existing problems such as window-dressing or venue shopping by participating parties might still require anchoring private standard-setting in public forms of accountability. Perhaps the answer therefore lies rather in creating cross-cutting complementarities: if meaningful private governance is indeed driven by existing traditions of cooperation and consultation between different stakeholder groups, then embedding it in strong internal governance or investment chain control is a sine qua non. In other words, to move towards a sustainable finance that does more than embed in-

dividual investor behavior in the profit-driven logics of the global marketplace (type 1) requires a politico-economic sensibility to the ways in which finance is shaped and supported by these local collaborations (type 2 embeddedness). Only then can finance achieve the kind of sustainability that is long-term oriented and truly impactful.

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Compliance Without Transformation: Sustainable Investment Networks and the Dilution of Ecological Impact

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Abstract

The EU Action Plan on Financing Sustainable Growth seeks to reorient private capital flows toward sustainable economic activities, but its ambiguous and principle-based design leaves the translation of its disclosure obligations into practice to the market itself. Actors constructing a sustainability-related fund must manage the structural tension between their mandate to diversify investment risk and the restriction of the investable universe that sustainability considerations impose, a condition this chapter terms the sustainable investment dilemma. Drawing on discursive institutionalism and 26 expert interviews across the European fund market, the chapter reconstructs the sustainable investment networks. These are variable constellations of financial actors, non-financial intermediaries, and supervisory authorities that co-produce what compliance comes to mean. The chapter argues that the Action Plan has reframed sustainable finance from an investment opportunity into a compliance risk. Within this frame, the implementation process is oriented toward regulatory defensibility rather than ecological ambition. Because the reframing operates at the programmatic level, it cannot be corrected by policy instruments that are themselves read through it. Ecological dilution occurs through an interlocking set of mechanisms that the ambiguous regulatory design makes possible. The sustainable investment dilemma is thereby managed rather than resolved. What emerges is a form of sustainable finance that is procedurally legitimate but ecologically contingent.

1. Introduction

Sustainable finance has become a prominent feature of contemporary financial markets. For much of its history, it remained a voluntary project driven either by privately-led market initiatives or by transnational organizations such as the United Nations, in which participation was voluntary and its ambitions largely aspirational (Migliorelli 2021). In this realm, financial actors integrate environmental, social, or governance (ESG) criteria into their financial decision making. Especially, institutional investors and pensions funds have organized this approach through collective investment vehicles, such as investment funds (Van der Zwan/Van der Heide 2024). Subsequently, over the past two decades, funds integrating ESG criteria expanded the domain in both number and assets under management, with ESG integration becoming a dominant investment strategy globally (GSIA 2017, 2023). The promise of sustainable finance, in this framing, is that pursuing ecological objectives is simultaneously that of the financially rational course of action.

Yet these funds have attracted persistent criticism. Doubts have been raised about their capacity to function as genuine transmission mechanisms for substantive economic transformation (Caldecott et al. 2024; Fichtner et al. 2025). Due to vast heterogenous understandings of sustainable finance, the actual contribution of individual funds to broader ecological objectives was difficult to assess due to methodological heterogeneity (Migliorelli 2021; Dimmelmeier 2023; Fichtner et al. 2023). Given the absence of common definitions, accusations of greenwashing have become a recurring feature of public debate (Abouarab et al. 2024). Uncertainty about the ecological impact of these funds and skepticism toward their sustainability claims are therefore structural features of a market operating without institutional scaffolding.

The European Commission (EC) has sought to address this heterogeneity by homogenizing the European sustainable finance domain. Through the disclosure-based framework of the Action Plan for Financing Sustainable Growth (Action Plan), the EC aims to reorient financial flows toward sustainable economic activities that ultimately contribute to achieving a net-zero economy by 2050 (European Commission 2018). However, its implementation process has triggered persistent questions about emerging implementation strategies, green-

washing accusations and whether this approach dilutes financial commitments towards European climate targets (Fichtner et al. 2023).

The Action Plan confronts financial actors with a structural tension of the sustainable fund market: the sustainable investment dilemma. Investment funds are designed to reduce single-asset risk through diversification across sectors and geographies, a core principle anchored in modern portfolio theory (Markowitz 1952; 1968). However, any meaningful integration of sustainability criteria, e.g. the exclusion of fossil intensive stocks, narrows the eligible investment universe and thus directly conflicts with the fund's structural mandate to diversify investment risks (Lundberg 2025). The sustainable investment dilemma is therefore a structural condition with which every actor constructing a sustainability-related fund must manage.

This chapter illuminates how financial actors translate the disclosure requirements of the Action Plan into organizational routines, thereby managing the sustainable investment dilemma. Drawing on discursive institutionalism (Schmidt 2008, 2010a), it traces how diverse constellations of financial actors, intermediaries, and supervisory authorities – the sustainable investment networks – interpret and operationalize a regulatory framework characterized by ambiguity and principle-based rules, concretely by constructing reporting systems that disclose how ESG criteria have been integrated into the investment process. One central finding is that the Action Plan produces a fundamental cognitive reframing of sustainable finance; from a domain of voluntary commitment to a domain of compliance risk. The sustainable investment networks that emerge under the Action Plan establish compliance-oriented architectures whose primary orientation is toward satisfying regulatory requirements rather than achieving substantive ecological impact. This reframing, the chapter argues, redefines the problem that the Action Plan is meant to solve. Ecological integration becomes the management of regulatory exposure.

The chapter proceeds as follows. The next section examines the governance of sustainable finance in Europe through disclosure-based regulations, presenting the Action Plan and its structural implications for the European fund market. The theoretical section introduces discursive institutionalism and ideational power as the analytical framework. The methods section explains the research design. The empirical section reconstructs the sustainable investment networks and shows the reframing of sustainable finance as a compliance risk and presents

the mechanisms through which ecological impact is diluted across the implementation process. Finally, the conclusion reflects on the contributions of the analysis and discusses the conditions under which the identified dilution mechanisms could be contested or reversed.

2. *The Governance of Sustainable Finance in Europe*

The European fund market is among the largest in the world, accounting for more than one-third of the global market (EFAMA 2025: 8). As investment funds pool substantial amounts of capital from institutional investors and private households, the EU sees these financial vehicles as an essential lever to transform the material trajectory of economic growth toward greater ecological sustainability (Fichtner et al. 2025). It is against this background that the EU has sought to mobilize the fund market's infrastructure for its climate and sustainability agenda through binding regulatory intervention.

Adopted in 2018 as a compromise between ecological ambition and financial market continuity after decade-long policy debates (Ahlström/Monciardini 2022), the Action Plan aims to reorient financial flows toward sustainable economic activities and thereby contribute to the EU's target of achieving a net-zero economy. Its market-affirmative approach follows a principle-based regulatory logic in which broad objectives are stated rather than prescriptive rules (Black 2008). Underlying this design is the programmatic conviction that information asymmetry constitutes the central problem of the European fund market: if financial actors have access to more adequate climate-related information, capital will flow to more sustainable assets. This logic follows the conviction that financial markets, if properly informed, generate more optimal outcomes (Fama 1970). Hence, this governance choice sought to harness existing financial market infrastructures and financial logic to utilize them for environmental objectives. However, the structural consequence of such a principle-based framework is the creation of interpretive space to which financial actors must respond with concrete organizational practices.

The regulatory framework of the Action Plan operates through a set of interlinked regulations and directives. The Corporate Sustainability Reporting Directive (CSRD; Directive 2022/2464/EU) mandates companies to disclose sustainability-related information in their annual

reports, supplying the informational foundation on which investment decisions are expected to draw. The EU Taxonomy (Regulation (EU) 2020/852) provides a classification system for determining whether specific economic activities qualify as environmentally sustainable. The Sustainable Finance Disclosure Regulation (SFDR; Regulation (EU) 2019/2088) mandates financial actors to disclose how sustainability criteria are integrated into their investment processes. For this, the SFDR distinguishes three disclosure categories. Funds disclosing under Article 8 promote environmental or social characteristics as part of their investment process, and funds categorized as Article 9 pursue sustainable investments as their primary objective. In contrast, funds categorized as Article 6 do not have a sustainability scope. Crucially, however, the criteria of how funds promote sustainability or contribute to environmental objectives remain opaque. Also, the Taxonomy, on which SFDR disclosures partially depend, remains incomplete, covering only a fraction of economic activities, and sustainability data reported under the CSRD remains uneven in quality and availability. Hence, the methodological infrastructure as well as the necessary data for the implementation of the Action Plan were incomplete when its implementation began.[1]

As result, the Action Plan was enforced as an ambiguous project with an incomplete supporting infrastructure. Its implementation has produced substantial interpretive variation across the investment fund market. Funds disclosing their sustainability considerations apply widely divergent investment methodologies and sustainability criteria, resulting in a disclosure architecture that builds on standardized categories while leaving their substantive content largely undetermined. This has led to widespread confusion about what the classifications signify (Colard et al. 2022; van Hoorn/Gallagher 2022). Several funds marketed as sustainable or impact-oriented continued to hold significant positions in the oil and gas industry, fueling greenwashing accusations (Colard et al. 2022: 42f.). The aggregate consequence of this implementation dynamic is that despite the Action Plan's ambition to

[1] The Action Plan additionally introduced a Benchmark Regulation (EU) 2019/2089, creating two new categories of climate-related benchmarks, designed to provide investors with standardized reference portfolios aligned with low-carbon transition pathways. As benchmark construction falls outside the scope of investment fund disclosure practices examined here, this regulation is not discussed.

redirect capital flows toward European climate targets, the share of investment oriented toward those targets remains insufficient (Fichtner et al. 2023).

In response to mounting greenwashing concerns, the European Securities and Markets Authority (ESMA) has gradually intensified its supervisory stance. In 2022, it issued a Supervisory Briefing urging national competent authorities (NCAs) to scrutinize more consistently sustainability claims in the disclosure reports and marketing materials of Article 8 and Article 9 funds (ESMA 2022). This trajectory continued in 2024 with concrete fund-naming guidelines imposing stricter requirements on funds using sustainability-related terms in their names, and a guideline specifying how climate-related risks are to be disclosed (ESMA 2024a, 2025). This iterative supervisory response reveals a regulatory environment in which substantive meaning of the Action Plan is produced through an iterative process of regulatory clarification, in which supervisory authorities respond to how actors have so far operationalized the disclosure framework.

These dynamics reflect two constitutive features in the governance style of European financial markets. The first is its vertical architecture: following the 2008 financial crisis, supervisory competences were progressively transferred upward to newly created European Supervisory Authorities, with ESMA assuming responsibility for harmonized oversight across the European fund market (Quaglia 2012; Naert 2016). Sanctioning and supervisory powers, however, remain with NCAs, who translate European legislation into domestic supervisory practices, producing a hybrid regime of European harmonization without full centralization. The second is its horizontal character: financial governance has come to depend increasingly on expert-driven interpretive authority, expanding the discretionary power of financial professionals and intermediaries in translating abstract rules into concrete practices (Hübner 2019). Especially in context of ambiguous regulations, financial actors hold high discretionary power to establish organizational routines that are compliant to regulatory text (Thiemann/Lepoutre 2017). Together, these features produce a mode of governance in which regulatory outcomes are co-produced by supervisory authorities and the expert communities whose practices they govern.

Sustainable finance is a particularly complex instance of this governance configuration because it requires governance of a financial domain which is mediated by environmental knowledge (Dimmel-

meier 2024; Hernández 2025). Financial logics centered on risk and return, legal logics centered on regulatory compliance, and environmental logics centered on ecological impact are structurally in tension (Seabrooke/Stenström 2023, 2025). What this governance architecture does not determine is which of these logics prevail in practice, and under what conditions ecological objectives are incorporated, diluted, or displaced as the Action Plan is translated into organizational routines. Answering this question requires paying attention to the ideational and discursive dimensions among those actors that are involved in the implementation process. It is this analytical task to which the following section turns.

3. The Power of Ideas and Discourse in Governing Sustainable Finance

The Action Plan does not prescribe the concrete processes through which its sustainability objectives are to be achieved. Instead, it sets broad disclosure mandates and leaves their translation into organizational practice to the market itself. This principle-based design (Black et al. 2007; Black 2008) means that compliance procedures are not fixed technical outcomes but an interpretive process that is fundamentally shaped by how actors frame the implications of the regulatory text.

This process unfolds across a heterogeneous field that constitutes sustainable finance. Financial actors, non-financial intermediaries and supervisory authorities each bring different epistemic foundations, institutional positions, and normative commitments to this interpretive process. The question of how an ambiguous regulatory framework gets translated into concrete organizational practice is therefore inseparable from the question of whose interpretation prevails. The two features of the implementation process, the interpretive openness and the multi-stakeholder character of sustainable finance, call for an analytical framework that emphasizes the actors' interpretations and their power relations through which some interpretations come to govern the process while others remain marginal. The intuition that this chapter tries to clarify is when and how the implementation of the Action Plan cannot prevent ecological dilution. The chapter argues that the implementation practices consistently produce outcomes that are procedurally

compliant but contingent in regards their ecological impact, and traces this pattern to a deeper cause: because the diagnosis underlying the Action Plan reduces the sustainability problem to information asymmetry, the policy instruments built on that diagnosis remain structurally unable to reach the mechanisms through which ecological dilution occurs. To uncover these dynamics, the chapter draws on discursive institutionalism (DI) (Schmidt 2008, 2010a, 2010b) and its extension into ideational power analysis (Carstensen/Schmidt 2016).

To reveal this argument empirically, DI helpfully distinguishes three levels at which ideas of the implementation process operate (Schmidt 2008): the philosophical, the programmatic, and the policy level. At the philosophical level, ideas take the form of deeply embedded assumptions about how the world works and are rarely contested by actors themselves (ibid.: 306). With respect to sustainable finance, this manifests as the largely uncontested assumption that economic growth is compatible with, and can serve as a vehicle for, ecological and social outcomes, and that the financial system, given its structural and infrastructural position within the economy, is the appropriate lever for this transformation. At the programmatic level, ideas define the problems to be solved, the goals to be pursued, and the instruments deemed appropriate (ibid.: 306). The governing idea of the Action Plan is that the current allocation of capital does not adequately reflect ecological risks and opportunities because environmental considerations are "not sufficiently taken into account" (European Commission 2018: 3). This misallocation results from information asymmetry and the Action Plan is the institutional expression of this diagnosis. This diagnosis stems from the programmatic assumption that markets, once properly informed, allocate capital optimally. Hence, the programmatic response takes the form of correcting information flows rather than restricting which economic activities are eligible for investment. At the policy level, ideas take the form of concrete regulations through which actors implement the programmatic agenda (Schmidt 2008: 306).This hierarchy is analytically consequential for understanding the Action Plan's implementation: when the programmatic diagnosis reduces the challenge of ecological sustainability to a problem of information asymmetry, the chosen policy instruments remain structurally unable to reach the mechanisms through which ecological impact is diluted in the implementation process.

Because this diagnosis calls for improved information flow for financial actors rather than for prescriptive ecological outcomes, the Action Plan's design remains principle-based, and its translation into organizational practice remains open. This translation process is the empirical site that the chapter investigates. To investigate this, this chapter proposes to pay attention to the discursive dimension of the implementation process. DI distinguishes between two discourse types through which ideas are produced, negotiated, and stabilized (Schmidt 2008: 309ff.). Coordinative discourse refers to the expert-driven interactions among actors through which shared understandings, methodologies, and organizational practices are constructed. In the context of the Action Plan, coordinative discourse encompasses the ongoing negotiations among financial actors, non-financial intermediaries and supervisory authorities through which the principle-based regulations are translated into concrete compliance routines. Communicative discourse refers to the public presentation and legitimation of those practices to public audiences beyond the expert community. Importantly, these two discourse types are analytically distinct but empirically intertwined. Coordinative discourse generates the practices that materialize in disclosure reports, while communicative discourse stabilizes and legitimizes them. Coordinative and communicative discourse operate simultaneously and are sometimes in tension. As mentioned in the previous section, the refinements of regulatory requirements were a response of the results of assessed methodological heterogeneity, which were established by coordinative discourse. Both forms of discourse interact, showing that the meaning of regulation is neither fully determined by the framework's designers nor by individual actors.

The implementation process involves a heterogeneous set of actors with unequal resources, institutional positions, and access to the discursive arenas. Distribution of power explains whose interpretations prevail and through what mechanisms. In this regard, Carstensen and Schmidt (2016) conceptualize ideational power as the capacity of actors to influence other actors' normative and cognitive beliefs. They distinguish three analytically distinct forms. First, power through ideas recurs to the capacity of actors to persuade others to accept their views through reasoned arguments and the deployment of legitimate expertise (ibid.: 323-326). It operates in both coordinative and communicative discourse. In coordinative discourse it takes the form of epistemic authority that refers to the capacity to define which organizational

practices count as credible and compliant whereas in communicative discourse it takes the form of normative framing of as legitimate perceived results to public audiences. Power over ideas designates the capacity of actors to dominate the production of meaning, especially by enforcing their power of framing into the relevant decision-making arena (ibid.: 326-328). It is expressed through the power of excluding certain actors' ideas in coordinative and communicative discourse. Furthermore, it can be exerted by normally powerless actors who seek to shame other actors into conformity with their ideas or norms (ibid.). Power in ideas designates the authority that certain ideas acquire when they become structurally entrenched in institutions and routines, such that they constrain what is considered thinkable without requiring active persuasion (ibid.: 329-332). This form of power is especially consequential at the programmatic level, where institutionalized problem diagnoses structure what actors can even conceive as a viable response.

The relationship between the level of ideas, discourse types and forms of ideational power directs attention toward three analytical questions. First, how does the process of implementation change the conceptualization of sustainable finance at the operational level? Second, who are the relevant actors in the coordinative process, and through which form of ideational power do they influence this process? Third, how does communicative discourse stabilize particular enactments of sustainability, and what does this stabilization conceal about the coordinative practices that produced them? The empirical section takes up these questions by tracing the mechanisms through which the multi-stakeholder implementation process consistently produces outcomes that are procedurally compliant but ecologically contingent.

4. Data and Research Methods

To trace the dynamics underpinning compliance practices in the European sustainable finance domain, the empirical analysis followed a qualitative and abductive research process. Rather than applying theoretical concepts deductively to pre-structured data, analytical categories were developed iteratively in dialogue between theoretical reading and empirical engagement (Tavory/Timmermans 2014). The abductive orientation proved particularly suited to the object of inquiry because the interpretive practices of the ambiguous regulatory frame-

work could not be anticipated from the regulatory text alone. Theoretical sensitization to the ideational levels and discourse types of discursive institutionalism guided the analytical attention without predetermining what would be found. The central analytical unit of the empirical analysis is the sustainable investment network, a concept introduced and developed at the end of this section.

I developed a comprehensive understanding of the domain through a combination of scholarly engagement and prior professional experience. My employment at an ESG service provider provided first-hand insight into the operational routines, information infrastructures, and interdependencies that structure sustainable finance. This experience carries the advantage that Bryman (2012: 445) characterizes as membership access: professional background grants the researcher both credibility with interviewees and entry points that might otherwise be difficult to obtain. The work involved screening and rating investment funds among ESG criteria and conducting unsolicited ESG analyses of publicly listed companies, through which a network of professional acquaintances emerged that later served as a starting point for the empirical fieldwork. However, this background also constitutes a positionality that requires reflexive awareness as familiarity with industry perspectives carries the risk of over-identification with common framings. I have sought to counteract this by treating all interview accounts as subjective articulations of institutional positions rather than objective descriptions of reality, and by remaining attentive to what interviewees do not say about ecological impact – which is often as analytically significant as what is rendered visible.

The empirical analysis draws on 26 semi-structured expert interviews with representatives of private and public organizations involved in interpreting, translating, and operationalizing the disclosure-based requirements in the European fund market. Interviewees included representatives of asset management companies, institutional investors, ESG consultants, auditing firms, ESG service providers, industry associations, non-governmental organizations, and national supervisory authorities. The interviews were conducted between spring 2024 and fall 2025. All interviews were pseudonymized and a list of interview partners is provided in Table 1 at page 67. Building on my initial professional network, I employed snowball sampling to access additional interview partners across organizational types, deliberately seeking actors whose perspectives would challenge or complicate those ob-

tained through my primary network. Interview guidelines were actor-group specific, addressing the particular challenges and contributions of each type of organization, but shared a common thematic orientation: the interviewees' understanding of sustainable finance in general, their organization's role in the regulatory implementation process, and the challenges they face in the implementation process. Interviews were conducted in an open-ended format, allowing interviewees to speak freely and follow their own lines of reasoning; most extended well beyond an hour as a result.

The interviews were analyzed through qualitative content analysis and thematic coding. Codes were not established prior to analysis but developed iteratively across the material, in an abductive process in which emerging categories were continuously tested against both the empirical data and the theoretical framework. The resulting analytical vocabulary aligns with the language of discursive institutionalism: codes attend to the ideational levels at which actors operate – philosophical background assumptions, programmatic problem definitions, and concrete policy-level interpretations – as well as to the distinction between coordinative and communicative discourse. In a later stage of the coding process, attention was also paid to the forms of ideational power through which actors advanced their interpretations. This alignment was not imposed deductively but emerged through the iterative coding process, reflecting the theoretical resonance between the framework and the empirical dynamics it was developed to explain.

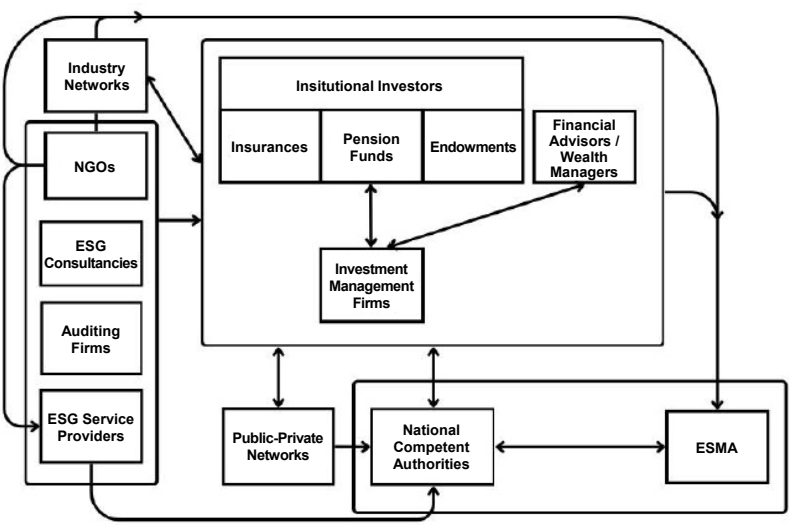
Complementing the interviews, I attended two sustainable investor summits, which provided opportunities to observe how financial actors publicly frame the opportunities and frictions they encounter in implementing EU regulatory reforms. These events represent occasions at which the industry collectively presents and legitimizes its implementation practices to an audience of peers, making them particularly relevant sites for observing communicative discourse in action. I also conducted a document analysis of fund prospectuses of Article 8 and Article 9 funds, as well as industry reports, supervisory guidelines, and consultation documents issued by European and national supervisory authorities. These documents are treated as materializations of ongoing discursive interpretation processes and as strategic communicative acts through which actors present their implementation choices in terms that claim compliance and legitimacy.

Table 1: List of interviewees

No.	Anonymized Code	Organization Type	Interview Length
1	NGO 1	NGO	1:13:13
2	NGO 2	NGO	1:08:52
3	Government Agency 1	Government Agency	30:47
4	Supervisor 1	Supervisory Authority	38:45
5	Government Agency 2	Government Agency	1:01:51
6	Government Agency 3	Government Agency	1:00:25
7	Asset Manager 1	Asset Management	55:04
8	Asset Manager 2	Asset Management	53:49
9	Auditor 1	Auditing / Consultancy	37:35
10	Pension Fund 1	Pension Fund	54:55
11	Institutional Investor 1	Institutional Investor	49:32
12	Asset Manager 3	Asset Management	1:17:37
13	Asset Manager 4	Asset Management	51:47
14	ESG Service Provider 1	ESG Service Provider	1:14:56
15	Consultant 1	Consultancy	50:46
16	Asset Manager 5	Asset Management	56:00
17	ESG Service Provider 2 (Interview 1)	ESG Service Provider	50:45
18	ESG Service Provider 2 (Interview 2)	ESG Service Provider	1:04:12
19	Corporate 1	Corporate	18:43
20	Asset Manager 6	Asset Management	49:09
21	Asset Manager 7	Asset Management	57:29
22	Pension Fund 2	Pension Fund	1:01:46
23	Data Analyst 1	Bank	54:22
24	Consultant 2	Consultancy	1:20:20
25	ESG Service Provider 3	ESG Service Provider	1:23:44
26	ESG Service Provider 4	ESG Service Provider	40:50

The empirical analysis centers on the concept of the sustainable investment network: a variable constellation of financial actors, non-financial intermediaries, and supervisory authorities assembled around the construction of Article 8 and Article 9 fund reporting systems, including the investment methodologies and classificatory infrastructures these funds require. Building on the notion of interorganizational dependencies that structure the issuance of investment funds (Arjaliès et al. 2017; Braun 2021), the concept captures an analytically decisive feature of the implementation process: different actors assemble different networks, and the specific configuration of a given network shapes the content of emerging reporting systems, thus also form of sustainability that is institutionalized in the resulting fund. This variability is not incidental to the regulatory design but a structural consequence of its principle-based, disclosure-oriented character. As the Action Plan does not prescribe how sustainability is to be operationalized, the networks become the primary sites at which the sustainable investment dilemma is managed and through which ecological impact is incorporated or diluted.

Figure 1: Sustainable Investment Network



Source: Own graphic.

The sustainable investment networks consist of a range of financial actors, non-financial intermediaries and supervisory authorities on European and domestic level that collectively establish organizational routines for compliant reporting systems. This process is not linear but, as the empirical section shows, an iterative process. Crucially, the implementation of the Action Plan has not produced a technically uniform process of regulatory adoption. Instead, it has generated a complex field of coordinative interaction within and across these networks whose outcomes are structured but heterogeneous. What emerges from the empirical analysis is not a single picture of compliance or non-compliance, but an interlocking set of mechanisms through which ecological impact may be diluted across the implementation process. These mechanisms are the structural outcome of the regulatory design interacting with commercial intermediation markets, incomplete calculative infrastructure, and fragmented supervisory oversight.

5. *Implementing the Action Plan and the Structural Dilution of Ecological Impact*

The empirical analysis proceeds in three steps. It first reconstructs how the implementation process has changed the conceptualization of sustainable finance, examining two mechanisms through which this change is produced: the compliance-risk frame, which operates at the programmatic level and the entrenchment of the SFDR's self-disclosure categories as quasi-labels for sustainability, which operates in communicative discourse. The analysis then traces the coordinative process through which the sustainable investment networks respond to regulatory ambiguity. This coordinative process is the structural condition in which the mechanisms arise: the strategic selection of ESG service providers, the delegation of classificatory responsibility to proprietary intermediaries, the limits of procedural certification through auditing, and fragmented supervisory enforcement. The concluding subsections examine the position of normative ideas within the networks and synthesize how the identified mechanisms interlock.

5.1 Sustainable Finance as a Compliance Risk and its Organizational Consequences

The most consequential transformation produced by the Action Plan is the cognitive frame through which sustainable finance is understood by financial actors. Before the Action Plan, sustainable finance was constituted primarily as a domain of opportunity and as a privately-led initiative driven by normative commitment, reputational signaling, or market differentiation (Migliorelli 2021). The introduction of binding disclosure obligations has displaced this framing as a consistent pattern emerged in which sustainable finance was processed cognitively as a domain of compliance risk.

This cognitive reframing redefines what the problem is and how success looks like. The problem is not the integration of ecological objectives into investment practices but the satisfaction of regulatory obligations, thus setting up compliant reporting systems, without incurring legal exposure. The frame of sustainable finance as a compliance risk determines the architecture of the coordinative process that follows from it.

> "And in the last, let's say, one and a half, two years, the regulatory frenzy has unfortunately, in my view, once again led to a certain aversion among clients towards too much sustainability, so that many are now more oriented towards the whole topic of data management, reporting obligations, SFDR and so on, and approach the subject less out of conviction than out of necessity." (Asset Manager 7, Pos. 6)

This account articulates the compliance-risk frame in consequential form. The characterization of regulatory proliferation as producing aversion towards "too much" sustainability showcases the cognitive framing of sustainability as an administrative burden and the explicit contrast between "conviction" and "necessity" marks a normative shift as sustainability is reframed from a value-driven commitment into a regulatory obligation. This dominant orientation is also signaled as one institutional investor mentions the prevailing market practice of asking legal experts for the minimum effort required to secure a green label to ultimately enhance product marketability (Pension Fund 2, Pos. 8). This minimum-threshold logic is an expression of the compliance-risk frame at the policy level of ideas as actors calculate the minimum required to satisfy formal requirements rather than maximizing ecological contribution.

This reframing produces apparent organizational consequences. One significant change is the migration of sustainability reporting from marketing and investment functions to legal and compliance functions. Where sustainability was previously a communications responsibility, it is now an audit-level obligation.

> "Sustainability was placed within the context of marketing departments [...] because sustainability reporting is treated on the same level as financial reporting. This also applies to the audit, which, of course, has a completely different status within the organization." (Auditor 1, Pos. 24)

This migration is an organizational trace of the cognitive reframing. In the new regulatory context, sustainability has not only travelled to legal departments but also changed its institutional identity within financial cooperations. Crucially, the understanding of sustainable finance as a compliance risk also has led to the suppression of certain forms of sustainability communication. One institutional investor describes how they were explicitly told by their ESG consultant not to make certain ecological claims as this would enhance compliance risks (Pension Fund 2, Pos. 127). This shows how ecological claims are screened by legal considerations before they enter public communication, thereby constraining certain forms of how sustainability is articulated in communicative discourse.

This migration has also consequences for the allocation of organizational resources. As core investment management activities receive no additional funding, costs for compliance and sustainability reporting functions expand that create structural cost pressures, especially on smaller asset managers (Asset Manager 1, Pos. 70-71). One institutional investor described that setting up the compliance process demands as much effort as changing the actual investment strategy itself (Pension Fund 2, Pos. 144).

Another organizational response to the compliance-risk frame is greenhushing. The term describes practices in which organizations deliberately understate or withhold communication about their sustainability efforts (e.g. Font et al. 2017). Interviewees mention that some asset managers that incorporate sustainability criteria into their investment processes choose not to classify their funds under Article 8 or Article 9, thereby withdrawing entirely from the regulatory sustainability domain (ESG Service Provider 2 (2), Pos. 20,30; Pension fund 1,

Pos. 35; Asset Manager 4, Pos. 102; Pension Fund 2, Pos. 125). The motivation is not the absence of ecological commitment but the presence of compliance risk. This dynamic reveals a structural paradox of the disclosure-based regulatory design: the very instrument intended to make sustainability visible in the market actively incentivizes some actors to reduce its communicative visibility.

To conclude, the emerged compliance apparatus has grown significantly in response to the regulatory endeavor and shows that the compliance-risk frame has become institutionalized organizational artefacts. Analytically, this reframing serves as a fundamental mechanism that establishes the cognitive conditions for the subsequent dilution. It is power in ideas in the sense that Carstensen and Schmidt (2016: 329f.) describe. In terms of the level of ideas, this reframing operates at the programmatic level. It redefines the problem that the Action Plan is meant to address. It therefore cannot be corrected by policy-level instruments, because these instruments are themselves interpreted through the frame. Within this frame, actors pursue the resolution of the sustainable investment dilemma not by deepening ecological commitment but by managing regulatory exposure.

5.2 Communicative Institutionalization of Disclosure Categories as Sustainability Label

A central consequence of the Action Plan's regulatory design is the discursive institutionalization of the SFDR's Article 8 and Article 9 classification system as a sustainability labeling scheme. This institutionalization is important as it establishes a dilution mechanism that operates at the level of public meaning rather than individual fund construction. It illustrates the decoupling of coordinative and communicative discourse because the categories of Article 8 and Article 9 were explicitly designed as transparency distinctions, not product classifications:

> "The fact that, when we now refer to Article 8 and Article 9 funds [...] we also believe that this is not a good categorization [...] because this categorization was not intended for that purpose, but is purely a distinction for transparency. Because it is being misused as a label." (Supervisor 1, Pos. 14)

This statement from a representative of a NCA is analytically decisive. Even after ESMA formally communicated that the Article 8 and Article 9 categorization is not suitable as a product classification (ESMA 2024b: 12), the communicative institutionalization of the label has proven durable in media and industry. This dynamic shows how regulatory meaning is co-produced by a broad range of actors rather than handed down by supervisory authorities. While the coordinative discourse among market actors has operationalized the label interpretation, the communicative discourse toward public audiences has entrenched it.

This dynamic is not merely a misunderstanding but a structural consequence of how communicative discourse functions. This understanding is communicated across fund marketing, industry communications, media coverage, and academic literature and thus acquires institutional force. The self-reporting basis of this classification regime reinforces this dynamic.

> "My take on this is: Yes, it's a nice classification, but it's based solely on the fund's own statements." (Government Agency 1, Pos. 27)

A classification architecture resting on self-declaration is decoupled from ensuring substantive ecological performance. Hence, the categorization regime itself is a dilution mechanism as it allows funds with limited ecological ambition to occupy the same communicative space as genuinely ambitious ones, undermining the informational function the disclosure regime was designed to provide. The understanding of Article 8 funds being simply equated with sustainable funds (e.g. Consultant 2, Pos. 20), is consequential: by the end of Q3 in 2025 nearly 56% of the European fund market (measured by asset under management) are perceived as "light" green (Morningstar 2025: 3), making it the most dominant segment in the market. This communicative institutionalization of the disclosure categories constitutes a mechanism through which the public appearance of sustainable market transformation is produced at scale while the self-declaratory architecture of the classification regime systematically underdetermines the ecological substance. In terms of ideational power, the entrenched label operates as power in ideas within communicative discourse. Once institutionalized, it structures public expectations of what a sustainable fund is without requiring active persuasion.

5.3 Coordinative Responses to Regulatory Ambiguity

Beyond the framing of sustainable finance as a compliance risk and the common practice of using the disclosure categories as quasi labels, the structural ambiguity of the concrete regulatory requirements generates an immense amount of coordinative work. Collectively, the sustainable investment networks interpret vague regulations by developing methodologies and disclosure systems that ultimately stabilize what compliance means in practice:

> "Where the real problems begin is simply in all the issues surrounding disclosure, templates, data, calculations, and so on; there are many … I wouldn't even call them gray areas, but rather many issues that simply aren't clearly defined. And that actually leaves a lot of room for interpretation." (Data Analyst 1, Pos. 18)

Setting up the necessary reporting systems and their constitutive calculative infrastructures is not a neutral process but an interpretive one. Specific data requirements, e.g. such as the EU Taxonomy alignment figures, are in practice based on estimates rather than verified data, as the actual figures cannot be calculated due to a lack of available data. These estimations present reporting systems not as neutral but as contingent artefacts of the coordinative work.

The coordinative response to this ambiguity has taken both internal and inter-organizational forms. As discussed above, within financial firms, the primary response has been organizational restructuring by expanding their legal and regulatory capacity for developing disclosure templates and integrating sustainability considerations into governance structures that previously had no formal sustainability mandate. The resource intensity of this process is significant as countless calls, iterative refinement of drafts, and frequent recourse to external consultants characterized the extensive amount of coordinative work (Asset Manager 1, Pos. 62).

Across firms, coordinative responses operate through discourse coalitions, industry networks and public-private networks. These coalitions generate and stabilize shared interpretations of regulatory requirements. One senior supervisory official described how the implementation process has solidified into a stable community that is characterized by formal working groups and informal meetings in form of regular lunches, pre-release peer review of products, and bilateral ex-

changes across institutional lines (Supervisor 1, Pos. 20). This form of coordination establishes field-level reasoning through professional community norms rather than hierarchical regulatory instruction. Within these coordinative spheres, the implementation process is accomplished though shared interpretations on which then organizational practices are built. Existing uncertainties are navigated via ongoing negotiations and agreements among network actors. Crucially, the coordinative process is the structural condition in which the dilution mechanisms for ecological impact described below arise.

5.4 Strategic Selection of ESG Services

Within the coordinative process, one consequential and deliberate decision financial actors make concerns the selection of their ESG service provider and their sustainability ratings. They provide essential parts of the calculative infrastructure through which sustainability is made measurable and actionable. They aggregate corporate disclosures, public filings, and proprietary data sources into scores and ratings that financial actors use to construct investment methodologies and fill disclosure reports (Dimson et al. 2020; Billio et al. 2021; Benjamin 2025). Crucially, they do not represent an objective property but actively enact a particular version of sustainability (Dimmelmeier 2024), and different providers make substantially different methodological choices, producing divergent ratings for the same company (Berg et al. 2022). Crucially, even when ESG service providers produce different ratings, they appear to be epistemic authorities of sustainability knowledge.

Because no authoritative ESG methodology exists and the regulatory framework does not prescribe one, financial actors face a genuine choice among available enactments. The choice is not merely practical but strategic. A financial actor that selects less restrictive ESG criteria maintains investment freedom that would be constrained by a more demanding methodology. Hence, the sustainable investment dilemma can be resolved by choosing a version of sustainability compatible with existing investment practices.

The business model of ESG service providers makes them avoid excessive methodological stringency, because overly demanding criteria would reduce their client base. This commercial constraint is a

structural incentive toward methodological moderation that operates independently of any individual actor's intentions.

> "Their business model is based on offering attractive products. That means they can't be too strict. Conversely, if they were, no one would buy their ratings." (ESG Service Provider 2 (1), Pos. 30)

ESG service providers customize their methodologies to client-specified criteria, comparable to choosing from a menu in a restaurant (ESG Service Provider 2 (1), Pos. 12), so that the resulting enactment of sustainability is tailored to the preferences of the commissioning actor. In the disclosure documents, however, this output is presented as the methodological enactment of an external entity, lending it the appearance of independent third-party assessment while masking what is in practice a client-directed construction of sustainability.

In terms of ideational power, financial actors exercise power over ideas by choosing among competing ESG service providers. They deliberately choose which version enters their disclosure architecture and exclude more demanding alternatives through market choice. However, once selected, ESG service providers exercise power through ideas as their institutionally recognized position as providers of calculative infrastructure. The commercial constraint is the link between these two forms of ideational power. Because ESG service providers are incentivized to supply moderate methodologies and financial actors have the choice to select them, the resulting calculative infrastructures converge towards a systematic marginalization of ecologically demanding enactments of sustainability within a network.

5.5 Delegation of Classificatory Responsibility and Proprietary Opacity

The acquisition of aggregated ESG data offers another opportunity for financial actors for minimizing compliance risks and the further dilution of ecological impact: the formal delegation of classificatory responsibility from regulated financial actors to ESG service providers whose methodologies remain opaque. This delegation mechanism is distinct from strategic selection because it concerns not which provider is chosen but how the choice is formalized in disclosure documents in ways that shield the underlying methodology from scrutiny.

The delegation dynamic is most clearly visible in how institutional investors describe their own process. One interviewee explained that data is purchased externally, screened against the portfolio universe, and the client selects which criteria boxes to tick before passing the output to asset managers (Pension Fund 2, Pos. 65-66). The institutional investor delegates classificatory responsibility to a data provider without engaging with the underlying methodology. This delegation is then formalized in disclosure documents.

Fund documents (e.g. Fund Prospectus, Asset Manager 5, 2024, p. 44; Fund Prospectus, Asset Manager 6, 2025, p. 13; Financial Report, Pension Fund 1, 2024, p. 5) illustrate this concretely: compliance with sustainability criteria is delegated to external rating providers with their proprietary methodologies effectively serving as legitimizing authorities. The proprietary nature of such methodology means it is shielded from scrutiny within the disclosure document itself. The regulated actor satisfies their disclosure obligation by referencing a recognized ESG service provider. However, the concrete steps of how a provider e.g. determines which companies qualify as sustainable are not disclosed. Hence, ecological dilution occurs through structural opacity as the methodology that determines what counts as sustainable investment is insulated from public examination by its proprietary character.

The delegation of classificatory responsibility to ESG service providers instantiates power through ideas in the coordinative sense: their institutionally recognized position as providers of calculative infrastructure grants them methodological authority over what counts as sustainable within the networks. Financial actors do not produce this infrastructure fully internally but purchase substantial parts of it externally, embedding proprietary methodologies in their disclosure documents as the de facto standard of compliance (Asset Manager 4, Pos. 6).[2]

[2] Importantly, the ESG Rating Regulation (2024/3005) is expected to address this by mandating ESG service providers to disclose their methodologies by June 2026. However, its capacity to constrain the strategic selection dynamic described above remains uncertain. Even with disclosed methodologies, financial actors may continue to select among available enactments and the structural commercial incentive toward methodological moderation might persist.

5.6 The Limits of Procedural Certification

Auditing firms function as important regulatory gatekeeper in the sustainable investment networks. Their certification provides disclosure systems with legal standing and institutional legitimacy. Yet their role is not simply certifying but co-constructing. Interviewees across actor groups confirmed that auditing firms accompany clients from the very beginning of the disclosure process through to the formal audit, blurring the boundary between preparation and certification.

> "[…] it's basically, let's call it, a joint effort between the auditor and the bank." (Data Analyst 1, Pos. 22)

Auditors are certifying sustainability-related disclosures while simultaneously co-constructing them. The formal norm of independence and sequential logic that underpins the regulatory architecture is structurally contradicted by the practical co-production dynamic. The disclosure regime implicitly assumes a linear process in which the regulations are implemented in organizational routines and subsequently verified through independent audits. The co-production dynamic disrupts this sequence as the auditors are embedded within the implementation process, making the audit function part of the very process it is supposed to evaluate from the outside.

Moreover, these audits are limited to limited assurance only. They check whether disclosures are formally complete, not whether every data point is accurate or whether the fund's ecological claims are substantively justified:

> "The audit is conducted on a limited basis. It verifies whether all disclosure requirements have been met and whether everything that is supposed to be disclosed has been disclosed, but it does not [...] provide full assurance. In other words, it does not cover every single data point." (Auditor 1, Pos. 36)

The legitimacy conferred by the audit is therefore procedural rather than ecological. A fund that is ecologically weak occupies the same formal compliance space as an ecological ambitious one. The certification mechanism ratifies the procedural form of compliance while remaining agnostic about its ecological substance. Hence, the mechanism designed to prevent dilution actively extends to it.

Crucially, interpretive divergence was identified as a challenge in the coordinative sphere. When the same regulatory question was put to three different auditors, three different implementation answers were obtained, creating market disadvantages for companies whose auditor applied a particularly strict or unfavorable interpretation (Data Analyst 1, Pos. 20). Notably, convergence in auditing practice was eventually driven not by regulatory instruction but by client pressure. As result, a lateral alignment process among auditors was produced by market dynamics rather than by supervisory intervention. This dynamic shows the coordinative process among auditors operating through the sustainable investment networks and market pressure, rather than through the hierarchical regulatory authority that certification is supposed to represent.

Auditing firms exercise power through ideas. Their authority derives from their institutional position as external validators. Unlike the epistemic authority of ESG service providers, which rests on methodological expertise, this authority is positional. It derives from their function as regulatory authority rather than from superior sustainability knowledge. What counts as credible disclosure is co-produced across the network, but auditors crucially provide the final legitimizing act that transforms negotiated outcomes into formally ratified ones. The expansion of auditing firms into the co-constructive phase of disclosure preparation reinforces this dynamic, concentrating certification authority in actors whose financial interest in client retention creates structural pressure toward interpretations that are defensible rather than ecologically demanding.

5.7 Fragmented Supervisory Enforcement and the Distribution of Regulatory Power

The mechanisms described above are conditioned by a further feature of the regulatory architecture: the fragmentation of supervisory enforcement across national contexts. This is the result of the vertical architecture of European financial markets. Supervisory authorities at both European and national levels constitute a distinctive actor group in the sustainable investment network. Unlike other actors, they are simultaneously inside and outside the network as they set the terms of coordination while also being shaped by its outputs through iterative feedback loops of regulatory revision.

ESMA's role in the coordinative process is primarily that of an iterative framework-setter. It responds to questions from financial actors, publishes guidance documents, and refines the regulatory framework in response to identified ambiguities. Consultative working groups formally incorporate market expertise into this process (ESG Service Provider 1, Pos. 4). This shows the horizontal governance dynamic as regulatory outcomes are co-produced by the expert communities whose practices they govern. The implementers shape the framework that governs their implementation.

At the national level, domestic differences in supervisory practice persist despite ESMA's convergence efforts, though comparison across jurisdictions is complicated by divergent legal frameworks (NGO 2, Pos. 44). A particularly consequential expression of this fragmentation is territorial: NCAs have publicly acknowledged their lack of jurisdiction over funds domiciled in other member states, effectively shifting supervisory responsibility to the fund's home authority while investors in the original jurisdiction remain exposed to those funds (NGO 2, Pos. 44). One NGO frames this gap normatively: compliance with sustainability rules is a duty of consumer protection that should follow the investor, not the fund's domicile (ibid.). This normative framing highlights the structural gap that the current regulatory architecture does not close.

Cross-linguistic translation introduces further variation. E.g. the English "promote" in the SFDR's characterization of Article 8 funds was rendered into German in ways that allow either "to advertise" a characteristic or "to advance" it (Asset Manager 5, Pos. 16). These are not minor differences, since they determine whether Article 8 is primarily a disclosure obligation or a substantive investment mandate. Hence, cross-linguistic ambiguity is not a technical communication issue but a site of substantive interpretative variation that supervision cannot fully resolve.

Finally, the technical capacity to assess whether disclosed sustainability claims are methodologically credible is effectively outsourced to the same external intermediaries whose outputs financial actors use to demonstrate compliance (Supervisor 1, Pos. 10). This creates a structural dependency that compromises sanctioning power. NCAs cannot independently evaluate the methodological validity of a disclosure that references a proprietary ESG methodology they did not design and cannot fully scrutinize. Discretionary power is similarly constrained,

as regulatory judgment must operate through calculative infrastructures produced outside the supervisory apparatus. Ultimately, regulatory authority is distributed across the sustainable investment network in ways that systematically advantages the actors with the greatest calculative and institutional resources.

5.8 Normative Ideas at the Margins: NGOs and the Structural Limits of Ecological Advocacy

The mechanisms described above are predominantly driven by cognitive ideas such as methodological frameworks, calculative infrastructures, and legal interpretations. They are mainly supplied through commercial relationships by actors whose institutional positions give their interpretations legitimacy within the coordinative process. In contrast, NGOs occupy a distinct position in this field. Unlike consultancies, auditors, and ESG service providers, they do not participate in the coordinative process primarily as providers of cognitive resources. Their contribution is primarily normative. They bring ecological impact claims, consumer protection arguments, and democratic accountability concerns to a process that would otherwise be governed by legal and financial logics. Crucially, the NGO landscape in sustainable finance is not homogeneous. As research has shown, the civil society actors that gain access to the coordinative process tend to be those that have adopted a pragmatic, market-compatible stance, while more critical actors remain structurally excluded (Ahlström/Monciardini 2022; Tischer/Ferrando 2024). This selective inclusion itself shapes which normative claims enter the process and which do not.

This normative function is expressed directly by NGO interviewees. One NGO described its role as giving nature a voice in a process dominated by financial logic, frequently without success, thereby acknowledging that financial logic consistently prevails over ecological ambitions in the coordinative discourse (NGO 1, Pos. 32). This asymmetry between cognitive and normative ideas is structural. Cognitive resources are purchased in market relationships and are therefore systematically well-resourced and reliably available. Normative resources, on the other hand, are offered through advocacy and engagement, and are therefore dependent on access, capacity, and the willingness of other actors to incorporate them.

Furthermore, capacity constraints limit NGO`s participation in the sustainable investment networks. Very few civil society organizations possess the resources to engage with sustainable finance governance at the required level of technical detail. One NGO representative described being largely alone in the relevant committees within the sustainable finance domain (NGO 1, Pos. 32). This is confirmed from the supervisory side as one NCA has established productive cooperation with an NGO, which has invested substantial resources in sustainable finance expertise, while other NGOs such lack the capacity for equivalent engagement (Supervisor 1, Pos. 20). Hence, only NGOs that have adopted the technical language gain meaningful access to the coordinative process, which may come at the cost of more radical normative positions.

One of the NGOs' strategies of influencing the networks reflects a combination of direct coordinative engagement with the threat of communicative escalation. One NGO described its approach as first attempting direct participation in the coordinative sphere and if actors do not respond, turning to public exposure i.e. communicative discourse (NGO 2, Pos. 22). This multi-channel strategy confirms the NGOs limited power within the coordinative process. However, external communicative pressure which can be directed at domestic supervisory authorities, public audiences, and European-level institutions is the ultimate instrument available to them.

The distinction between cognitive and normative ideas maps directly onto the ideational power typology (Carstensen/Schmidt 2016). The cognitive resources supplied by auditors, consultancies and ESG service providers constitute power through ideas, an institutionalized interpretive authority that shapes the cognitive agenda of the coordinative process. The certification authority of auditors likewise operates as power through ideas, yet it rests on their institutional position rather than on epistemic expertise. NGOs, by contrast, lack an equivalent institutional position within coordinative discourse. Persuasion and normative framing therefore rarely convert into binding organizational routines. When coordinative engagement fails, their remaining instrument is public shaming. This constitutes power over ideas in communicative discourse rather than a weaker form of persuasion (Carstensen/Schmidt 2016: 326). The structural asymmetry between these two forms of ideational influence explains why the sustainable investment network is cognitively well-resourced and normatively thin. Eco-

logical concerns are not absent from the coordinative process, but they lack the commercial backing and institutional authority that converts cognitive ideas into entrenched practices.

However, contingencies exist. One fund manager described a formal arrangement in which an NGO has a distinct institutional position by holding veto rights over investment approval (Asset Manager 5, Pos. 28). In practice, most investments that reach this stage are accepted because the preceding process has already filtered out non-qualifying assets. The formal veto functions primarily through a strict upstream selection process of investment opportunities, rather than active intervention. This exception proves the rule: normative ideas gain structural traction in the sustainable investment network under specific institutional choice, not through the ordinary dynamics of coordinative engagement.

6. *The Sustainable Investment Dilemma: Managed, Not Resolved*

The empirical section of this chapter reveals how the sustainable investment dilemma is managed through the implementation of the Action Plan. The management operates through the mechanisms examined above: the reframing of sustainable finance as a compliance risk, which establishes the cognitive conditions under which the further mechanisms operate; communicative institutionalization of the disclosure categories as quasi-labels for sustainability that blur the distinction between procedural compliance and substantive sustainability; the strategic selection of ESG service providers that allows financial actors to choose among competing enactments of sustainability; the delegation of classificatory responsibility to unregulated proprietary intermediaries whose methodologies yet remain opaque; the formal certification through limited assurance audits that ratify procedural compliance without verifying ecological substance; and the fragmented supervisory enforcement that creates variable accountability across national contexts.

Read through discursive institutionalism, the dilution of ecological impact appears not as implementation failure but as a structural feature of how meaning is produced across these sustainable investment networks. The distinction between coordinative and communicative discourse (Schmidt 2008) reveals a systematic decoupling between

two forms of meaning-making. In coordinative discourse the disclosure categories function as technical compliance instruments, whereas in communicative discourse they signal sustainability as quasi-labels. Furthermore, the ideational power dimensions (Carstensen/Schmidt 2016) specify how dilution is produced. ESG service providers exercise power through ideas via cognitive and methodological authority that determines what sustainability means in practice, while auditors exercise power through ideas via certification authority that ratifies procedural compliance as sufficient. NGOs are genuine participants in coordinative discourse. However, oftentimes they lack the positional authority that enables ESG service providers and auditors to shape implementation outcomes directly. Still, when coordinative channels fail to accommodate their normative commitments, NGOs can fall back on communicative discourse as a mechanism of last resort, exercising power over ideas through public scandalization.

The compliance-risk frame, in turn, operates as power in ideas. It functions as a background ideational assumption that orients all subsequent coordinative work toward managing regulatory exposure rather than deepening ecological impact. This is what makes the mechanisms described above resistant to policy-level correction. Better templates, stricter definitions, or enhanced disclosure requirements are policy-level instruments, interpreted through a programmatic-level frame that has already redefined the problem from ecological integration to regulatory risk management. The frame thereby constrains what is thinkable within the networks.

Read through the three levels of ideas, the empirical pattern condenses into a layered structure. Dilution becomes visible in the classifications, templates, and compliance routines through which the Action Plan is enacted. But it is anchored at the programmatic level, where the compliance-risk frame has redefined the problems that these instruments are meant to solve. And it remains stable because the philosophical assumption that financial markets can serve ecological objectives goes uncontested across the networks.

Hence, the mechanisms are not independent of one another but form an interlocking architecture. The compliance-risk frame creates the incentive structure within which strategic selection and minimal-threshold strategies are rational. The absence of a single authoritative ESG methodology makes strategic selection possible. The delegation to proprietary intermediaries formalizes the opacity that protects stra-

tegic selection from scrutiny. Limited assurance audits certify the resulting disclosure documents without questioning that opaqueness. Fragmented supervision means the consequences of these practices vary by jurisdiction. And crucially, communicative discourse stabilizes Article 8 as a sustainability label, ensuring that such funds are publicly presented as sustainable products.

What emerges is a form of sustainable finance that is procedurally legitimate but ecologically contingent. The contingency is structured by variation in normative orientation, by which intermediaries are selected, and by which jurisdiction a fund operates in. Some networks might produce genuinely ecologically ambitious outcomes, while others might produce only formal compliance with minimal ecological commitment. Crucially, the regulatory framework does not fulfill the alleged promise of sustainable finance as converging normative and cognitive claims of financial decision making. Instead, the Action Plan produces the conditions under which ecological ambition is possible for some actors under some conditions, while making the management of the sustainable investment dilemma equally possible through procedurally compliant but ecologically permissive strategies.

7. Conclusion

The European Action Plan for Financing Sustainable Growth has reshaped the fund market. Crucially, its implementation cannot be understood as a technical process but must be grasped as a discursive and coordinative achievement and as the product of ongoing negotiation among diverse network constellations. Together, involved actors operate within conditions of genuine ambiguity, incomplete calculative infrastructure, and structural tension between financial and ecological logics.

Three findings stand out. First, the introduction of binding disclosure obligations has generated a fundamental reframing of sustainable finance from an investment opportunity to a compliance risk. This reframing, visible in organizational restructuring, the migration of sustainability expertise from marketing to legal functions, and greenhushing practices, has structurally shaped the implementation process. It was argued that when the cognitive frame through which actors process sustainable finance is regulatory uncertainty rather than ecologi-

cal opportunity, the coordinative work is dominantly focused on managing compliance risk rather than deepening ecological impact. Crucially, this is not a strategic choice but an institutionalized orientation which is operationalized through coordinative discourse and legitimized through communicative discourse. In terms of the level of ideas, the reframing operates at the programmatic level. Regulatory refinements such as stricter templates or naming guidelines remain policy-level instruments and are interpreted through the frame and therefore cannot correct it on their own.

Second, the necessary calculative infrastructure underpinning the regulatory design has made financial actors structurally dependent on ESG service providers whose methodologies remain proprietary, divergent, and largely opaque. Their divergent methodologies do not represent sustainability objectively but actively enact particular versions of it. Because no authoritative version exists, financial actors exercise strategic choice among them, selecting that methodology that best reconciles the sustainable investment dilemma within the scope of their normative preferences and investment constraints. Hence, this delegation of classificatory responsibilities to external intermediaries not only reduces financial actors' compliance risk but also allows them to manage the sustainable investment dilemma.

Third, the coordinative processes through which reporting systems and investment methodologies are constructed vary considerably across networks, shaped by variation in normative orientation, methodology selection, and supervisory environment, producing contingent and heterogeneous outcomes despite the regulatory intent of standardization. The disclosure reports that emerge from these processes are formally comparable but contingent in their content and depth: rather than maximizing ecological transparency, many reflect minimum threshold strategies oriented toward satisfying regulatory requirements with the least possible exposure, a practice that shades into greenhushing. The sustainable investment networks that have emerged under the Action Plan ensure formal compliance and procedural legitimacy. What they do not ensure is ecological alignment. Especially, the communicative institutionalization of Article 8 as a sustainability label blurs the distinction between funds that are genuinely ecologically ambitious and those that merely satisfy disclosure requirements.

The institutionalization of sustainable finance in the European fund market remains a contested and unfinished process. The geopolitical

and economic uncertainties of the present moment, including receding political support for the green transition in several European member states and growing pressure to roll back regulatory burdens, in form of the Omnibus regulation or the SFDR 2.0, add further dynamics to the regulatory environment. The flexibility built into the sustainable investment networks allows financial actors to adapt their sustainability arrangements to shifting contexts. Whether this flexibility will be used to deepen or dilute ecological commitments depends not on the regulatory architecture alone but on ongoing contestation among financial, regulatory, and civil society actors, and on the broader political and policy environment in which these networks are embedded. As long as the philosophical assumption that the financial system, once properly informed, can serve as the vehicle for ecological transformation remains uncontested, contestation will remain confined to the programmatic and policy levels, and the underlying market-based logic will not itself become a site of dispute.

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Bankability and the Green Transition

Rethinking Financial Governance for Net Zero

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Abstract

Despite wide-ranging policy efforts and high hopes for sustainable finance, green investment falls far short of estimated needs, while financial flows into high greenhouse gas (GHG) emitting activities continue largely unabated. Drawing on a three-year research project comprising 88 semi-structured interviews and in-depth document analysis, we argue that the decisive barrier is not a lack of money, but a shortage of bankable activities: many green firms and projects fail to meet the risk-return profiles expected by banks and non-bank financial institutions, whereas carbon-intensive activities remain profitable and low risk. Current EU sustainable finance regulation, centred on disclosure, taxonomies, and voluntary approaches, has had little if any impact on redirecting financial flows. Against this background, the chapter elaborates policy recommendations capable of effectively steering financial flows and creating the fiscal space required for sustainable transformation. The recommendations build on a classification of activities according to whether they are green or high GHG emitting,

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and whether they are bankable, not yet bankable, or never bankable. We suggest minimum lending quotas and expanded European Investment Bank guarantees to increase the bankability of green activities; higher capital requirements to render carbon-intensive investments, including shadow carbon financing, less bankable; and expanded public funding, enabled by reformed fiscal rules, for never-bankable green activities.

1. Introduction

Preventing the climate crisis from escalating into increasingly devastating and self-reinforcing disasters requires a sustainable transformation of the state, economy, and society. Such a transformation, however, depends on a substantial increase in green investment. Despite rising awareness of the magnitude of the sustainability challenge, a pronounced gap persists between the estimated investment needs for the green transition and current expenditure levels. For Germany, additional annual green investments of at least EUR 60-100 billion through 2034 are considered necessary (Agora Think Tanks 2024; Dullien et al. 2024). On a wider scale, the European Commission estimates that by 2030, financing the green transition across the European Union will require at least EUR 370 billion per year (Lagarde 2023). At the global level, investment requirements by 2030 are projected at USD 8 to 9 trillion per year (CPI 2023).

However, financial markets have not significantly reduced funding for firms and projects with high greenhouse gas (GHG) – emitting firms and projects.[1] On the contrary, many investors have begun retreating from previous commitments to redirect capital from carbon-intensive to sustainable sectors. Since sustainable finance became a topic of debate, the assumption has tended to prevail in many European policy circles that it is primarily the lack of information that prevented

[1] In this article, we define "high-GHG-emitting" firms and projects as those that are inconsistent with a 2050 net zero GHG emissions target and above the threshold defined by widely used climate and transition policy scenarios. Conversely, we define "green" activities as those that are consistent with a net zero GHG emissions target for 2050 and in line with the threshold defined by widely used climate policy scenarios. Ultimately, the question of what is considered "green" and "high-GHG-emitting" is part of a social negotiation process and therefore a political issue.

investors from correctly assessing climate-related and environmental risks, the belief being that the misallocation of capital can be mitigated by improving the production of data and modelling techniques (Baioni et al. 2026). Against this background, the European Commission has proposed a wide range of measures to increase the availability and quality of information for investors. Despite this wave of regulations, there has been no significant narrowing of the huge gap in green financing or a reduction in the high volume of high GHG investments.

This chapter is based on a three-year research project. Our research drew on data gathered in a combination of qualitative data collection techniques and a variety of other methods, including 88 semi-structured interviews and in-depth document analysis through an interdisciplinary and multi-method approach (Wullweber 2019).[2] We found that the main reason for the lack of investment in sustainable transformation is closely related to the issue of 'bankability', which refers to financial investors' considerations regarding the risk-return profile of loans, bonds, and other financial assets. Bankability is not confined to the realm of banks, but also applies to other financial investors. In this chapter, the term bankability therefore also refers to what is sometimes known as 'investability'. Green firms and projects often lack bankability, as they fail to meet the risk-return profiles sought by private capital, either because they are not sufficiently profitable or because they are considered too risky. At the same time, high-GHG-emitting firms and projects, which need to be phased out to meet climate targets, continue to be bankable. Because they remain highly profitable and have not experienced the expected increases in risk, they are still being funded by banks and other financial institutions.

Most existing sustainable finance regulations have neither a positive impact on the bankability of green activities nor a negative impact on the bankability of those that generate high GHG emissions. Therefore, if financial flows are to be influenced so as to increase green investments, it is essential to create policies or regulations that improve the bankability of green firms and projects while making high-GHG-producing firms and projects less bankable. Moreover, there is no basis for the assumption implicit in contemporary calls for more

[2] We conducted interviews in Europe and the United States with financial practitioners, public sector officials, and representatives from civil society organizations (CSOs) active in the sphere of sustainable finance.

private finance that all sustainable activities are potentially bankable. Many activities necessary for the green transition will never be bankable. As current policies do not sufficiently address this problem, we also offer suggestions for effectively financing never-bankable activities. We focus on three fields that we consider crucial for steering financial flows in more sustainable directions.

Considering that the measures introduced so far have not succeeded in directly affecting the risk-return profiles of green and high-GHG-emitting investments, nor in mobilizing the funds necessary for non-bankable activities, we argue that the current EU sustainable finance policy framework has little if any impact on shifting financial flows away from climate-damaging investments, and is far from sufficient to adequately incentivize green investments. This conclusion was confirmed in numerous interviews that we conducted with EC public officials who acknowledged the difficulty faced under current policies to achieve the ambitious decarbonization targets set by the EU for 2030 and 2050 (see Wullweber et al. 2025 for a detailed list of our interview partners).

2. Understanding 'Bankability'

Banks, institutional investors, and other financial actors continue to refrain from providing sufficient levels of green investment (Aguila et al. 2026). What is more, they continue to finance high-GHG-emitting activities, with some even increasing their amount of investment in carbon-intensive sectors (Mack 2023; RAN et al. 2024; Rickmann et al. 2024). This raises the questions: Why are these actors providing insufficient funding for the green transition? And why do they continue to finance carbon-intensive firms and projects? According to our research, the reason is clear: the problem lies in the fact that high-GHG-emitting investments continue to be considered bankable, while many green firms and projects are not.

Bankability ultimately it is about whether an investment in the productive economy or financial assets is profitable enough to meet an investor's expectations with an acceptable level of financial risk. Financial risk can include political risk (planning certainty), credit (or default) risk, currency risk, interest rate risk, and liquidity risk. Investors can be private or public banks, but also non-bank financial institutions

(NBFIs) such as investment banks, hedge funds, asset managers, pension funds or reinsurance companies.

In the context of traditional activities of commercial banks, a firm or project is considered bankable if the bank is confident that the client will be able to repay the loan in due time at the agreed interest rate. Financial actors want to know as precisely as possible how much income the borrowers will generate, and over what period of time, in order to assess their debt-servicing capacity (Christophers 2024). Proper repayment is expected if the borrowers plan to invest the money in a highly profitable and low risk undertaking that is expected to create the stream of funds necessary for repayment, and/or if they have sufficient equity or can post enough quality collateral to ensure repayment.

Most bank loans to business firms are so-called general-purpose corporate loans that are used for general firm expenses. Loans for specific projects are less frequent. When financing green activities, banks can either provide green loans or underwrite green bonds, proceeds of which in both cases are tied to a specific purpose. However, at the overall corporate level, banks may also issue sustainability-linked loans or underwrite sustainability-linked bonds (SLBs) that are not tied to a specific use, but that require the borrowing firm to improve its results on certain key performance indicators. Banks and other financial investors apply creditworthiness analysis to both green and conventional investments, but additional reporting, disclosure, scrutiny, and monitoring make these forms of green-labelled debt more costly to issue than their conventional counterparts.

The case is slightly different for other financial instruments held by NBFIs. One of these is equity. When buying stocks, long-term investors (such as pension funds or insurers) pay attention to the potential profitability of the stock-issuing firm in order to assess the probability of future dividends or capital gains. As a stock purchase makes investors part owners, they must also consider the prospect of bankruptcy. Gauging the likelihood of bankruptcy and the profitability potential of the stock-issuing firm are important factors in determining the willingness of investors to purchase stock. The same holds true for the private equity sector, where it is common for private equity firms to buy out businesses in order to restructure them and sell them at a profit (Sissoko 2023). In contrast to long-term investors, short-term investors (such as hedge funds) focus on the expected evolution of the asset's price. In financial parlance, financial assets that meet investors'

desired risk-return profiles are called 'investable'. However, for the present analysis we have chosen to use the term bankability instead in order to indicate clearly that our focus is on the financial sector, as 'investability' is a term that is only used for productive investments. In our analysis, bankability refers both to the analysis of banks with regard to loans and debt instruments as well as that of banks and NBFIs concerning other financial assets. Green firms and projects often fail to meet the risk-return profiles expected by the financial sector. This is because many green activities are considered either not sufficiently profitable or are too risky, due, for example, to their use of immature technologies or to their long-term investment horizon. In contrast to green activities, high-GHG-emitting firms and projects continue to remain bankable due to their higher profits and lower risks.

3. Sustainable Investing: Lower Profits and Higher Risks

When evaluating the profitability of a green investment, one of the first aspects that investors consider is the expected returns. Estimates place the share of climate mitigation projects that meet the expected risk-return profile at only 40%. For adaptation projects, the number falls to just 20% (Finance Watch 2024). But even firms and projects with a favourable profit potential are plagued by a variety of risks that tend to discourage investors. Although renewable energy sources like solar photovoltaic systems (PV) and wind power have low operating costs and are meanwhile considered mature technologies, the financial returns of such projects are subject to market dynamics and policy decisions. This creates uncertainty with regard to the future profitability of renewable energy projects. Retroactive changes in policies or regulations (such as feed-in tariffs or taxation) can also pose policy and regulatory risks that are mainly driven by policy credibility and future policy trajectory (Egli 2020).

The financial viability of a renewable energy project is also influenced by technology risks related to the maturity of a technology type, its design characteristics, and its stage of development as well as its resource capacity. Emerging solutions such as advanced energy storage, floating offshore wind turbines, and next-generation geothermal systems lack extensive real-world performance data, causing hesitancy among investors to finance them (Gumber et al. 2025). Lithium-ion

batteries, for instance, are expected to enhance grid stability, but concerns remain over their long-term durability and efficiency (Onabowale 2025). Technology risks generally decrease as markets are created and mature. More mature markets attract competition, leading to quality improvements. As quality improves, the investment ecosystem expands, which, in turn, fosters relationships of trust among investors (Egli 2020; Gumber et al. 2025). This tendency can be seen in the case of solar PV systems and wind turbines. As assessment tools and data availability have improved, resource risks stemming from inaccurate estimates of solar irradiation and wind speed have generally become lower.

Green firms and projects that are small-scale or confined to a local area tend to lack the minimum investment values required to justify transaction costs (Ameli et al. 2020; Gabor et al. 2019; Kedward et al. 2020). Moreover, green projects carry risks due to their relatively longer time horizons that make their ability to generate sufficient profits uncertain. They are generally long-term commitments that exceed the time horizon in which most investors are willing to conduct business. The typical bank lending horizon, for example, is five to seven years, whereas the time frame for some green investments can extend beyond 15 or even 25 years.

The energy sector is one area where green investments are urgently needed. Conditions in this sector illustrate why green projects are less bankable than fossil fuel ventures. With renewables projects, primarily wind and solar PV, costs are mostly borne up front, while revenues are spread over a period of 20 years or more. In addition, renewable energy projects are more capital-intensive (Egli et al. 2018). These costs are rarely financed using cash holdings, partly because renewable energy firms are relatively new and have yet to generate large sources of cash inflows or accumulate the necessary capital. They accordingly have to be financed, whether by debt, equity, or a combination of both. Developers generally prefer debt financing because it is cheaper and its costs (the interest rate) are easier to assess. Considering that debt represents between 70% and 80% of wind energy finance, developers in this area are consequently highly leveraged (Christophers 2024). Given that renewable energy projects have very low operating costs, this means that debt servicing generally accounts for the main part of their expenditures. This, in turn, makes green projects particularly sensitive to interest rate increases (Aguila/Wullweber 2024). It is estimated, in fact, that renewable energy projects are at least five times more sensi-

tive to an increase in interest rates than fossil fuel projects (Voldsgaard et al. 2022). Therefore, unless sufficient debt can be raised, a renewable energy project is unlikely to proceed, making financing the 'ultimate chokepoint' (Christophers 2024).

As a result, only banks with a high risk tolerance are willing to finance renewable energy projects on a commercial basis, and they charge high interest rates to compensate for this risk (Christophers 2024). In other words, they only lend if they believe the investment will be profitable. Even in the relatively small number of cases where green investments are considered bankable, their profitability for investors is declining. This is largely due to financial regulations and reputational pressure, which have increased competition among banks and other financial institutions to green their portfolios. Whereas investors once earned a green premium due to the higher risks of renewable projects, they now may even have to accept a green discount to gain more exposure to green assets. According to, this is unlikely to last: "banks, of all capitalist firms, are not charities. If we can be sure of anything, it is that their willingness to pay the premium in question will be limited" (Christophers 2024: 221). The core issue is that there are not enough green projects and firms characterized by a risk-return profile deemed acceptable by banks and other financial investors. Even projects that might be expected to be profitable are plagued by risks mentioned above. Consequently, banks and other financial investors are only willing to lend them funds, or invest in them, at a high interest rate or a premium over alternatives, rendering them unaffordable for most firms. The conclusion is that the challenge of financing the green transition does not stem from the lack of money, but rather from a shortage of bankable activities.

4. High -Emission Investments: Low Risk, High Profits

Our research shows that unlike activities carried out by green firms and projects, high-GHG-emitting activities continue to be bankable for various reasons. First, high-GHG-emitting undertakings remain more profitable than green activities (Christophers 2024). Second, in terms of financial risks high-GHG-emitting activities are generally considered less risky than green projects. This might seem surprising at first glance, given that activities of high-GHG-emitting firms and

projects are exposed to what is known as climate and environmental risks, which should effectively make them riskier than green activities. Even though markets have been shown to take some environmental information such as GHG emissions into account, overall evidence suggests that they fail to price in climate-related risks sufficiently, including to anticipate the stranding of assets (Campiglio et al. 2023; Hansen 2022; Semieniuk et al. 2022). Studies estimate that by 2050, as progress is made toward meeting the Paris Agreement goals, stranded assets from the energy sector could reach a global amount of USD 927 billion (Saygin et al. 2019). In addition, sudden devaluations of these assets could trigger defaults and destabilize the broader financial system (Monasterolo 2020; Campiglio et al. 2023; Semieniuk et al. 2022). Despite the gravity of such prospects, banks and NBFIs remain heavily invested in high-GHG-emitting assets (ECB 2024; Urban et al. 2025a).

Our research identified four reasons why there has not (yet) been a rise in the risks of financing high-GHG-emitting activities significant enough to decrease the bankability of carbon-intensive firms and projects: first, a microprudential bias in regulation and supervision (Urban et al. 2025b); second, an approach to stranded assets that stretches the time horizon; third, the use of risk diversification strategies, including offloading such assets to the shadow banking sector (Schairer et al. 2025); and, finally, policy uncertainty about the future path of decarbonization.

The first reason is based on the fact that the microprudential approach to climate-related and environmental risks takes prevalence over a macroprudential supervisory approach, leaving banks solely responsible for deciding what to finance and how much risk to take. A microprudential approach is limited to fully incorporating climate and environmental risks, as from such a perspective, activities of firms and projects with high GHG emissions do not seem riskier than those of green firms and projects. By contrast, a macroprudential approach that takes systemic risks into account could lead all institutions to take appropriate measures to manage climate and environmental risks beyond their individual assessment of exposure. The second reason why financing high-GHG-emitting sectors remains highly bankable is the interest on the part of market players to secure currently high profits for as long as possible. The current risk of stranded assets is perceived as still very low due to projections that it will take from 20 to 30 years

before such assets result in write-offs (Christophers 2019; Urban et al. 2025a).

The third reason why unsustainable projects remain highly bankable is that banks see their diversification as sufficient from a risk management perspective to ensure that even if one of their inherent risks were to materialize, it would not significantly affect their overall financial standing. In cases where risks are deemed too high to be acceptable, banks may transfer risks to the shadow banking sector or withdraw from direct financing (using their own balance sheet) and engage in underwriting of tradable debt securities instead. There is indeed growing evidence that the shift towards sustainable finance has coincided with a rise in what we term 'shadow carbon financing' (Schairer et al. 2025), a special form of carbon leakage. While banks increasingly resort to securitization of high-GHG-emitting loans to manage climate-related risks and decarbonize their loan portfolios (Cusano et al. 2024; Müller/Nguyen/Nguyen 2024), fossil fuel firms are accessing alternative sources of funding. They have been using instruments such as corporate bonds, private equity funds, private credit as well as complex structured financing in which oil reserves are posted as collateral. They frequently also engage in opaque cross-border funding arrangements that obfuscate the GHG emissions of the activities being financed (Schultz/Mager 2024). For example, large multinational corporations (MNCs) can conceal high-GHG-emitting financing flows via offshore corporate wealth chains. This method involves a complex network of subsidiaries such as special purpose vehicles stretching across multiple jurisdictions. MNCs can also lower their GHG emissions and simultaneously source funds for their operations via asset partitioning. This involves separating their most carbon-intensive assets (e.g. oil wells) from their mother company and then selling them to other firms or investors such as private equity funds (Armour/Enriques/Wetzer 2022). Private equity funds typically refinance such acquisitions and leveraged buyouts with leveraged loans issued by banks that refinance such loans by issuing 'collateralized loan obligations' (CLOs) that are then sold to institutional investors (Sissoko 2023). However, in recent years private credit funds have also been increasingly financing the private equity industry with funds provided by institutional investors, their asset managers, and other NBFIs. This means that pension savings of ordinary citizens can easily end up financing high-GHG-emitting firms via the shadow banking

system. Smaller oil firms that do not command such a vast network of subsidiaries and typically depend more on debt financing for their operations are increasingly relying on alternative funding via private credit. During the decade leading up to 2023, total global private credit quadrupled to over USD 2 trillion (IMF 2024). Private credit is lightly regulated and thus largely invisible to most market participants and regulators. It may be granted by private credit funds that issue private loans directly to energy firms (Park 2023) or to private equity funds that they own (see in more detail Schairer et al. 2025).

Overall, projects and assets with high GHG emissions remain highly bankable. Apart from the negative impact they have on the climate and environmental crisis, their high bankability also poses a dilemma for banks that must be taken seriously. Individual banks and financial actors would place themselves at a competitive disadvantage if they were to stop financing high-GHG-emitting projects or firms. This would only leave someone else to invest in such ventures because of their continued profitability. In other words, early divestment from unsustainable activities would lead to a *first-mover disadvantage*.

5. *Activity Types Based on Bankability and Possible Policy Avenues*

While financing falls significantly short of what green firms and projects require, funds continue to be channelled into high-GHG-emitting activities. This is because green activities fail to meet financiers' expected risk-return profiles while carbon-intensive projects remain bankable. We suggest to classify activities into six different categories according to whether they are green or high-GHG-emitting, and whether they are bankable, not yet bankable, or never-bankable (see Table 1).

Green bankable activities (1) are those that are both environmentally sustainable and already financially viable. As outlined above, this accounts for approximately 40% of climate mitigation projects and 20% of adaptation projects. Raising the capital needed for projects in this category is generally not a problem. Not yet bankable green activities (2) include green investment projects that, while environmentally beneficial, are not yet financially viable and therefore require public support to become bankable, such as most offshore wind farms. Never-bankable green activities (3) are green activities that are essential for

reducing GHG emissions or adapting to climate change. Examples include reforestation, rewetting of swamps, raising of dikes, and restoration of rivers. Although by their very nature they are socially beneficial, there is little likelihood that they will ever be considered financially viable for private investors. High-GHG-emitting bankable

Table 1: Different types of activities based on their bankability and GHG emissions

	Green (sustainable) activities	**High-GHG-emitting activities**
Bankable	Investments that already receive private funding (1)	Investments that receive private funding but must be phased out: e.g. oil and gas exploration and production (4)
Not yet bankable	Investments that can become bankable through support of policy instruments: e.g. most offshore wind parks (2)	Investments that no longer receive private funding (5)
Never bankable	Investments that will never be bankable: e.g. biodiversity protection (3)	Investments that no longer receive private funding (6)

Source: Wullweber et al. 2025: 17

activities (4) are carbon-intensive activities that remain financially viable for the time being but need to be gradually phased out if climate targets are to be met, such as oil and gas exploration and production. As such activities continue to be (very) profitable and low risk, market forces alone will not suffice to reduce their GHG emissions or to phase out those that hinder progress towards climate goals. The two final categories, not yet bankable activities with high GHG emissions (5) and never-bankable activities with high GHG emissions (6), do not require specific financial policy as they do not receive any private funding (i.e. they are not bankable). In other words, as soon as the state withdraws from financing such projects, they would cease to operate, as no private investor would be interested in getting involved. From a bankability perspective, these fields are not interesting because

they do not require policies relating to risk and return. Thus, they are not covered in this chapter.

The foregoing classification allows us to distinguish among activities that face different financial problems and thus require different financial policies. Green firms and projects that are not yet bankable require a form of financial policy that lowers their risks to make them bankable and allow them to access private funding. A different set of issues is concerned when it comes to bankable high-GHG-emitting firms and projects. For such activities, financial policy intervention should aim at diminishing the risk-return profile to make them unattractive for financial investors. Green activities that are never bankable, on the other hand, have no chance of being financed by the private sector and therefore need to receive necessary funding from the state.

Due to limited space, we can only briefly mention some policies that steer financial flows towards green finance here with a focus on European policies. For a more detailed explanation of these policies and how they work, see Wullweber et al. (2025).

5.1 Targeted Support to Increase the Bankability of Green Projects

Green activities that are not yet bankable require targeted political support. Although for various reasons such ventures do not yet have a risk-return profile profitable enough to attract investor financing, many do have high potential and could very well be made bankable through the creation and implementation of targeted policy intervention. Green hydrogen, for example, could play an important role in the future as a medium for long-term energy storage and a means to decarbonize industry, but it is not yet bankable. Green steel, i.e. steel produced using green hydrogen, is another product that could become bankable in the future. Until this happens, however, investments in areas such as these are very risky, and their expected returns are uncertain. Policy instruments are therefore needed to make such projects investable.

In general, instruments of this nature should increase the bankability of green projects by either reducing the risk or increasing the expected return. However, not every approach to increase bankability is possible, effective, or desirable. We suggest that, first, policy should

lead to an increase in investment in productive green activities, not merely an increase in green financial assets (Fichtner et al. 2025). Second, if relying on capital from private investors is more expensive than direct public (fiscal) investment and public provision, policies to increase the bankability of green investments for private capital should not be pursued. Third, if government policy allows the financial sector to increase its returns through public guarantees, risk taking, and financial incentives, part of the profits should be returned to the government to continue expanding successful programmes. Fourth, policy interventions aimed at advancing green objectives should also consider their effects on equality and wellbeing.

There are various policies possible in this realm. Renewable energy projects, especially wind power, are vulnerable to higher interest rates because developers need to borrow large amounts of capital to cover upfront investments. Given that the interest rate charged by banks on loans is partly determined by the interest rate at which they borrow funds, one possible way of tackling this issue would entail lowering the borrowing rate so that banks, in turn, could offer lower rates to their green customers. Accordingly, an example widely discussed in the literature (van't Klooster/van Tilburg 2020; Aguila/Wullweber 2024) is a facility to provide collateralized targeted longer-term refinancing operations (TLTROs), offering banks access to cheap long-term funding, if they lent money to green targeted sectors. In order for green TLTROs to be an effective policy tool, their rates should be significantly lower than current market rates to entice banks to tap the facility as a source of liquidity. Other policies include introducing minimum lending quotas for green loans, i.e. to establish a legal framework requiring financial institutions to allocate a specified portion of their financing to green initiatives. Additionally, the European Investment Bank (EIB) could play a more active role by expanding its guarantees for green investments, allowing for higher risk tolerance and credit margins for green projects, for example. A much more visionary approach would be to establish a green Bretton Woods system with a global central bank capable of creating its own currency. This would greatly facilitate financing the global green transformation, particularly in southern countries (Aguila/Haufe/Wullweber 2025).

5.2 Measures to Disincentivize High-GHG-Emitting Investments

While direct bank financing of high-GHG-emitting firms and investments has slowly begun to decline in the EU (RAN et al. 2024; Rickman et al. 2024), the trend is increasing abroad (Cojoianu et al. 2021; Reghezza et al. 2022). Moreover, as our research shows, investments of this nature continue to be made off bank balance sheets through non-bank financial institutions (NBFIs), or the so-called shadow banking sector (Wullweber 2024; Schairer et al. 2025), which more than tripled in size from 2004 to the end of 2023. During the same time frame, the NBFI share of total financial assets increased from 37% to 49.1%, and by now is almost equal to that of the regulated banking system (FSB 2024). To divert capital flows away from emission-intensive sectors, risks must be increased and returns must be reduced. Various effective policies are possible in this respect (see in detail Wullweber et al. 2025). A very effective policy, for example, includes higher capital requirements in microprudential banking and NBFI regulations to address high-GHG-emitting activities. Raising capital requirements decreases the bankability of these activity in relation to others, by making it more expensive to finance it. As a result, firms that engage in this activity will face higher costs of capital and may be disincentivized to run this kind of business. This would also empower the supervisory authorities to provide recommendations on the calibration of risk weights and, if necessary, to provide regular updates to ensure financing in line with the EU's path to net zero.

5.3 Provision of Public Funds for Never-Bankable Green Investments

The preceding sections provide policy recommendations for financing not yet bankable activities and for phasing out bankable high-GHG-emitting activities. There is, however, a large and important area of sustainable activities that need to be financed but will probably never be bankable. These investments involve valuable and necessary projects and activities that can help prevent future climate damage. If insufficient countermeasures are taken, it is estimated that climate damage will amount to approximately US$2 trillion by 2030, with a sharp upward trend. In 2050, climate damage is expected to reach US$12.5

trillion (World Economic Forum 2024). However, from an investment perspective, these projects are not bankable. There are various reasons for this. Some sustainable projects (e.g. climate adaptation measures such as building higher dams) fail to generate private profits but are desirable from an environmental and social welfare point of view. For activities geared to fostering climate change adaptation, bankability is even harder to achieve. In the past, 92% of global climate adaptation flows came from public budgets (Climate Policy Initiative 2024: 4). Activities such as peatland protection, infrastructure for non-motorized mobility or flood protection are not bankable or only to a very limited extent.

Taking on debt now to mitigate climate damage is the rational approach to prevent future costs of damage and recovery. We argue that it is therefore justifiable to expand sovereign debt or use taxation to finance public investment in sustainable initiatives that private investors are not willing to finance. One promising proposal is the so-called Green Golden Rule, which would exclude expenditures on climate-related and green investments from the fiscal deficit and debt calculations under both national and EU-level frameworks. Removing green investments from fiscal constraints in this way would create the fiscal space needed to meet climate objectives without violating constitutional or EU treaty obligations.

In terms of taxation, the existing carbon pricing mechanisms could be supplemented with a Carbon Wealth Tax on carbon capital. Bastos Neves and Semmler (2024) propose that such a tax should be imposed on carbon capital returns, and that the proceeds should be used to subsidize green capital. The advantage of a Carbon Wealth Tax is that it would directly target polluting assets instead of emissions or consumption. It could generate revenues to finance additional green investments and also alter portfolio allocation choices in favour of green capital, fostering disinvestment in carbon capital.

6. Conclusion

In summary, our argument can be broken down into the following four key points. First, the main barrier to the financing of the necessary activities for the sustainable transition is their lack of bankability. Many green firms and projects are not considered bankable, that is,

they do not meet the risk-return profiles desired by financial investors. To shed light on this situation and its challenges, we elaborated a classification of activities based on two criteria: on the one hand, whether the activities concerned are green or high-GHG-emitting, and on the other, whether they are bankable, not yet bankable, or never-bankable.

After comparing the different categories in our classification with the results obtained from our analysis of documents on the current policy and regulatory environment in the EU as well as with the findings from the interviews we conducted, it became clear that current policies based on disclosure, stress testing, green taxonomy, and voluntary approaches, together with derisking interventions, have not succeeded in increasing the volume of green financing. Accordingly, we offer recommendations in three areas that we consider to be the most pressing: not yet bankable green activities, high-GHG-emitting bankable, and never-bankable green activities.

Not yet bankable activities are those that are currently not profitable, or only to a marginal degree, while being burdened with significant risks for a variety of reasons. Moreover, they tend to have long-term investment horizons, more volatile cash flows, and uncertain policy frameworks. Accordingly, we argue that the prevailing EU approach is insufficient to overcome these obstacles and unable to upscale the flows of climate finance to any significant degree. To address this problem, we recommend that the present policy framework be expanded to provide for a more comprehensive approach.

Second, high-GHG-emitting activities remain bankable and thus continue to attract financing from banks and NBFIs (shadow banks). High-GHG-emitting bankable activities are those that need to be phased out but remain highly profitable and low risk, and therefore are still attractive for financial investors. They continue to be financed with significant amounts of money loaned by commercial banks. But there are also high-GHG-emitting investments not financed by banks that are increasingly being funded by NBFIs. This is a phenomenon that we call *shadow carbon financing.*

Third, many activities necessary for the green transition will never be bankable, and therefore will never be attractive for financial investors. As a result, the state must directly provide the necessary financing. Never-bankable green activities are those that will very likely never generate streams of revenue, or will only do so to a very limited extent. Consequently, they will fail to attract private financiers. As the

private sector is not willing to finance such activities, the state is required to step in.

Fourth, no single policy suffices to address the challenges of sustainable transformation. Instead, a combination of monetary, financial, fiscal, and industrial policies is required. It is important to acknowledge that there are no single solutions or easy answers to solve the problems facing financing the sustainable transformation. Increasing the financing available for green projects and decreasing that for high-GHG-emitting ones is critical to enabling the transition to a net-zero future. However, there are important limitations to what a financial policy approach can achieve on its own. It is therefore imperative to complement the recommended financial and monetary policies with fiscal and industrial policies specifically designed to help drive the sustainable transformation of the productive economy. Civil society has an important role to play in making this happen (Kern et al. 2026).

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Governing by Knowledge: The Quasi-infrastructural Role of Knowledge Production in Green Finance

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Abstract

This chapter foregrounds and conceptualizes the production of climate- and environment-related knowledge as a pervasive but underexamined form of financial climate governance. Drawing on extensive ethnographic data, we characterize green finance's knowledge production as a *quasi-infrastructural form of governance*: climate- and environment-related knowledge is produced to infrastructurally enable yet not to prescribe or clearly define the transformation of financial markets in the context of a climate and ecological crisis. We argue that this mode of governance gives rise to several problematic dynamics. First, because knowledge is understood by financial practitioners as infrastructurally enabling, the actual governance and steering of financial flows is left to 'the market.' Knowledge production thus becomes an end rather than a means in the practice of green finance. What is more, the approach naturalizes knowledge production as the dominant – if not exclusive – mode of governing nature-finance relations. Not only does such naturalization limit critical reflection on underlying assumptions and disqualify alternative modes of governing. It also cements finance's claim to authority over the governance of nature-finance relations as finance itself is best equipped to produce knowledge for finance.

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1. Introduction

The plethora of green finance initiatives – ranging from disclosure and transparency initiatives to standards for green financial products, climate-related risk supervision and derisking of green assets – is increasingly being understood as forms of financial climate governance, i.e., the use of established financial mechanisms, paradigms and practices to pursue environmental goals (Bracking/Leffel 2021; Kob et al. 2025; Mertens/Van der Zwan 2025). As such, green finance is the attempt to steer financial behavior and decisions in ways that they induce decarbonization and ecosystem protection in the economy. In this context, private finance asserts itself and is being upheld by public actors to be a legitimate, competent and knowledgeable governor of the planet's climate and integrity (Kaplan/Levy 2025; Kob 2025).

In this chapter, we want to draw attention to a dimension that underlies these various attempts of financial climate governance: knowledge production. Whilst the role of knowledge has been thematized in specific contexts of green finance, such as impact investing (Golka 2024), green bonds and 'low' or 'high-carbon' assets (Bracking et al. 2023; Langley et al. 2021), as well as the expanding ESG information infrastructures (Dimmelmeier 2023), we want to foreground and conceptualize the production of climate- and environment-related knowledge as a pervasive governance attempt rarely approached as such. This conceptualization is important because knowledge has been recognized as an important mechanism in both global financial governance (Helgadóttir/Ban 2021; MacKenzie/Millo 2003) and environmental governance (Beck/Mahony 2018; Turnhout et al. 2014).

To examine knowledge production as governance, we draw on a three-year, multi-sited team ethnography (Jan 2021 to Dec 2023) that traced knowledge production across various financial actors. Our observations and interviews with 240 informants revealed that the majority of efforts of green finance professionals was focused on producing relevant, accessible and easily applicable climate-related knowledge. Our informants saw this knowledge as an infrastructural enabling mechanism for a different kind of financial behavior and decision-making. They thus sought to make climate-related knowledge part of the working infrastructure that finance professionals use in their everyday work. Whilst there is a clear performative intent in the work of green finance professionals – the knowledge they produce and provide

to other financial professionals is supposed to produce or realize a different 'world' (Kob et al. 2024) – our analysis shows that what is supposed to be achieved through knowledge production remains implicit and vague. This vagueness emerged precisely because knowledge was seen as infrastructurally enabling for the functioning of markets, but not prescriptive or directing in any way.

Based on our findings we characterize knowledge production in and for green finance as a quasi-infrastructural form of governance – with the prefix 'quasi' denoting that at the time of our study and arguably still today climate-related knowledge has not yet become a naturalized, integral part of financial behavior and decision-making. The quasi-infrastructural role of knowledge production in financial climate governance has important implications: the market gains and retains the epistemic authority to diagnose and govern our socioecological crises. We end with a discussion of what this means for our ability to confront the urgency and complexity of the escalating socioecological breakdown.

2. *Governance and Knowledge Production in Green Finance: a Conceptual Framework*

The lens of governance is increasingly used to make sense of green finance as a phenomenon (Bracking/Leffel 2021; Gabor/Braun 2025; Kaplan/Levy 2025; Kob et al. 2025; Mertens/Van der Zwan 2025). Though the literature on governance is vast and diverse, it is commonly agreed that the notion of governance broadly refers to "a conditioning influence on the arrangements in place for managing an asset, people or resource" (Bracking/Leffel 2021: 3). It thus encapsulates "all coexisting forms of collective regulation of social affairs, including the self-regulation of civil society, the coregulation of public and private actors, and authoritative regulation through government" (Dingwerth/Pattberg 2006: 188).

Many scholars approaching green finance as financial climate governance acknowledge that green finance follows and reinforces "a longer tradition of governance through financial markets" (Mertens/Van der Zwan 2025: 3). Governing through financial markets means using financial markets, paradigms, and practices to govern society's relations with our planet. It also entails governing private finance itself so that

it produces the desired environmental outcomes. With our focus on knowledge production, we are particularly interested in the latter part, i.e., how finance governs itself through knowledge production, and the repercussions this has for socioeconomic systems and our planet.

In conceptualizing knowledge production as a form of governance, we draw on the rich insights produced by multiple strands of governance scholarship that highlight the pivotal role of knowledge in governance processes (e.g., Beck/Mahony 2018; Blyth 2013; Helgadóttir/Ban 2021; Taeger et al. 2025; Turnhout et al. 2014). For example, the authority of knowledge shapes how markets are made and private financial actors assume competence and power (Mackenzie 2011; MacKenzie/Millo 2003). However, knowledge is not just a tool used to assist in the pursuit of stated goals. Because knowledge is a productive force that acts on the world (MacKenzie 2006), it becomes intimately involved in the very definition of goals as every governance initiative rests on a foundation of knowledge specifying the 'is' and the 'should' of the world. In this way, knowledge production can be understood as governance that determines which goals to pursue and the means to achieve them.

Approaching green finance as governance through knowledge production allows to take into account the distributed structures that govern financial behavior and decision-making (Bracking/Leffel 2021). Specifically, it makes visible and accessible for research the varieties of actors across the financial sector – from companies to data and analytics providers, financial institutions, regulators, policymakers, NGOs, think tanks, academics, and investor networks – that act as a heterogeneous, distributed and only partially coordinated complex of knowledge producers and users. This perspective also draws attention to knowledge contestations that shape whose interests and values are realized and empowered through green finance. It thus makes knowledge visible as a forum for and a means of politics (Taeger et al. 2025). As Kob (2025) emphasizes, knowledge is one of the primary means through which private financial actors assume competence and authority in global climate governance.

Our focus on knowledge production builds on existing scholarship that has scrutinized knowledge production in specific contexts of green finance (Bracking et al. 2023; Folkers 2024; Golka 2024; Langley et al. 2021). These studies focus on the particular characteristic of certain types of knowledge production and their implications. For example, Golka (2024) introduces the term 'epistemic gerrymandering'

to explain how impact investors tailor 'impact' to their financial portfolios and notes that this way of producing knowledge subjugates sustainability to financial returns.

Here we broaden this perspective and want to highlight the ubiquitous – and as we argue quasi-infrastructural – nature of knowledge production and its role for financial climate governance. Drawing on the sociology of knowledge (Knorr-Cetina 1999; Mackenzie 2011), we conceptualize knowledge production as the local and situated practices through which market participants produce knowledge about financial assets and instruments. Because these practices are embedded in different institutional and organizational contexts, the knowledge produced is tied to local conventions and practices of judgement. Whereas information is often understood as abstract content that can be encoded, transmitted and processed, knowledge is what emerges when such content is taken up within particular institutional and practice contexts.

A few rare studies approach knowledge production in green finance from the perspective of knowledge infrastructures (Dal Maso/Maresca 2026; Dimmelmeier 2023; Folkers 2024; Maechler/Boisvert 2025). For example, Folkers (2024) conceptualizes the emerging disclosure frameworks on climate-related financial risks as a new reporting infrastructure. He draws on Paul Edwards' (2010: 17) notion of knowledge infrastructures as "robust networks […] of people, artifacts, and institutions that generate, share, and maintain specific knowledge about the human and natural worlds." Taking a similar approach, Dimmelmeier (2023: 763) conceptualizes the various technical tools that provide data on the ESG attributes of financial products or entities as an "ESG information infrastructure."

Whilst these studies highlight an important dimension of knowledge production, they are primarily concerned with the infrastructures for producing knowledge, i.e., the technical devices, calculative conventions and types of what generates and shares knowledge. In contrast, in our chapter, we are concerned with knowledge as infrastructural, i.e., the ways in which knowledge becomes integral to financial behavior and decision-making to steer it towards environmental goals. We draw on Star and Ruhleder's (1996) understanding of infrastructure as a fundamentally relational concept. The authors point out that something only "becomes infrastructure in relation to organized practices" (Star/Ruhleder 1996: 113). For example, "the cook considers

the water system a piece of working infrastructure integral to making dinner" (Star/Ruhleder 1996: 113). He uses water in a "natural, ready-to-hand" (Star/Ruhleder 1996: 114) way without further thematizing it. Instead, "for the plumber, the waterworks system in a household connected to the city water system is target object, not background support" (Star/Ruhleder 1996: 113). The infrastructural quality of knowledge thus resides in the fact that it is taken up and used as a resource in particular activities, such as investment and lending; it becomes integral to these activities.

3. Knowledge Production as a Dimension Underpinning All Governance Attempts in Green Finance

By now, green finance initiatives stretch across all policy fields and have become polycentric and dispersed (Bracking/Leffel 2021). Here, we denote the various initiatives as 'governance attempts' because green finance as a governance regime is still emerging and by no means institutionally settled (Mertens/Van der Zwan 2025; Bracking/Leffel 2021; Kaplan/Levy 2025). In reviewing existing scholarly work, we show how knowledge production is a feature that underpins and is integral to all these governance attempts.

The role of knowledge production is most clearly visible in the area of disclosure, a policy tool used by financial supervisors, conduct authorities and private voluntary initiatives. Disclosure seeks to oblige or encourage companies to report information on environmental-related risks and impacts and relies on financial market participants to ingest this information into their risk management and decision-making processes. A myriad of distributed actors is involved in these knowledge production processes, including companies and financial institutions, but also consultants, accounting firms, data and analytics providers, and the designers of the various disclosure frameworks.

Knowledge production in green finance's disclosure regimes is particularly contested when it comes to questions of 'materiality,' i.e., what information is considered material and therefore relevant to disclose. Different conceptions of materiality (i.e., financial, impact and dynamic materiality) embody different environmental goals and goods and shape what is realized through disclosure (Abhayawansa 2022; Jørgensen et al. 2022; Stenström 2026). There are notable differences

in how different stakeholders perceive and assess materiality (Reimsbach et al. 2020), but these differences are not always taken into account in the narrow, technic-rational approaches to materiality assessments in sustainability disclosures (Puroila/Mäkelä 2019).

Knowledge production is also the mode through which order is established and control exercised in disclosure regimes via the question of uncertainty. Although there is debate in the field around the feasibility of reducing uncertainty within climate-related information, by and large, disclosure advocates amongst policy makers and industry experts argue that climate-related risks can be correctly perceived, calculated and managed. In contrast, some scholars are skeptical, arguing that "climate change futures, and especially climate change's sociopolitical and socioeconomic futures […] is to enter a realm of 'deep,' 'fundamental,' or 'radical" uncertainty'" (Ameli et al. 2020; Christophers 2017: 1119).

Similar to disclosure initiatives, classification schemes like the EU Taxonomy and standards for green financial products are supposed to take governance effects through knowledge production, i.e., creating an understanding of the extent to which financial investments or products support environmental goals. Such policy tools, deployed and readily used across the financial sector, embody knowledge that categorizes and otherwise orders the world to build a specific, shared view of financial and economic 'greenness'. Far from only representing an existing world, knowledge in this form acts on the world by producing 'green' and 'sustainable' financial assets.

In these contexts, the private sector is not only the primary target audience for knowledge production but also the main actor shaping what is considered as 'green' or 'sustainable.' For example, Fichtner and his colleagues (2024) point out that the initial unregulated phase of the ESG industry has led to the development of market standards for ESG criteria, which in turn now shape what is considered 'sustainable' in regulation: "market-driven ESG standards set by a handful of private actors […] have likely 'pre-structured' regulatory initiatives" (Fichtner et al. 2024: 481). Through circumscribing the assessment of environmental issues, private financial actors assume competence and authority in climate governance, acting as "powerful standard-setters" (Fichtner et al. 2024: 492) and "epistemic guardians" (Gabor 2021: 444).

Knowledge production is also foundational to the dominant risk framing of climate change used by financial supervisors, fiscal policy-

makers, and development banks. In activities such as climate stress-testing, climate risk management, and derisking, the world is made legible and acted on through a risk frame. This risk framing is premised on the idea that information is gathered, interpreted, and processed – within financial institutions or 'markets' more broadly – so that risks can be assigned to assets and transactions, with every market participant defining their own risk appetite and transacting accordingly.

The reliance on and embodiment of knowledge production becomes evident, for example, in climate stress tests, which are typically promoted as exercises to 'raise awareness' and 'create capacity' amongst financial market actors – in other words, to build up expertise and knowledge. Even within the circles of central banks, "building awareness and intellectual capacity" (Helleiner et al. 2025: 909) became important for "converting" central bankers (Helleiner et al. 2025: 913) to see the relevance of climate-related risks to their mandates (see also Deyris 2023). Such 'conversion' underlines the productive nature of knowledge in the sense that it acts on the world, molding and not only representing it. A similar argument has recently been advanced by Eich (2025), who describes how knowledge production underpinning derisking is a conservative form of world-making, one that is unlikely to be sufficient to effect a successful transformation.

Finally, private voluntary initiatives also fundamentally rely on knowledge production, in the form of developing standards, metrics and 'best' practices. For example, Fichtner and his colleagues (2025: 71) point out that investor networks "are major contributors to qualifying what high-carbon assets are specifically and developing metrics to assess such." In turn, Thistlethwaite and Paterson (2016) examine the various voluntary disclosure initiatives as a contested terrain for knowledge production. They point out that professionals working in these initiatives "engage in 'epistemic arbitrage'" (Thistlethwaite/Paterson 2016: 1208) – using their control over different specialized pools of knowledge – in order to negotiate between the competing interests of investors on the one hand and civil society actors on the other.

In summary, we argue that knowledge production – whether in the form of disclosing and ingesting information; deciding what information counts as 'material' or not; constructing, assigning and acting on risks; or defining what is 'green' or not – is central to the various governance attempts of green finance. Conceptualizing and highlighting knowledge production as a mode of governance in its own right is

important to be able to grasp its distinctive features, and the implications this has for environmental and social outcomes.

4. Methods

To examine knowledge production as a distinct approach to financial climate governance, we suggest taking as a starting point the work of those that are the primary producers and users of knowledge, i.e., green finance professionals themselves. In the last few years, the number of green finance professionals has increased exponentially, ranging from climate risk managers and ESG analysts at financial institutions to ESG specialists at data and analytics providers, industry initiatives, think tanks and NGOs.

In our three-year, multi-sited team ethnography, we explored the practices and processes through which climate-related knowledge is produced and used in different organizations. Table 1 provides an overview of our extensive dataset from various financial organizations and settings. The data was collected by five researchers between January 2021 and December 2023 and comprises 412 interviews, 393 observations, and numerous internal and public documents.

In each organization, we observed and interviewed green finance professionals in a wide range of roles. Broadly, our 240 informants can be clustered into five distinct positions within green finance's epistemic division of labor:

- *Technical developers at data and analytics providers:* These actors engage in data engineering and modelling to construct climate-related data sets (e.g., Scope 1-3 emissions, climate-target data) and to develop analytical tools (e.g., Implied Temperature Rise, Climate Value-at-Risk), which they sell to financial institutions.
- *Technical contributors to industry-wide frameworks:* Often employed by financial institutions, these experts participate in field-level standard-setting, such as standardizing climate-related methodologies and datasets, or developing voluntary frameworks for climate-target setting for financial institutions.
- *'ESG translators':* Dedicated teams within financial institutions that act as boundary spanners between external experts and internal

decision-making units. They scrutinize and validate externally sourced tools and data sets, support colleagues in using them, and develop bespoke tools and data sets for their organizations.

– *'ESG analysts':* Specialists who work closely with investment managers at financial institutions, providing climate-related expertise and embedding it directly in investment processes.
– *Users of climate-related knowledge:* Finance professionals who engage in downstream knowledge application, drawing on the tools, data sets, and expertise produced by technical developers, ESG translators, and ESG analysts.

Table 1: Overview of data collection

Instances of events	Interviews	Observations	Access conversations	Feedback sessions	TOTAL
Asset Owner	90	86	22	4	202
Asset Manager	41	3	6	2	52
Bank	79	81	3	2	165
Data Provider	47	85	8	5	145
Open-source	33	76	1	3	113
NGO	13	8	2	1	24
NZ initiatives	31	21	1	2	55
Investor network	18	4	2	2	26
Other industry experts	60	29	18	1	108
TOTAL	412	393	63	22	890

5. *The Quasi-Infrastructural Role of Knowledge Production in Financial Climate Governance*

Very early on in our field work, we realized that green finance professionals saw climate-related knowledge as the primary – and often also most effective – means to pursue environmental goals in finance. For climate-related knowledge to affect financial behavior and decision-making, our informants sought to make this knowledge part of the working infrastructure of finance professionals. Whilst the means for

achieving environmental goals were clear – i.e., making climate-related knowledge infrastructural – the ends of this knowledge production often remained vague and generic. This was precisely because our informants saw knowledge as infrastructurally enabling for the functioning of markets, but not prescriptive or directing in any way. Green finance professionals' approach is thus in line with a market orthodoxy that sees markets as the most efficient and desirable way to organize economic life. In the next two sections, we first describe the means – i.e., how our informants sought to make climate-related knowledge infrastructural – and then the ends they pursue in this approach to financial climate governance.

5.1 The Means of Knowledge Production as Governance: Making Climate-Related Knowledge Infrastructural

Within the varied work that green finance professionals engaged in to produce climate-related knowledge, they shared one main commonality: they all sought to make climate-related knowledge infrastructural – part of the working infrastructure of finance. Without making this knowledge integral to what finance professionals do, so the sentiment amongst our interviewees, the various attempts at using financial mechanisms, paradigms and practices would remain ineffective in steering institutional financial behavior towards environmental goals. In what follows, we use square brackets to denote these governance attempts in our informants' work.

For example, one of our interviewees, Arthur (all names are pseudonyms), an ESG translator at a large asset owner, explained that he is working to clarify and validate the climate impact and risk tools that they are sourcing from a data and analytics provider. His and his team's efforts were driven by both regulatory requirements for the management of climate-related financial risk [governance attempt: financial supervision] and the company's voluntary climate commitments [governance attempt: private self-regulation]. Arthur lists a variety of 'pain points' with these tools and how he is working to alleviate them, such as methodological concerns about carbon budgets and climate scenarios, the range of values the tools produce and the difficulty to explain them. He concludes:

> "So, these are the bigger pain points. And until these are solved, I don't see these solutions will see the light of the day apart from the TCFD reporting. They won't come into the decision-making approach […] we haven't used them 'till now because we don't have enough confidence. My role here is to build more confidence. So, bringing transparency into these metrics, and making them useful enough for our investment decisions and our analysis" (Interview, June 2023).

At the time of our fieldwork – and to some extent still today – many of the tools and data sets that green finance professionals worked on were nascent and in development. Most of our informants thus shared Arthur's view that their work in building and validating tools and datasets, both those developed internally and those sourced externally, was crucial for removing obstacles to their use and making climate-related knowledge part of the working infrastructure integral to financial decision-making processes.

Educating and convincing portfolio managers about climate-related knowledge was an equally important part of making this knowledge infrastructural. For example, an ESG translator at an asset manager notes:

> "Lots of my job is indeed to do education. […] So, you know, my role is both to convince [portfolio managers] to include as many data as possible, and to actively consider these additional new metrics […] as part of a binding element in their [investment fund] prospectus." (Interview, May 2023). [governance attempt: conduct – transparency about financial products]

Convincing finance professionals to draw upon climate-related knowledge in their work often involved "help[ing] them understand the importance of climate risk and how material that is for their financial performance" (Interview, October 2023). A lot of green finance professionals saw education and awareness raising as an important part of their role and they set up various ways to do so, for instance, via webinars or one-on-one meetings.

ESG analysts worked directly with finance professionals to translate and mold climate-related knowledge so that it can be readily taken up and used in investment decision-making [governance attempt: private self-regulation]. An ESG analyst working with the equities team at an asset manager described her work as follows:

> "At the core of it, it's actually quite simple. It's about translating a bigger ESG issue or a theme or a trend into an actionable kind of investment outcome. So, it's about translating what we're seeing into implications for broader sectors or markets, companies, and then basically coming up with a list of ideas or a basket of companies that we believe are well positioned to be benefiting from that given theme or trend. […] And so, in my new role […] it's trying to firmly embed [this research] across the equity investment process, ensuring that we're closing the loop effectively between research idea generation, and then ensuring that there is an impact at the level of portfolio decision making." (Interview, November 2023)

Here, the ESG analyst's emphasis on "closing the loop" and "ensuring that there is an impact" indicates her effort in ensuring that the climate-related knowledge she produces is also taken up and used by portfolio managers. However, how this knowledge would be used was left to the discretion of finance professionals. The green finance professionals we interviewed often pointed out that they are providing expertise and knowledge, but that "it's not my decision. Ultimately, it's the portfolio managers" (Interview, October 2023). In turn, finance professionals actively retained and used that discretion. They sought out expertise and understanding from ESG translators and analysts on their own terms, when and in the way that it was relevant to them. For example, a portfolio manager explained:

> "So, if I'm writing [an investment analysis…] I'll see if anything's been written on [environmental aspect] by the ESG analyst. And if it has, I'd usually have a 15-minute chat with them. And then that might lead me to do more research. And then I might send something to them and say, What do you think of this and ask for their opinion? But I think only if they really know the stock […] and it's later on in the research when we've tried to develop our own ideas." (Interview, October 2023)

The work of technical developers at data providers and technical contributors to industry-level standards was further removed from financial analysis and decision-making processes, but nonetheless equally important for making climate-related knowledge infrastructural. For example, a technical contributor described the various working groups at industry level that worked over several years to standardize meth-

odologies for calculating Implied Temperature Rise[1] (ITR) scores. It was considered an important metric to support financial institutions in working towards meeting their climate commitments [governance attempt: private self-regulation]. However, many green finance professionals considered the divergence in ITR scores across data providers a serious obstacle to the practical use of this metric, necessitating standardization of methodologies to achieve greater convergence. The technical contributor to this standardization process notes:

> "Now why do we want to converge all the time, really? […] There's like five different methodologies on the market. […] When I was working at [asset owner], I didn't want [my competitor] to use the methodology that would say 2.1° when I, with very similar portfolios more or less, would use [another methodology] and come up with 3.5°. […] Probably we will never have the full convergence. Probably Model A will give you a 2.1°, but model B will give you 2.3°. […] That's more or less fine. As long as we can explain the differences. What you don't want is like a 1° difference with the same portfolios that would kill the whole idea of using those metrics." (Interview, June 2022)

Overall, the various efforts at knowledge production in green finance – whether in the form of building tools, educating, or standardizing – sought to make climate-related knowledge easily accessible, remove obstacles to its use, and make it interesting and important to apply in financial analysis and decision-making processes. In that sense, the work of green finance professionals is akin to the plumber who provides the water system for the cook: for them, climate-related knowledge is not background support but the very target object. They work on climate-related knowledge production with the aspiration to render it infrastructural for finance professionals. The tentative way in which climate-related knowledge is taken up and used leads us to characterize it as quasi-infrastructural.

[1] ITR is a metric expressing the alignment of a given portfolio or asset with global temperature outcomes as seemingly simple and intuitive degree Celsius value.

5.2 The Ends of Knowledge Production as Governance: Implicit and Vague

Whilst the means for governing climate-finance relations via knowledge were clear, the ends of this knowledge production were often only vaguely articulated. In our analysis, we identified that the ends were either (1) left implicit – implying that by providing climate-related knowledge and making sure that it gets integrated into the work of other finance professionals, things will 'get better' – or they were (2) articulated more explicitly but in rather vague terms. Akin to the plumber who provides the water system for the cook, but does not in any way determine what the food cooks nor how they use the water, green finance professionals left it open how and in what way climate-related knowledge would change financial decision-making.

5.2.1 Implicit Hope for Things to 'Get Better'

The implicit hope of many green finance professionals that we interviewed and observed was that things would 'get better' as soon as climate-related knowledge becomes an integral part of financial processes. For example, one of our interviewees, who was the lead for 'net zero and climate integration' at a large asset manager, told us:

> "We want to make sure that [portfolio managers] be comfortable with [climate change], the basic concepts and understanding around it, because […] once we kind of help them understand the importance of climate risk and how material that is for their financial performance. Once they get it, I think they will have so many ideas and things they want to do with it, […] We're trying to enable them and 'unleash their potential'" (Interview, October 2023)

Here, the interviewee clearly has high hopes for a 'better' future through integrating climate-related knowledge in investment decision-making, but what precisely 'better' entails, in terms of what might change, when it might change and what kind of future environmental, social and economic outcomes this change would produce remains unspecified.

We observed the same kind of implicit hope for things 'getting better' at data providers. For example, the data provider that we studied closely, provided an engagement service to financial institutions, in which engaged investee companies on behalf of investors. The knowl-

edge and expertise the data provider produced internally informed the demands they raised through engagement letters and calls with companies. The head of this engagement service, Sara, explained how they set up the service initially, for example, by deciding on the length of the engagement period:

> "We agreed on two years, because it's … some of our competitors I know, do three years. Other investors that engage, they don't really set a time bound, they just kind of engage. And then it can take a long time to yield results, really. But we wanted to have a timeframe that is long enough for them to be able to actually … to move the dial, but then also not too long to not move forward, basically." (Interview, June 2023).

What becomes visible here is that the provider's intent is not only to sell a service to financial institutions, but to provide something that would "move the dial." What is hoped for is some kind of progress, but what this progress entails remains unspecified.

In our observation of day-to-day work, we noted that green finance professionals experienced positive emotions when they saw things 'getting better,' even if that 'better' simply pertained to better disclosure or an improvement in portfolio composition with an unclear relationship to developments in the wider economy. For example, a fieldnote from one of our observations of the work of ESG analysts classifying the climate-related disclosure and target-setting of investee companies describes:

> "Luca seems to be quite happy: He tells Elena that he is quite pleased because he was able to upgrade 7 holdings in the fund from black [no disclosure and no climate-related targets] to red [basic reporting and demonstrating commitment to setting targets]. However, he notes that this uptake in disclosure is due to regulation." (Fieldnotes, December 2023).

Even though more climate-related disclosure and commitment to setting targets do not mean that companies also take actual immediate or even future action to reduce their environmental impact, the positive emotion that Luca experiences signals what he is hoping to achieve with his climate-related knowledge work.

With the broader goals of knowledge production remaining implicit and unarticulated, the provision of climate-related metrics, data and

tools – i.e., the means – often become the end itself. For example, as pointed out above in the case of Luca and Elena, an improvement in climate-related disclosures was often seen as an achievement. Initiatives such as ClimateAction 100+ and CDP, as well as ESG ratings that evaluate companies on their climate performance, similarly view improvements in company disclosures as achievements (CDP 2024; Climate Action 100+, 2025). Disclosure as a measure of progress was also used as a sub-score in the asset purchasing program of the European Central Bank between July 2022 and 2023 (European Central Bank 2022) and is now being used as part of the climate factor in the Euro system's collateral framework (European Central Bank 2025).

As the means – making climate knowledge infrastructural – become the ends, an uptake of climate-related tools and data sets by financial institutions and decision-makers was also seen as an achievement, independent of what tools in turn change (or not) in capital allocation. For example, a green finance professional we interviewed proudly notes:

> "Very often, the modus operandi would have been, we prototype a tool, test the tools, see what spat out on the other side. Sometimes it would be pulled into various teams. Or some of our clients would put together a new product from that. Mostly on the investment side, but some of the banks, some of the insurance teams, also brought it into some of their offerings." (Interview, August 2023).

5.2.2 Intended Outcomes Articulated in Vague Terms

Sometimes, green finance professionals articulated more explicitly what they intended to achieve with their knowledge production. These explicit articulations occurred most often when participants were engaged in defining and standardizing climate-related metrics, methodologies and best practices for use by the broader financial sector. For example, one of our interviewees, Michelle, who was participating in an investor network explained how this network was working to develop standards for climate-related data:

> "A major topic […] that concerns everyone is the issue of data […] It already starts with carbon footprinting. Even in the area of listed equities, there are sometimes gaps or differences – data providers with discrepancies of over 50 to 70 percent. You simply can't work with that. That's why our […] proposed solution is […] building a

> climate database that is open source, […] something that will hopefully establish itself globally as the standard. Because if we have transparency and a standard, only then will money flow into the right channels. […] So, if we really, truly want to have real-world impact and actually see change in the climate space, then for me this is the most powerful way" (Interview, February 2021).

Here, Michelle is explicit about the intention behind her knowledge work, i.e., directing money "into the right channels" and achieving "real-world impact". However, the intended outcomes are articulated in rather generic terms. In the interview, Michelle does not unpack what the timeframes, locales and contingency factors are for achieving carbon reductions, and how the proposed data and forward-looking metrics would affect concrete capital allocation.

In public documents outlining voluntary standards and best practices, the intended outcomes remain equally vague. For example, in a document of the Glasgow Financial Alliance for Net Zero on how to enhance the measurement of transition finance, the aim is described as "enable[ing] an orderly and inclusive whole-economy transition" (GFANZ 2023: 5) Other best practice frameworks, such as the Net Zero Investment Framework from the Institutional Investors Group on Climate Change (IIGCC), articulate their intended aims similarly. IIGCC states that "the primary objective is achieving emissions reductions in the real economy […], consistent with achieving global net zero greenhouse gas (GHG) emissions by 2050" (IIGCC 2021: 5-6). Even though these public documents tended to provide some more detail on the type of transition hoped for (i.e., orderly instead of disorderly) and a timeframe (e.g., by 2050), further milestones, regional specificity, contingency factors and a causal chain of actions that leads from measurement to the intended outcomes are lacking.

This vagueness in what green finance professionals hope to achieve through knowledge production was ubiquitous across our interviews and observations. Our interviewees often referred to "net zero by 2050" (mentioned in 52 interviews), "real world impact" (23 interviews), "achieving net zero" (20 interviews), "impact in the real economy" (13 interviews), "real world decarbonization" (6 interviews) – or variations of them, such as "scale transition finance" or "mobilize capital for decarbonization." These generic terms indicate that green finance professionals hope that integrating climate-related knowledge into the

working infrastructure of finance will change capital flows in a desired way – i.e., away from high-carbon assets and towards low-carbon assets to support the transition to a low-carbon economy. However, where, when and by whom this transition is supposed to be achieved is left unspecified, as are the concrete mechanisms by which the produced knowledge can induce actions contributing to the transition.

5.3 Implications: The Epistemic Authority of The Market in Green Finance's Knowledge-Centric Approach to Climate Governance

The characterization of green finance's knowledge production as quasi-infrastructural with implicit and vague ends has significant implications: it leaves the actual governance and steering of financial flows to 'the market'. As both producer and consumer of climate-related knowledge, the market has the ultimate authority to determine the form, pace and distributional consequences of change – its temporal horizons, regional and local variations, and winners and losers. The knowledge-based approach to financial climate governance rests on a fundamental belief in the information-processing powers of markets (Mirowski/Nik-Khah 2017) and its ability to produce the most efficient outcomes. Here, the familiar trope of the market as the most efficient and desirable way to organize economic activity is rearticulated as the need for better integration of climate-related knowledge into financial decision-making processes. Insofar as knowledge becomes integral to financial decision-making – or in our words, infrastructural – it would necessarily produce the desired outcomes.

The economic understanding of markets as an information-based mode of coordination has been enshrined in the TCFD recommendations from the beginning. The recommendations assert that the availability of "information about the risks and opportunities presented by climate change […] will lead to smarter, more efficient allocation of capital, and help smooth the transition to a more sustainable, low-carbon economy." (TCFD 2017: i). The document notes that "without the right information, investors and others may incorrectly price or value assets, leading to a misallocation of capital" and therefore concludes that there is a "need for better information to support informed investment, lending, and insurance underwriting decisions" (TCFD 2017: ii-iii). The market is seen as neutral and therefore able to produce the

optimal outcomes. As Carney (2015: 13), the former governor of the Bank of England and prime instigator of the TCFD, pointed out:

> "Given the uncertainties around climate, not everyone will agree. Some might dispute the IPCC's calculations. Others might despair that there will never be financial consequences of burning fossil fuels. Still others could take a view that the stakes make political action inevitable. The right information allows sceptics and evangelists alike to back their convictions with their capital."

In this approach to financial climate governance, the market's epistemic authority in producing optimal outcomes is elevated above those of governments and scientific, civic, or affected communities. This places market actors in the driver's seat of both knowledge production – because the market knows best – and knowledge consumption – with a wide margin of discretion. In this vein, Carney (2016: 2) proudly described the TCFD disclosure recommendations as a "solution for the market, by the market."

Analyzing finance's epistemic practices also reveals the power structures in markets that shape how knowledge takes effect. Across our 240 informants, our research clearly shows that portfolio managers and other financial decision-makers maintain full discretion over when and how they use climate-related knowledge. Whilst previous literature argues that climate-related knowledge is prescriptive (Dal Maso/Maresca 2026) – for example, in the form of investment trajectories that climate scenarios stipulate – our research shows that it remains up to finance professionals how and when they use this knowledge. The exercise of discretion in the use of climate-related knowledge is thus not just limited to the ambiguities left open by knowledge production, but pertains to every aspect of it, i.e., which tools, models and data sets are chosen, which ones are rejected and how the outputs of these are (re)interpreted.

6. Conclusion

In this chapter, we set out to examine and conceptualize the knowledge production-based approach to financial climate governance. Our review of green finance initiatives across the private and public sector has shown that knowledge production is a dimension that underpins

all of these governance attempts. Our empirical account further demonstrated that knowledge production is a specific and pervasive attempt amongst green finance professionals to pursue environmental goals. Our analysis of the distinctive features of this governance approach revealed that knowledge production fulfils a quasi-infrastructural role with implicit and vague ends.

We can draw two main conclusions from our account. First, our informants' strong buy-in in knowledge production and its infrastructural role naturalize knowledge as the primary, if not only, way to change financial behavior and decision-making. There is a widespread belief that only through 'granular' and 'decision-useful' information provision decisions can be altered and affected, not by command-and-control or by a shift in values and norms. Importantly, the construction and formatting of what constitutes relevant and applicable knowledge is governed by finance professionals themselves. If the provision of this knowledge does not produce the desired environmental outcomes, green finance professionals typically interpret this as a need for 'better' and 'more' knowledge, rather than a need to change their approach. This explains why green finance professionals persistently and continuously call for 'more' and 'better' disclosure, and the enhancement of climate-related models and analytics.

Second, the vagueness about which actual or eventual goals, changes, and achievements are being pursued means that green finance professionals focus on the means, i.e., making climate-related knowledge infrastructural. This dynamic perpetuates knowledge production as an end rather than a means, making this governance claim largely impervious to internal reflection and criticism. Green finance professionals thereby learn to relate to changes in the production and dissemination of knowledge as goals and accomplishments in themselves, losing sight of the environmental outcomes it is supposed to produce.

By reframing knowledge production as a central yet under-theorized mode of governance in green finance, we expose how this approach to financial climate governance empowers private finance through two interlinked moves: First, private finance gains and retains the epistemic authority to produce the knowledge and knowledge structures to diagnose and govern our socioecological crises. Second, this approach naturalizes knowledge production as the dominant – if not exclusive – mode of governance, disqualifying alternative modes as inappropriate, ineffective and unsystematic. In doing so, private finance is elevated

as the privileged site of climate governance, given its alleged expertise in knowledge-based coordination. This raises a critical question: In the face of escalating socioecological breakdown, can alternative modes of governing the finance-climate nexus – such as principle-based governance or grassroots democracy – be better equipped to confront the urgency, uncertainty and political contestations that knowledge-centric financial climate governance tends to obscure?

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Financing Sustainability or Making Finance Sustainable in Africa: Implications for Financial Institutions

A Reflection through the Africapitalism Lens

Kenneth Amaeshi

Abstract

Sustainable finance has largely been framed through environmental and ecological criteria, with particular emphasis on climate change. This chapter argues that such a framing is insufficient for Africa, where sustainability challenges are inseparable from broader socio-economic priorities, including energy poverty, unemployment, technological capability, and institutional development. Drawing on the principles of Africapitalism, the chapter proposes an alternative lens by distinguishing between financing sustainability and making finance itself sustainable. It argues that sustainable finance should be understood as a mechanism for correcting market failures and governing externalities rather than merely integrating ESG risks into financial decision-making. Situating sustainable finance within mainstream market governance enables a more holistic appreciation of finance as a means of advancing both economic prosperity and societal well-being, which are central to the Africapitalism agenda.

1. Introduction[1]

One of the achievements of the United Nations' Conference of the Parties (COP) 27 is the historic agreement to establish a 'loss and damage' fund for climate impacts in developing countries (UNEP 2022). However, there is no agreement on how it will be funded or where the funding will come from. Still, the agreement recognises the fundamental need to address and/or pay for the negative impacts, as well as to enhance the positive impacts, on society and the environment wherever they occur (UNEP 2022). This idea of holistic impact management is also central to many African governments' sustainability initiatives, such as their commitments to net-zero emissions and the Nigeria Energy Transition Plan (NETP). NETP, in particular, argues that:

> "…bold action to limit the impacts of climate change must be undertaken urgently. At the same time, in light of a rapidly rising population, accelerated development is needed to ensure improved living conditions for millions of Nigerians." (NETP: 2022).

Apparently, Nigeria's commitment to net-zero emissions and the NETP reflect a holistic impact management that covers the gamut of Environmental, Social, and Governance (ESG) issues. Notwithstanding, sustainability transitions are often framed as solely climate-or green-related issues. This can only be a partial articulation of the quest for sustainability.

It can therefore be inferred that both COP and Africa's sustainability initiatives signal that focusing on holistic impact management, rooted in a deep organisational culture and philosophy, is a much more essential organisational strategy than superficially and 'performatively' chasing sustainability transition targets. This means that any organisation that focuses on holistic impact management, in line with the dominant principles underpinning the market economy and society, would be better prepared to make the most of the sustainability transition. This is particularly important for financial institutions in their operations and lending activities in emerging markets.

The idea of holistic impact is also core to the Africapitalism movement, which focuses on how the private sector can contribute to

[1] An earlier version of this chapter titled "Financing sustainable energy transitions in Africa" was presented at the 2022 Bankers' Committee Retreat in Lagos, Nigeria.

sustainable development. It is an idea that has its origin from Africa and can be seen as one of the truly indigenous contributions to the global discourse on business and society.

This chapter, therefore, draws on the holistic impact management principle in the context of the market economy, and particularly on Africapitalism, to explore its implications for financing the sustainable energy transition in Africa, particularly for financial institutions involved. It is expected to raise fundamental questions that will help financial institutions develop much more robust, principle-based strategies to manage risks better and explore the opportunities presented by the sustainability transition.

The chapter starts with putting Africapitalism in context and before applying it to sustainable energy transition and finance in Africa. The chapter then contends that financial institutions should move beyond compliance-oriented approaches and adopt organizational cultures rooted in long-term value creation, inclusion, and shared prosperity. Such an approach aligns sustainable finance with Africa's development aspirations, including the African Union's Agenda 2063, and positions Africapitalism as a normative and practical framework for designing financial systems capable of delivering a just, contextually relevant, and inclusive sustainability transition.

2. *What is Africapitalism?*

Capitalism has not always worked for the interest of society as it should. Hence, there are many efforts to realign capitalism with societal needs (e.g., inclusive capitalism, progressive capitalism, responsible capitalism, sustainable capitalism, etc.). Arguably, Africapitalism draws from these progressive contemporary movements as the private sector's commitment to the socio-economic development of Africa (Elumelu 2012). According to Amaeshi and Idemudia (2015), Africapitalism, as an idea and a discourse, is underpinned by values, which reflect the spirit of long-termism and inclusion, such as the:

1. Sense of Progress and Prosperity: the combination of financial profitability and social wealth.
2. Sense of Parity and Inclusion: the recognition that the benefits of progress and prosperity need to be equitably shared.

3. Sense of Peace and Harmony: the view that the simultaneous pursuit of profit and social wealth is primarily a quest for balance, harmony, and peace – "… a process of achieving human development … in an inclusive, connected, equitable, prudent, and secure manner" (Gladwin et al. 1995: 878).
4. Sense of Place and Belonging: an understanding of Africa primarily as a place (and not necessarily as a market) with meaning and value to people's identities; a form of entrepreneurship, which seeks to meet Africa where the continent is in its development path.

As an idea, Africapitalism is arguably an imaginative articulation of a possible face of capitalism in Africa, which could be extended to other parts of the world. It is a discourse aimed at galvanising a movement that will ultimately change the practice of capitalism in Africa. Positioned as such, Africapitalism becomes an aspiration for Africa's renaissance – i.e., a force for change. It challenges the status quo – i.e., capitalism in Africa – which has not transformed Africa. The problem here is not necessarily the spirit of capitalism as the harbinger of human freedom and economic emancipation, but the inherited form of capitalism practised in Africa, which is often at variance with the continent's socio-economic development. This misalignment invariably creates lopsided outcomes like economic banditry, corruption, inequality, poverty, etc. that the Sustainable Development Goals (SDGs) seek to address in Africa. In that regard, Africapitalism is a call for the private sector in Africa, especially multinational enterprises, to contribute to the realisation of the SDGs by taking into account the continent's unique circumstances.

In sum, the quest for a sustainable energy transition in Africa should reflect the aspirations of Africans, as captured in the African Union (AU) Agenda 2063, as highlighted below.

1. A Prosperous Africa based on inclusive growth and sustainable development.
2. An integrated continent, politically united based on the ideals of Pan-Africanism and the vision of Africa's Renaissance.
3. An Africa of good governance, democracy, respect for human rights, justice and the rule of law.
4. A peaceful and secure Africa.

5. An Africa with a strong cultural identity, common heritage, values and ethics.
6. An Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children.
7. Africa as a strong, united, resilient, and influential global player and partner.

The AU Agenda 2063 (2015) also aligns closely with the principles of Africapitalism, as shown in the insert. Perhaps, this should offer food for thought to help finance the sustainable energy transition in Africa.

However, for this to happen, the sustainable energy transition should be seen as a paradigm rather than merely a compliance issue. In that regard, it requires an appropriate organisational culture. A sustainable organisational culture is more important than a tick-box approach to sustainable finance. It is about creating shared value – win-win outcomes for business and society. Framed as such, commitment to sustainability is a way of life, the how of "how we do business", guided by a sense of connectedness – the ability to see the whole picture and systems thinking; a sense of fairness, justice, and otherness – the ability to consciously and voluntarily minimise negative impacts and enhance positive impacts on others; innovation, creativity, and change – the ability to discover and adapt to new ways; and a sense of transparency and accountability – the ability to minimise information asymmetry through openness and good governance (Amaeshi/Ogbechie 2013).In that regard, commitment to sustainability is not primarily a strategy, but a lens through which strategy is crafted and implemented. It is first a mindset before being a strategy; otherwise, a sustainability strategy is, at best, hollow and unsustainable.

However, for genuine commitment to sustainability to succeed, the larger society must provide an enabling environment for it to thrive. For example, if a firm tries to reduce negative impacts, these efforts can be sustained only under certain conditions where there is a market for such improvements, NGOs help make standards visible, and governments have disclosure rules that make it uncompetitive for competitors to behave otherwise. In such an enabling environment, a commitment to sustainability allows firms and managers to adjust their practices to gain a competitive advantage and long-term sustainability.

This is at the heart of the Africapitalism movement and is embedded in its sense of progress and prosperity.

3. Sustainable Energy Transition – Issues and Financing

Globally, there is an increased emphasis on moving towards net-zero carbon emissions. Green transition and energy security have never been as pressing as they are today. Climate change and political uncertainties heighten anxieties. Africa is the least contributor to global warming, responsible for less than 3% of the world's energy-related carbon dioxide (CO_2) emissions to date and has the lowest emissions per capita of any region (Wang et al. 2024). However, Africa is already bearing the brunt of climate change more than any other region. Africans are disproportionately experiencing the negative effects of climate change, including water stress, reduced food production, more frequent extreme weather events, and slower economic growth – all of which are fuelling mass migration and regional instability (Alex-Oke et al. 2025; Wang et al. 2024).

Africa has large reserves of coal, oil, and gas, yet it is energy poor. Although Africa is equally rich in renewable energy sources, it lacks the capabilities and technologies to transition from non-renewable to renewable energy (Panja et al. 2025; Alex-Oke et al. 2025). This scenario puts many African countries in a dilemma – i.e., using what they have to address their urgent energy needs, risking further global warming, or remaining in abject energy poverty whilst transitioning to renewable energy. This is an uncomfortable situation for both political and business leaders in Africa. Nonetheless, they need to find creative ways of addressing the energy dilemma.

Obviously, the consequences of climate change for the continent necessitate mitigation and adaptation approaches rooted in sound principles of economic transition. As such, several African countries have developed or are developing energy transition plans to advance their decarbonisation commitments and achieve sustainable socio-economic outcomes. For example, since Nigeria's commitment at COP26 to achieve net-zero by 2060, the country has followed up on this commitment by passing the 2021 Climate Change Act and developing an Energy Transition Plan, launched in August 2022 (NETP 2022). The plan, which considers sectors such as power, oil & gas, and transport,

as well as industries such as cement and mining, is expected to galvanise smart technologies, including solar products, from a financing and investment perspective to enhance new markets, decarbonisation, and job creation. The estimated reduction in emissions through Nigeria's Energy Transition Plan (2022) is 65%, with 100 million people expected to be lifted out of poverty.

To integrate energy transition thinking from a just-transition perspective, governments and businesses in Africa will need to understand what is expected of them, particularly in relation to the continent's energy transition plan. Africa receives less than two per cent of all investments in renewable energy (Alex-Oke et al. 2025). One of the reasons we do not see the scale-up of assets in the green transition in Africa is the lack of bankable projects that can attract or access adequate financing on the continent. But to do this, we first need to articulate what a sustainable energy transition means or should look like from where many Africans sit. It is also important to understand the roles of governments, civil society organisations, and the private sector in realising the vision of a sustainable energy transition in Africa, which is rich in oil and gas.

To address these issues effectively, it will be necessary to bring together governments, relevant civil society organisations, and companies in the following sectors (Climate Policy Initiative 2023): oil & gas, power, other extractive industries such as cement and mining, manufacturing firms, the financial services sector, financial services regulators, energy sector regulators, and development finance institutions for meaningful and constructive engagement. It is also important to reflect on how sustainable finance and investment (SFI) in Africa can contribute to this.

Sustainable Finance and Investment (SFI) is an emerging field of practice and research. As with any evolving field, it has become all things to all people. To some, it is about integrating ESG criteria into investment and funding decisions (Chiu 2025). To others, it is about financing the SDGs (i.e., financing sustainability) (Iacobuţă et al. 2022). It presents both risks and opportunities.

Despite the emphasis on ESG criteria, SFI has been excessively skewed towards environmental and green issues – especially climate-related ones (Babic 2024)[2]. This has become the dominant framing of

[2] Also see Climate Policy Initiative (2023).

SFI in the global north, apparently at the expense of social and governance criteria.

A broader view of SFI links it to the governance of externalities. It argues that SFI can be better understood by focusing on its goal/purpose (i.e., its *raison d'être*) (Chen et al. 2026; Ziolo et al. 2019). This teleological perspective, which is sometimes taken for granted in the practice and theorisation of SFI, offers interesting ways to interrogate SFI. This view is at the heart of this essay.

To properly situate this essay, it is important to revisit the meaning and purpose of SFI and to appreciate them in the broader context of market governance. Markets often fail. As such, failure is inherently a natural part of markets. A failed market can be injurious to society and the natural environment. Market failure can be occasioned by externalities, information asymmetry, lack of competition, missing markets (or presence of public goods), as well as high inflation and unemployment. The presence of any of these factors makes it difficult for markets to function well. A well-functioning market is one that cumulatively minimises negative impacts on, and enhances, social welfare and the natural environment. A competitive market, for instance, arguably maximizes total social welfare.

Arguably, SFI is a quest to correct market failures – in this case, the possible shortcomings of financial markets. This is the mainstream view in economics, which seems largely ignored or taken for granted in both the theorisation and practice of SFI, especially by policy, market, and corporate actors (Dimmelmeier 2023). The idea here is to revisit SFI as a market correction and governance mechanism. The essence of SFI is, therefore, to minimise negative and enhance positive impacts on society and the natural environment.

In that regard, SFI can be understood as a practice that aligns individual and organisational financial capabilities, resources, and goals with societal needs[3]. This can be done through self-governance (reflexive governance) or what is often referred to as soft regulation (Papenfuß/Schmidt 2021). The latter approach seems very dominant in the framing of SFI – either as some ethical agenda or as risks and opportunities. This framing tends to prioritise the interests of financial insti-

[3] Societal needs here are extensive and include the financial success of individuals and organizations as well as the protection, retention, and enhancement of life-enabling environmental, ecological, and planetary support systems.

tutions above other interests (e.g., society and natural environment) and position sustainability as a voluntary and optional activity – i.e., something to engage with as long as it speaks to the profitability of the engaging financial institutions either by saving them from some risks or creating business opportunities (Cho et al. 2026). This thinking appears to be at the heart of the current emphasis on Environmental, Social, and Governance (ESG) factors in financial markets.

Nonetheless, SFI is rarely framed as a market failure or market correction issue (Dimmelmeier 2023, 2024). The absence of this narrative is rather curious. First, the inability to frame it as such, risks mischaracterisation, misdiagnosis, and mistreatment. Secondly, it distracts the practice from benefiting from the well-established literature on market governance in its various forms – from soft to hard, and from formal to informal (i.e., social pressures) governance strategies and instruments.

Based on the foregoing, it could be argued that there is a need to embed SFI discourse in mainstream economic thinking of markets, market failure and efficiency, as well as the broader issues of market governance. In that regard, any SFI policy or practice should address the various dominant sources of market failure (e.g., externalities, information asymmetry, lack of competition, missing markets or the presence of public goods as well as high inflation and unemployment). This thinking can inform the analysis of the current policies and frameworks of sustainable finance and investment.

4. Implications for Financing the Energy Transition in Africa

Production and consumption, like supply and demand, are intrinsically intertwined. And together they constitute the market economy. So, the emphasis on sustainable energy transition as a catalyst for production can only be better appreciated from a broader market perspective, as an arena for exchangeable production and consumption. As such, financing the sustainable energy transition for the production economy inevitably invites a conversation about sustainable finance from a market-economy perspective. This essay, therefore, draws inspiration from this angle and argues that financing sustainable energy transition in Africa should align with the tenets of the market economy and society, where efficient markets are expected to produce low negative external-

ities, high employment, low inflation, as well as information asymmetry, and minimise the existence of missing markets.

However, Africa is often a recipient of business and management ideas developed outside the continent (Kolk and Rivera-Santos 2018; Ibeh et al. 2022). These ideas are never neutral. They embody the realities and experiences of their contexts. While some of these ideas are useful and appropriate to Africa's needs, others fall short of these ideals because they reflect unfamiliar worldviews and make inadequate assumptions that fail to capture Africa's peculiarities and uniqueness. A clear example of this mismatch is the current preoccupation of Western business and management scholarship with sustainability narrowly articulated as climate change. Africa's contribution to global climate change, for instance, is minimal given the low industrialisation of the continent. Yet African businesses and organisations are often bombarded with sustainability frameworks and demands from the West and the Global North (Abdulai et al. 2020). This is obviously problematic, as businesses and organisations in Africa struggle to meet these demands, which do not make good sense to them. However, this does not negate the negative impacts of climate change on Africa, which means the continent needs to invest more in adaptation and devise new ways of doing things. This is obviously an opportunity to champion new business models and create new templates for business and capitalism at large.

Therefore, as an apparent latecomer to post-colonial capitalism, Africa has a clean slate to craft a responsible, sustainable form of capitalism, unlike many Western capitalist societies. In other words, Africa can lead the way in reimaging and practising capitalism, which other regions of the world can adopt. In this regard, Africa offers space for a social experiment. This sense of experiment and exploration is at the heart of Africapitalism, which emphasises the need for business models in Africa to reflect progress and prosperity, parity and inclusion, peace and harmony, and place and belonging (Amaeshi/Idemudia 2015). The Africapitalism paradigm affords Africa a rare opportunity to reimagine the relationship between business and society.

This means that the pursuit of sustainable energy transition should reflect African realities. It should be fit for purpose. One major area to consider is the implications of the sustainable energy transition for unemployment and job creation. Energy poverty is still a scourge in Africa. What Africa cannot afford is a sustainable energy transition that is unjust, leaving many Africans behind.

As such, it is important to finance sustainable energy transition in ways that address energy poverty and the threatening challenge of high youth unemployment in Africa – i.e., the proverbial youth bulge. Youth unemployment is becoming an existential threat in Africa and one which should be at the centre of Africa's efforts towards sustainable development. Whilst conventional wisdom sees agriculture and industrialisation as solutions to unemployment, these options may not be the only solutions in a globalised, digital world, where the service economy has become very dominant. Moreover, the institutional and infrastructural enablers of agriculture and industrialisation that enabled employment are largely absent in Africa. As Africa leapfrogged the traditional cable-based telecoms infrastructure to participate in the mobile phone revolution, there may be an opportunity for the continent to creatively leapfrog both agricultural and industrialisation-based requirements to address the challenges of unemployment. This will require significant innovation and out-of-the-box thinking.

Pay-as-you-go solar financing models – such as those offered by M-KOPA[4] and d.light[5], blend mobile-money microfinance with DFI and green-bond capital to distribute off-grid solar directly to households, generating employment concentrated in sales, installation, and technical support roles rather than in manufacturing or farming. Nigeria's Solar Power Naija programme[6] offers a domestic parallel, channelling Central Bank-backed financing into solar mini-grids while deliberately recruiting and training youth as installation technicians. Both illustrate how sustainable energy finance can be structured to create service-based employment pathways that sidestep the traditional agriculture-industrialisation sequence entirely.

However, for Africa to participate in the new energy economy, it is important to develop the necessary technological capabilities. Currently, Africa is mainly seen as a source of raw materials and natural resources to power the new energy economy. At the moment, most technological innovations are happening outside Africa. There is a need to finance the sustainable energy transition to help Africa build the human capital and technological capabilities needed to avoid overreliance on imported technologies. If this risk is not addressed, it will only lock Africa

[4] www.m-kopa.com
[5] www.dlight.com
[6] http://spn.rea.gov.ng/

into a perpetual reliance on imported technologies and create new, dangerous dependencies.

This is where Africapitalism comes in as a new economic philosophy for Africa and a possible policy and practice framework. Unfortunately, due to weak market development and poor governance, Africa suffers from significant negative externalities, inflation, unemployment, information asymmetry, and the absence of sustainable energy markets. As such, the pursuit of sustainable energy transition through the market system in Africa should address such concerns because weak institutions, poor governance, and their attendant consequences, such as high youth unemployment and dearth of technological capability, which, amongst others, stand in the way of realising a sustainable energy transition in and for Africa in a just fashion of leaving no one behind. In short, the quest for sustainable energy transition in Africa should work for Africans by addressing pressing African priorities. To do this, it is suggested that pursuing a sustainable energy transition in Africa can draw inspiration from emerging homegrown economic organisation ideas, such as Africapitalism and the AU Agenda 2063, to strengthen this position further.

5. Conclusion

Africapitalism is a useful lens to understand sustainable finance in Africa because making finance sustainable, or financing sustainability, is better understood when linked to the fundamental principles of markets. Markets are not just spaces for transactions and exchanges. They are also moral spaces. This is very germane in the African context. This means that for an actor to be effective here, sustainability should go beyond box-ticking and become a way of life. In other words, sustainability is a culture, and organisational culture matters in its pursuit. As such, financial institutions interested in Africa should align with this way of thinking, and the Africapitalism framework can help them do so. Although Africapitalism has largely been presented as a theory of action, the focus on sustainable finance and energy transition in Africa has offered a space to explore its ability to inform and shape business and management practices.

Appendix

AU Agenda 2063 Mapped on the Principles of Africapitalism

Sense of Progress and Prosperity

1. A prosperous Africa based on inclusive growth and sustainable development
6. An Africa, whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children

Sense of Parity

3. An Africa of good governance, democracy, respect for human rights, justice and the rule of law
5. An Africa with a strong cultural identity, common heritage, values and ethics

Sense of Peace and Harmony

4. A peaceful and secure Africa
7. Africa as a strong, united, resilient and influential global player and partner

Sense of Place and Belonging

2. An integrated continent, politically united based on the ideals of Pan-Africanism and the vision of Africa's Renaissance
5. An Africa with a strong cultural identity, common heritage, values and ethics

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Sustainable Finance in the Regional Economy: Institutional Conflict and Compromise

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Abstract

Sustainable finance became a focal strategy within the European Green Deal and faced massive political backlash. Its main antagonists have been industrial associations and family-owned firms mourning an "overload of bureaucracy". This chapter investigates the institutional conflict and compromises around sustainable finance based on a field study consisting of participant observations, focus groups and problem-centered interviews in the industrial region of East Westphalia-Lippe in North-West Germany. The analysis shows how the sustainable finance conflict is connected to the institutional logic of market transparency experienced as distant and aggregate without direct consequences for sustainable transformation (and its financing). The study shows that bureaucracy is not a problem, per se. Sustainability-related data work tends to be accepted when linked to concrete technical processes and competencies of transformation, as well as green business models. Of importance for regional green industrial transformation process are public sector promotional banks and funding agencies, consulting public sector agencies, as well as technical evaluation organizations, such as the TÜV in Germany, which so far did not play a central role in the sustainable finance architecture.

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1. Introduction

Sustainable finance, as a policy instrument, took form in the aftermath of the Paris Agreement 2015. The European Union shortly after published its Sustainable Finance Action Plan for a greener and cleaner economy as a part of the Capital Markets Union's efforts "to connect finance with the specific needs of the European economy to the benefit of the planet and our society". Valdis Dombrovskis, the Vice-President responsible for Financial Stability, Financial Services and Capital Markets Union announced:

> "We are today presenting our plans for a far-reaching reform that could set the global benchmark for sustainable finance. Only with the help of the financial sector can we fill the annual €180 billion funding gap to reach our climate and energy targets. This will help to support a sustainable future for generations to come." (EU Commission 2018).

Thereafter, several regulations have been put in place, such as the EU Green Bond Standard, the Sustainable Finance Disclosure Regulation (SFDR), the EU Taxonomy for sustainable economic activities, and the Corporate Sustainability Reporting Directive (CSRD), and later, the Voluntary Standards for Small and Medium-sized Enterprises (VSME). Small and medium-sized enterprises (SMEs) have been identified as "pivotal to Europe's sustainability transition, estimated to contribute over 50% of the EU's GDP and more than 63% of enterprise CO_2- and broader GHG emissions" (EU Platform on Sustainable Finance 2025) and they became a focus of the market transparency-oriented regulatory endeavor of sustainable finance to make them gain from the emerging sustainable investment market.

In 2025, the sustainable finance agenda faced a severe political backlash (Fontan 2026). At the European level, the so-called "Omnibus reform process" started with the aim of aligning and reducing sustainable data requests from the CSRD, the SFRD, as well as the proposed (not yet implemented) European Corporate Sustainability Due Diligence Directive (CSDDD). The European Commission promised to simplify and harmonize data communication across economic value chains. In Germany, a similar reform process characterized by three steps forward and two steps back was initiated. Here, the national version of the CSDDD, the German Act on Corporate Due Diligence in

Supply Chains, implemented in January 2023, was put on hold by the government of Chancellor Friedrich Merz. It was a reaction to the bureaucracy criticism launched by German industrial associations depicting ESG reporting policies as a "bureaucracy monster" (see e.g. the poster campaign of the German association of the corrugated cardboard industry).

This analysis sheds light onto the dynamics of this political backlash. Instead of analyzing sustainable finance from a capital market perspective, the chapter follows a bottom-up approach, drawing on a regional field study. The industrial region of East Westphalia-Lippe is considered an industrial stronghold, with lots of small and medium-sized, manager-owned and family-owned manufacturing enterprises. The region features elements of an economic system of "flexible specialization" (Piore/Sabel 1984) or "diversified quality production" (Streeck 1991; Sorge/Streeck 2018) and could be captured as a "regional innovation system" (Braczyk et al. 2004). In such economies, industrial networks, knowledge exchange and collaboration play an important role, supported by the institutions of coordinated market capitalism (Hall/Soskice 2001). The high level of regional coordination is supported by a dense network of associations (Streeck/Schmitter 1985), industry networks, regional banks (Flögel/Hejnová 2024), and an industry-oriented educational system.

The qualitative field study comprises several participant observations and conversations conducted between 2023 and 2026. This period was characterized by heightened sustainability regulation and ambition, primarily due to the German Supply Chain Act coming into force, and European legislation pending, such as the Taxonomy for Sustainable Investments. The empirical study consists of focus groups (Barbour/Kitzinger 1999) with participants from industrial firms and the regional financial sector, semi-structured problem-centered interviews (Witzel/Reiter 2012) at family-owned businesses, as well as the regional and national ecosystem of sustainable finance. Additionally, the research project consists of participant observations at regional workshops for industrial firms (SMEs in particular) where they could learn how to account for carbon and report on their sustainability performance, as well as the role sustainable finance would play for them in the future.

The conceptual framework of this study links insights from comparative political economy on economic institutional systems (e.g. on the financialization of the German banking system, Vitols 2004, and

the declining relevance of banks for industrial firms, Braun/Deeg 2020) with the institutional logics perspective (Friedland/Alford 1991) and the convention school of economics (Boltanski/Thévenot 2006), which both focus on the concomitance of institutional logics or economic conventions within economic fields. Of particular importance are the analytical notions of institutional contradiction and conflict, as well as the formation of compromise between diverse evaluative formats (Boltanski/Thévenot 2006). The study shows that the Green Deal political backlash grounds in a confrontation of institutional logics and/or formats of evaluation of sustainable finance.

The chapter is structured as follows: It begins by presenting the theoretical perspective of institutional conflict and contradiction (2.). This section outlines different strands of institutional theory with a focus on the political economy of sustainable finance, and the political economy of the German industrial system, to understand the institutional conflicts and compromises of sustainable finance in the regional economy. Then (3.), the chapter introduces the qualitative research design of the regional field study in East Westphalia-Lippe conducted between 2023 and 2026, consisting of participant observations, focus groups, and problem-centered interviews with regional protagonists of sustainable finance. The results of this study (4.) are presented alongside the analytical lens of institutional conflict (4.1) and institutional compromise (4.2).

The results section, first, identifies how regional protagonists of sustainable finance draw a distinction between two modes of sustainable evaluation and transformation. It reconstructs two institutional logics of sustainable finance from the material: the logic of transparency and financial reporting vs. the logic of production. The section, secondly, presents the moments of compromise, where regional protagonists of sustainable finance try to find the compromising sweet spots of aligning the sustainable finance instruments with their practices of production. It shows how the regional protagonists of sustainable finance struggle linking sustainable data management with meaningful sustainable activities. The chapter concludes (5.) that success of sustainable finance will depend on a more grounded and technical understanding of sustainability standards, and an acknowledgement that financial actors are currently not in a good position to help industrial actors to transform. A meaningful evaluation of sustainability performance depends on an understanding of the complexities of in-

dustrial products and processes. The current crisis of sustainability politics is related to the aggregate and distant form of financial evaluation (see also von Gehlen, this volume), which industrial actors do not experience as linked to their actual problems and challenges of transformation. The results of the qualitative field study indicate that the financial system, in its current financialized form, lacks the capacity and industrial influence needed. An alternative would lie in creating and supporting the demand for green business models through green industrial policies and public sector purchasing programs. Those would help firms and their financiers to create a market for green products and profits. In its current form, sustainable finance creates costs and lacks the demand for green business models.

2. Institutional Contradictions and Compromise

> "Institutional contradictions are the bases of the most important political conflicts in our society; it is through these politics that the institutional structure of society is transformed. A key task of social analysis is to understand those contradictions and to specify the conditions under which they shape organizational and individual action" (Friedland/Alford 1991: 256).

The analytical perspective of this study is based on theories that apply concepts of institutional plurality and contradiction, namely comparative political economy, the institutional logics perspective and the convention school of economics. These theories have been formed in the historical phase of the 1980s/1990s, when questions of how to organize an economy arose anew. During the historical phase of Neoliberalism (Davies 2014) political discussions were dominated by market-oriented ideas such as liberalization, privatization, deregulation, and sustainable market mechanisms (Knoll 2019). These ideas stood in contrast to concepts of an interventionist state, command-and-control solutions, active public sector steering, and "Daseinsvorsorge" (état providence in French, public provisioning in English). It was during this period that comparative political economy scholarship and studies on the plurality of economic systems proliferated. Notable examples include the regulation school of economics (Aglietta 1979; Boyer/Saillard 2002), business systems research (Whitley 1999) and varieties of capitalism (Hall/Soskice 2001). These scholars assume that the forms

of regulating the economy, the financial system, the education and skill development schemes, as well as collective bargaining and wage structures intertwine and lead to different versions of economic growth.

In the same period, in France (Boltanski/Thévenot 1989) and little later in the US (Friedland/Alford 1991) and Canada (Thornton et al. 2012), approaches emerged that argue for a concomitant plurality of economic conventions or institutional logics within economic constellations. They both offer an analytical framework to study the concurrence of economic conventions or institutional logics *within the same* institutional field, national economy, or firm and organization. The North American version of institutional logics emphasizes the legitimation and the stability of institutional logics within certain contexts, whereas the French version of economic conventions focusses more on the practical and evaluative competencies of actors to solve situational ambiguities (Boltanski/Thévenot 1999). It describes processes of social change as an endless cycle of critique, justification, and compromise (Boltanski/Thévenot 2006). People strive to find common good solutions within plural institutional situations. The compromise is a form, where multiple versions of a common good (e.g. the market, the civic, the industrial, etc.) become intertwined:

> "In a compromise, people maintain an intentional proclivity towards the common good by cooperating to keep present beings relevant in different worlds, without trying to clarify the principle upon which their agreement is grounded. […] But compromises are easy to denounce. […] The reference, for example, to workers' rights is a compromise between the civic world (where citizens have rights) and the industrial one (where the workers are relevant and worthy as opposed to the idle ones). The rights of persons as citizens in a civic world are specified in relation to their participation in the industrial one. These weak argumentative constructions (since their putting together will not survive a consistency test) can be strengthened by their objectification into objects or institutions which are made up of things relevant within the different worlds that are associated through the compromise (as in France, for instance, the Conseil économique et social, which links together in an objectified institution elements from the civic, the industrial and, even, the domestic worlds)" (Boltanski/Thévenot 1999: 374-375).

Finding a compromise and stabilizing it requires more than just words and sensemaking. It requires rebuilding the institutional world, its

actors and evaluative formats, and investing into structures that will change institutional/economic systems over time.

In France, in particular, there is a closer connection between the more macro-oriented regulation school, and the more meso and micro-level conventions school of economics (Favereau/Lazega 2002). Robert Salais and Micheal Storper (1992), for example, develop the worlds of production-approach, which allows to classify production regimes alongside the nature of the product (dedicated vs. standardized) as well as the nature of the market (predictable vs. unpredictable). For Storper and Salais, economic conventions need to pass "tests of coherence" (Salais/Storper 1992: 183) and its elements are thus not easily transferable from one world to another. In their typology, the "interpersonal world of production" allows dedicated products under conditions of unpredictable markets in which firms need to remain flexible and adaptive. Custom products are tailored to specific clients and coordination relies on personal trust, networks, local reputation, and tacit knowledge. The interpersonal world of production in Storper and Salais's work is guaranteed by a situational state. The convention of the situated state (e.g. Germany) creates the institutional arena and infrastructure for negotiation (e.g., between unions, business associations, and local networks). It acts as a mediator for coordination, forcing localized, cooperative forms of problem-solving.

The interpersonal world of production is similar to the regime of diversified quality production identified by Wolfgang Streeck in the 1990s (Streeck 1991). More recent studies emphasis how this system has changed in the last decades. For example: to cope with price pressure from world markets, firms did implement forms of modular standardization into the system of flexible and dedicated quality production (Sorge/Streeck 2018). Political economy scholars further argue that the export-led growth model of Germany was supported by a decline of collective wage bargaining (Baccaro/Benassi 2017) and conservative welfare state reforms putting price pressure down on workers (Hassel/Di Carlo 2025). This allowed companies to become more independent from banks (Braun/Deeg 2020), and to cope with the changes in the financial system, which developed from more bank-based towards more market-based forms at the time (Vitols 2004). German firms count as much less financialized than firms in other countries (Faust/Kädtler 2019).

In the last decades, market-based finance became the standard model in Europe's vision of a Capital Market Union (Braun et al. 2018). The

comparative advantages of bank-based finance (e.g. long-term stability, steady company growth, regional firm-bank-relationships) for a system of diversified quality production, such as Germany, were largely overlooked by these policies. Market-based approaches to financial market stability became a regulatory standard, and internal (highly mathematized) risk management and due diligence became the dominant approach to financial market stability (Baud/Chiapello 2017; Coombs/Van der Heide 2020). This change was experienced as a form of "aporetic financialization" (Fytros 2021) and a severe intensification and granularization of data work (Knoll 2022), which is today – in principle or form –, applied to govern sustainability (Maechler 2023).

Sustainable finance in the European Union aims at solving the societal task of achieving a climate-friendly, green, and socially inclusive transformation of the economy by means of the financial market (Mertens/Van der Zwan 2026). It acts on the assumption that financial actors should account not only for market risks but also for climate risks – recognizing that climate risks are becoming market risks – and, by doing so, invest in the environmentally and climate-friendly transition of the economy (Duterme 2024). It is an open question, whether and how this market transparancy approach reaches the industrial economy, since German firms are less dependent on external capital market financing (Braun/Deeg 2020), and small and medium-sized companies typically funding their sustainable investments through internal cash flows from operating profits, traditional bank loans, and public sector subsidies (Rossmann et al. 2026).

How firms experience the emerging sustainable finance regime, is not through additional sources for financing (most probably), but rather through sustainable data work stemming from the emerging "ESG information infrastructure" (Dimmelmeier 2024) and sustainable accounting requirements (Maechler 2023). The sustainable finance framework works by asking larger firms and banks to disclose data on their sustainability performance, which includes the necessity to gather data from their suppliers or investees. This regulatory form differs from the institutional logic of state bureaucracy, Friedland and Alford (1991) had in mind (defined by hierarchical command, official rules, and legal administrative control and execution). The "bodies that draw up standards and control their enforcement […] constitute a new kind of private government that contrasts with the public government of a State" (Cheyns/Thévenot 2019: 7). The governance regime of due diligence

and transparency works through mechanisms of "responsibilization" (Ormond 2015) and self-control. Firms are supposed to control their own sustainable performance and those of their business partners based on sustainable information made public. Consequently, data requests trickle down industrial value chains, where they also land on the desks of small and micro firms not directly regulated (Rossmann et al. 2026). In a classic more centralized state bureaucracy of a command-and-control type, smaller firms are (or can be) shielded from unproportional regulation. In the market-led governance regime of sustainable finance, all market actors are potential addressees of an emerging and evolving ESG information infrastructure.

We will now turn to the institutional contradictions and compromises of sustainable finance within the regional economy, based on a regional field study.

3. Research Design: Regional Field Study

This study examines institutional logics, their conflicts, institutional contradictions, and attempts at compromise through a regional field study. The introduction of sustainable finance into the industrial region of East Westphalia-Lippe has created new arenas for dialogue and sense-making. Several of these discursive arenas have been studied in the research project, ranging from seven online webinars and nine on-site workshops between April 2023 and October 2024, as well as four focus groups (Barbour/Kitzinger 1999) conducted by the ClimFiSoc-research project (table 1). The discursive arenas studied in this project typically involve a diverse set of actors, such as industrial association representatives, public and/or sector sustainability consultants, representatives of financial institutions and (public sector, and promotional) banks, as well as representatives of the firms these workshops are designed to help and inform. Focus groups can be used to study organizational change and conflicts within managerial and organizational settings (Barbour 1999). In this project, they were designed to understand what happens when representatives of the financial system and from the industry discuss the relevance and requirements of sustainable finance.

Table 1: Regional focus groups (own composition)

Focus group	Partici-pants	Profile of participants	Date
FG 1	3	▪ Project manager, mechanical engineering SME ▪ Sustainability team leader, mechanical engineering stock company ▪ Logistics SME, sustainability manager ▪ Industrial network representative	26.06.2023
FG 2	8	▪ Corporate customer manager, promotional bank ▪ Managing owner, tool manufacturing SME 2 ▪ Sustainability consultant, public agency ▪ Foreign facility manager, system and plant engineering SME 1 ▪ Trainee, system and plant engineering SME 1 ▪ Managing director, strategy consulting firm ▪ Project manager, regional industry network ▪ Sustainability manager, logistics SME	25.09.2023
FG 3	6	▪ Sustainability consultant, public sector agency ▪ Sales representative, industrial finance/leasing company ▪ Managing owner, tool manufacturing SME 2 ▪ Head of controlling, mechanical engineering SME A ▪ Project manager, mechanical engineering SME B ▪ Managing owner, mechanical engineering SME C	06.11.2023
FG 4	7	▪ Head of corporate client advisory, public sector bank ▪ Corporate customer advisor, public sector bank ▪ Specialist sustainability services consultant, auditing firm ▪ Managing owner, tool manufacturing SME 2 ▪ Managing owner, system and plant engineering SME 1 ▪ Sustainability manager, logistics SME ▪ Consultant, tax advisor	11.12.2023

A second set of data consists of problem-centered interviews (Witzel/ Reiter 2012) from the regional and national ecosystem accompanying SMEs in the emerging sustainable finance arena (table 2). A third set of data consists of problem-centered interviews with six small and medium sized, and two larger family-owned companies from diverse manufacturing industries (table 3). Two of the SMEs interviewed were also participants of the focus groups (SME 1 and 2).

Table 2: Sustainable finance ecosystem interviews (own composition)

Ecosystem interviews	**Organization**	**Professional profile**	**Date**
Eco 1	National industry association	SME sustainable finance policy advisor	14.11.2023
Eco 2	Public sector agency	Sustainability project manager	05.04.2024
		Subsidies program manager	
Eco 3	National sustainable finance standard setter	Standard setting manager	26.04.2024
Eco 4	Private credit rating agency	Head of sustainability	02.09.2024
Eco 5	Industrial bank/leasing	Senior sales consultant	08.01.2024
Eco 6	Regional savings bank	Corporate client consultant	18.01.2024
Eco 7	Regional savings bank	Head of corporate client	30.08.2024
		Sustainability and public sector subsidies manager	

Table 3: Company interviews (own composition)

Company	Industrial sector	Position	Date
SME 1	Mechanical engineering, system and plant engineering	Managing owner	15.12.2023
		Purchasing manager	19.1.2024
SME 2	Mechanical engineering, tool manufacturing	Managing owner	5.2.2024
SME 3	Polymer processing, kitchen industry	Managing owner	24.3.2024 19.2.2025
SME 4	Mechanical engineering, furniture industry	Managing owner	17.2.2025
SME 5	Mechanical engineering, packaging industry	Sustainability project manager	13.3.2025
SME 6	Mechanical engineering, food industry	Managing director	11.1.2024
			8.4.2026
Large 1	Mechanical engineering, heat pumps	Sustainability manager	5.3.2024
Large 2	Electrical engineering	Sustainability manager	26.3.2024
		Product engineer	

The problem-centered interviews aim to inductively reconstruct practical perspectives and problematizations from the field. Each interview began with a narrative stimulus regarding the firm's or organization's sustainability position, followed by three key topics addressed openly throughout the interview: sustainability-related actors and cooperations, tools and instruments, and financing of sustainable investments. The semi-structured format allowed participants to share their perspectives, narratives, and spontaneous insights. The ecosystem interview guides were adjusted as needed.

For qualitative interpretation, the focus groups and interviews were transcribed verbatim and coded using MAXQDA. Interview and focus group quotes have been translated from German into English conveying the intended meaning rather than performing a literal, word-for-word translation. The analysis in this chapter centers on a core analytical category of this study: the antagonism between the institutional logic of market transparency and the institutional logic of production.

To explore this, theoretical concepts from the literature – such as the institutional logics perspective, the convention school of economics, and comparative political economy – are employed as sensitizing concepts (Blumer 1954). These concepts help to organize and interpret the recurring antagonism between distinct modes and approaches to sustainability. Examples include the in vivo codes "theoretical approach" (SME 5) and "template-like thinking" (Eco 2), which are used to describe and make sense of sustainable finance as understood by regional protagonists (section 4.1). These codes also relate to concepts from the literature, such as the emerging "ESG information infrastructure".

Section 4.2 shifts focus away from the conflict between logics and instead highlights the activities and endeavors to find common ground between a production-oriented logic and the schematic, abstract market-information-oriented logic. The struggle for compromise is not only theoretical but also empirically grounded in numerous attempts to establish common ground and meaningfully apply the new world of sustainability disclosure. Interestingly, during these moments of alignment, the evaluative format of information shifts toward a more technical form, moving away from financial market rationales. New protagonists enter the scene, such as the TÜV ("Technischer Überwachungsverein") in Germany, who have expertise in handling technical and industrial evaluation procedures.

4. The Institutional Logics of Sustainable Finance in the Regional Economy

The results section is structured as follows: First, the contradiction and conflict between the institutional logics of sustainable finance are analyzed. A decisive theme within the empirical material is the clear opposition between a logic of transparency and a logic of production (4.1). These results challenge the sustainable finance claim that data transparancy will easily transform into ecological transformations on the ground. Section 4.2, then, addresses the practical struggles of linking sustainable data management with meaningful sustainable activities at the firm level. What becomes clear through the lens of institutional logics is that *financial* evaluative capacities and practices are ill-prepared to govern *industrial* transformation. For these capacities to become effective in the future, a new institutional world would need to

emerge: a banking and reporting system specialized in technical sustainable transformation.

4.1 Conflicting Institutional Logics

An overarching theme within the empirical material of this study is a sharp distinction drawn between modes and ways of conducting sustainability as a practice. This section reconstructs these contrasting institutional logics: the institutional logic of transparency, set against an institutional logic of production. The following quote from a sustainability manager at an industrial packaging firm (SME 5) illustrates this point. The company adopted the Voluntary Reporting Standard for SMEs (VSME) and subsequently decided to pursue a more practical and product-related approach as a firm:

> "Let's look at it again from the SME perspective. We are now starting to think about how our product will be used in the future and whether it will still be used at all. That means, we are a packaging company, where, among other things […] plastic hoods are used to secure loads, and we're now simply asking ourselves: How will load securing be done in the future? Will plastic covers continue to be used? Will they perhaps be recycling plastic covers, or will they be covers that are self-dissolving, made from various other materials? Or will they be reusable covers, whatever form they may take? And that's actually more in line with our approach to sustainability, which is to say: We're doing this from a product perspective and not from this theoretical approach of calculating CO_2 values. Because calculating CO_2 values or PCF is something you can go over and simply describe as product characteristics. Absolutely right. But a more hands-on approach is, of course, the other approach, which is to look at how we can improve our product in terms of sustainability. How is our product viewed in terms of sustainability, how will it be used in the future, and how can we compete in the market, because sustainability is always going to play a major role." (SME 5)

Within this quote, a clear distinction is drawn between a "theoretical approach" associated with the sustainable finance data architecture, and a 'hands-on approach' associated with the material processes of production – which will remain important, as the interviewee mentions – also after the political backlash. SME 5 is a forerunner in the

sense that the company early on engaged in sustainable data reporting. The company came to conclude that a more practical and product-related approach to sustainability is a better way to proceed. This resembles the answers of the managing owner of SME 6, who in the interview engaged in lengthy explanations of the firm's practical and product-related sustainability measures, but when asked about sustainable data management and verification of his activities, he states: "Some things we do right away, because they sound good. And when it comes to official reporting requirements, I wait until we actually have to do it" (SME 6). Throughout our material, we see such an opposition between two distinct approaches to sustainability, which the field protagonists consider as conflicting.

A SME sustainability consultant, with years of experience in working with SMEs on their sustainable transformation, also mentions the importance of the *modus operandi* of sustainability. He mourns a "narrow framework" to sustainability of ESG information politics, and frames the sustainable finance approach as a "template-like way of thinking" ("schablonenhaftes Denken"):

> "Once again, things are always implemented strictly within this narrow framework. That doesn't make our lives any easier – it makes it immensely more difficult. That's the difficulty I have, but I don't know – I'm not the one with the perfect solution, but I just want to highlight what the difficulty actually is. And if you really think about this template-like way of thinking [schablonenhaftes Denken] – that everyone is just moving within their own narrow corridor and only setting out within that corridor." (Eco 2)

The notion "template-like thinking" indicates a critique of the epistemological ontology of information that isolates entities of measurement, not necessarily linked to the very practical problems and product complexities. The notion of a "narrow corridor" not only refers to the numerical and isolating units-approach of information, but also to a legislative standard plurality that comes together at the firm level. Finding out, how to develop a state-of-the-art documentation is considered difficult, as the regulatory landscape is experienced as undecided or misaligned.

Thus, the clean notion of "information" is somewhat misleading. In the industrial lifeworld, sustainable reporting is experienced as "a huge mess" by one SME managing-owner and as "administrative trash"

("Verwaltungsmüll") by another (FG 3). The heterogenous ESG information landscape is felt to be evolving in a misaligned (or corridor-like) way. Due diligence, reporting and measurement are connected to other legislative programmes of the Green Deal, and one repeating theme in the empirical field is that formats of commensuration and measurement are not well aligned at the level of the product:

> "The frustration is really intense. […] Someone told me that he's calculating CO_2 figures for the sustainability report, but then he has to calculate them differently for this CBAM regulation, and then there's a third – well, he actually gave me five examples where he has to recalculate things differently over and over again to comply with yet another law. So, there's the CSRD, CBAM, and also the Supply Chain Act. They don't really mesh very well, and I think that simply causes a lot of problems at the operational level, and then companies have to dig very, very deep into it." (Eco 2)

The Omnibus reform process, is, in parts, a reaction to such felt misalignment of regulations and formats of measurement. It remains an open question whether these problems will be resolved in the future, as the material product and branch levels are not addressed by the proposed ESG standard reforms.

Another source of uncertainty arises from the fact that the primary audience for emerging ESG information infrastructure is not the state or regulators, but the financial sector. There is a widespread perception that the financial sector is not yet adequately prepared to conduct accurate or meaningful evaluations. One of the large companies in our sample, regulated under CSRD disclosure rules, questions whether banks are competent entities to lead meaningful ESG assessments.

> "I saw some ranking of the top consulting firms for sustainability, and our bank was highly ranked […]. I have to say, I don't get it. […] They don't know anything about it; they haven't even looked into taxonomy at all. They can't even begin to grasp what it means for companies to assess their own economic activities in accordance with the taxonomy. We've turned this into a project group – basically, all departments are involved in some way – because this isn't even something I can just jot down on a single sheet of paper; they haven't even grappled with it. And then I just wonder: the business world, we expect everything from them, but they [the banks] are the ones who should also be providing support in green finance. Why

> are we doing this? Because the financial sector is a massive lever – they hold the lever in their hands but aren't engaging with it. Yeah, that's not going to work." (Large 2)

Banks might have been ill prepared or ill motivated (as expressed in the interview sequence), but it also might be the case that the reason for the felt unpreparedness of banks lies in the aggregate and distant evaluative format of financial evaluation. The sustainability manager feels that the company's banks were not able to help them assessing the "multi-cultural" qualities of their product, which might be difficult to resolve, more generally, within the evaluative regime of sustainability information.

> "Because this product is 'multicultural,' I can't really see where the added value is for water purification or environmental protection. After all, I can use this product to bypass and repair a tank in Russia. But I can also use it to connect an offshore wind farm in the North Sea. So, they didn't see this 'multicultural' aspect of our product – the challenge we're facing there – at all, and they weren't really able to offer us any help in that regard." (Large 2)

The sustainable finance data architecture is not prepared to deal with product-related evaluative ambiguities, like the ones expressed in the interview quote above. It handles isolated items of information rather than complex networks and knowledge problems associated with transformation. Supporting this interpretation, a SME sustainability project consultant explains in the following quote that the current ESG-related evaluation approach of the regional bank conflicts with the incommensurability of SME transformation processes. The notion of exact measurement and comparison was something that earlier practical transformation projects tended to avoid.

> "These ESG ratings lead the regional bank to conduct industry comparisons. We are constantly trying to explain CO_2 accounting to companies: there's no benchmarking, you can't compare yourselves, because a plastics manufacturing facility here is completely different from one three streets down. We're always trying to explain to them: you can compare years, you can compare measures, and you might even be able to compare investments to some extent – to include those as a basis for decision-making in the CO_2 assessment – but don't compare yourselves to another company. And that's exactly what the regional bank is actually encouraging right now through its ESG rating." (Eco 2)

The sustainable project consultant adds in the interview: "We need to talk about the things that really matter right now – namely, how we can create sustainable circularity – rather than getting bogged down once again in finger-pointing and nitpicking over legal technicalities" (Eco 2). Later in the interview, the project consultant adds:

> "If I have to deal with, say, 90 data points just in a single chapter of the CSRD, then I really don't feel like slipping back down to the big picture again – and that's what I mean when I say that sometimes I'm a little scared that we're all getting so tangled up with each other here that we end up losing sight of the concrete details again." (Eco 2)

The difference and distance between diverse modus operandi of sustainability is a dominant theme in the empirical field study. The legal technicalities and formats of reporting and evaluation are experienced as overwhelming and misaligned with concrete processes of transformation at the level of industrial production. From these interpretations, two institutional logics of sustainable finance can be identified: the institutional logic of financial transparency and information and the institutional logic of production (table 1).

Table 4: Institutional logics of sustainable finance (own composition)

Institutional logic	**Market transparency**	**Industrial production**
Financial system	Capital market, institutional investors	Own profits, equity (private investors), bank loan, public sector subsidies
Spatial formation	Global distance	Regional proximity
Format of evaluation	Financial reporting, Due diligence, aggregate	Material technicality and process, concrete
Modus of coordination	Comparison, ranking (exit)	Complexity, collaboration, negotiation (voice)
Epistemological ontology	Information (isolated items)	Knowledge (complex networks)

Said this, and emphasizing the difference and misalignment, the following section is about the trials and errors to find meaningful compromises between these different modus operandi of sustainable finance.

4.2 Struggling for Compromise – Finding a Path Within the Sustainable Finance Regime

Measuring and managing is nothing alien to industrial firms, per se. As such, measuring and managing sustainably could bring about fruitful insights and help firms to transform. The challenge for actors of industrial transformation is to find the sweet spot, where measuring is experienced as helpful – and thus bridging the distance between the distant and aggregate modus of ESG evaluation and a more hands-on approach to concrete industrial transformation processes. Such translation activities are of utter importance for regional transformation processes (Knoll et al. 2025), but they are frequently overseen in the ESG-related legislative discourse. In the following quote, the managing owner of SME 3 refers to the trials to find and built a SME-ready sustainability data architecture "in various working groups". The following quote from the post Omnibus phase indicates that the collective search for an adequate sustainable data regime is ongoing also within the SME lifeworld:

> "Well, I'm part of various working groups, and right now we're working on a sort of 'light' reporting standard for all these sustainability criteria. It's definitely something we're starting to look into because the topic is important to me, but I don't have that many resources to devote to it. That's why I'm definitely interested – if a manageable amount of data is requested, which the vast majority of companies can generate with little effort, then I think that's a good way to simply ensure comparability. But this […], where every customer sends a different questionnaire with 5,000 different data points – is nonsense; it doesn't benefit anyone, and it hasn't happened since the middle of last year. Or I think one or two customers still have something like that. And in some cases, we've even said: 'Nope, you're not getting an answer.' You can come visit us and see what we do. But we're not going to just throw out random waste and wastewater figures here – since we can't just pull those numbers out of thin air, we've naturally accumulated quite a few

> figures by now. But we told them: 'You'll have to pay us if you want those figures.' And that was the end of that." (SME 3, Int. 2)

The managing owner engages in regional working groups to identify and define an SME-ready data architecture. This process requires bottom-up coordination across industrial value chains and branches. It is beyond the scope of this study to determine how, or if, such initiatives are linked to European legislative processes. However, it is noteworthy that regional bottom-up coordination for sustainable data regimes is actively underway, led by some regional industry initiatives and industry associations.

An ongoing theme within the empirical data is the need to align numerical data work with the technical aspects of sustainable production. In the following quote from one of the focus groups, a sustainable transformation consultant shares a success story to illustrate how advanced digital sustainable data management facilitated a sustainable transformation at the firm level:

> "I recently helped oversee a project involving a plastic extruder, where the solution provider took a close look at the process parameters and examined the startup process. When I have to change over and start up the next production line day after day, I'm dealing with a co-extrusion process where I fuse several types of plastic together. Ultimately, we were able to optimize many aspects. This involves speed control, material consumption, as well as streaks and other quality issues that previously always led to scrap. By controlling the process parameters and feeding the data into the newly implemented energy management system, we were able to reduce scrap by two-thirds – solely through digitalization. And they're now also working on this – repeatedly with the toolmaker – on the topic of product development. They're now moving away from co-extrusion because – given everything that's melted together in the past, with multiple types of plastic fused together – that material can only be thermally recycled as scrap, and it cannot be recycled otherwise. So, they're shifting their focus to a single material, such as ABS, for example. We have to look at where there are opportunities and what makes economic sense from the company's perspective." (FG 3)

The success stories of sustainable data gathering in the regional field are technical and production related. They are rarely driven by financial reasoning. To rebuilt the sustainable finance data architecture in a

meaningful way, it would or should integrate much more technical and industrial branch-related knowledge. Such a process would require different types of actors (more technical and not financial), such as public sector inspection organizations like the TÜV ("Technischer Überwachungsverein") in Germany. The sustainability manager of a large company expects such organizations to become much more relevant in the future:

Sustainability manager:	"For now, there are a lot of providers – many claim they can do it – and things will sort themselves out. So, something like a TÜV […] – it's very likely that the question is: How does such an, um, institute or company establish itself? But once they've figured out their business model, they'll certainly cover the entire spectrum."
Interviewer:	"But we're not there yet, are we?"
Sustainability manager:	"We're not there yet. Well, I also – we've just had this here, for our Green Product – we wanted to have that project fully validated in comparison to others, with external validation. The institute for applied research handled that, and it went smoothly. We reached out to others here – […] I didn't even get an answer. So, it's really a matter of supply and demand. Then it's about finding a good one who actually has the capacity to take on the project themselves. But I also think that will take another three years. Then things will settle down."
Interviewer:	"But it's also interesting that the people who were able to help them – or you – at that time were, well, people with a technical background. Not accounting or finance, let's just say."
Sustainability manager:	"So, the institute for applied research, that's really great. Life-cycle assessment is absolutely scientific – it's based on science and technology."
Interviewer:	"What you need."
Sustainability manager:	"So, to be precise, to really say, 'Okay, what's the CO_2 value I'm starting with? What's the CO_2 equivalent?' How do you evaluate the process in terms of, for example: What assumptions have we made about the technical process? So, the question is, what am I putting in? What is the technical process like – since it's also energy-intensive – and what is the coating thickness of the material? Where I say, 'Yes, that's a standard for me.' So for me, we simply produce certain individual parts that go

> entirely through this technical process. I can't ignore this process – it's essential for the product in terms of CO_2 emissions – and I can't just say, 'Let's leave it out', that's not possible." (Large 2)

What the sustainability manager of a larger family-owned industrial firm states, is a lack of technical evaluation knowledge in the field of sustainable finance. To create meaningful sustainability data, different evaluative competencies would be necessary (see also the diagnosis of "competence green washing", Schuhmacher 2022). So far, the sustainability manager could not find adequate evaluative competencies in the market, but expects technical evaluation organizations, such as the TÜV, to be the ones that should or would step in in the future.

To become valuable and meaningful, sustainability and carbon measurement need to become better aligned with industrial processes. The current sustainable finance architecture, it seems, does not provide the adequate competencies for industrial product-related evaluations. The current bureaucracy critique that teared down the EU Green Deal is not necessarily directed to administration, per se, but to a more abstract and aggregate reporting form experienced as disconnected from actual industrial processes. The mentioning of "different questionnaire with 5,000 different data points" (SME 3), or "90 data points just in a single chapter of the CSRD" (Eco 2) expresses an experienced randomness and ill-connectedness of the established sustainable data regime.

Furthermore, sustainable data and measurement is not alien to most SMEs experienced with public sector funding. In the regional economy, the form of sustainable *finance* that *exists*, are public sector subsidy schemes and promotional banking (Mertens/Stockmann 2026; Mertens/Stockmann, this volume). Capital markets and institutional investors do not play a role for SME sustainable financing (Rossmann et al. 2026). Interestingly, though, also in public sector funding schemes, technical product-related knowledge needs to be aligned with financial expertise. The sustainability consultant for public sector funding schemes explains in the interview: "So, I need to make it much simpler, and people will take notice – wow, if the clinker plants here have reduced their scrap rate with a system like this for surface inspection" (Eco 2). In the following quote, the managing owner of SME 3 explains a

lengthy administration intensive application process for sustainable public sector funding:

> "There is always this ebb and flow, depending on the public sector funding programs – whether they're swamped with work or have nothing to do. Yes, unfortunately I was in a phase where someone else – who probably would have been more competent – simply didn't have the time and said, 'Yeah, we can look at the application in nine months,' and I really wanted to make progress. That's why I chose the consultant myself. I'd already had a strange feeling about it beforehand. That turned out to be true. Well, we submitted the application. Then nothing happened at the public sector funding agency for about two months. Then I started following up on it, and it turned out they'd forwarded it to an auditing firm because the public sector funding agency found it too complex. And that was probably another stroke of luck for me, because at that auditing firm I was able to talk to people – people who actually wanted to talk to me. And he even wrote back saying he didn't quite understand it all yet, so I wanted to explain every possible point to him, which I did over the phone. And then he finally got it. Two weeks later, he came back and said, 'Actually, according to EU funding guidelines, these are two different funding programs. One is for material substitution, the other for material savings. Wouldn't you rather – since they couldn't quite get it right – submit two separate funding applications?' So, I thought, 'Okay.' Then I'm back at the very bottom of the pile, and it's already been 4 to 5 months – I'm running out of patience. But I managed to pull it off after all. So, then he was willing to discuss – uh, sort of – this precedent of combining funding from various EU sources in a single project. And lo and behold: after a few phone calls, they gave it the green light. That was sometime in November 2024. […] Now, in mid-February, the whole thing is being installed. So, I actually ended up spending less time on the implementation than on the entire application process. That's what frustrates me again – that the whole thing goes like this: 'Yes, it has to be reviewed.' After all, we're talking about a grant of around 180,000 €. I expect it to be reviewed properly. But it would be nice if that could happen within a reasonable timeframe and by people who are actually qualified to review it. [...] So now, of course, the challenge is that we have to actually pull off what we set out to do. But that's part of my entrepreneurial risk." (SME 3, Int. 2).

The application process described by the managing owner is bureaucratic and complex, requiring insights into technical details that are

difficult to grasp from a more aggregate level. Both public and private sector funding face the same challenge: the need for technical expertise, which contributes to bureaucratic procedures. The difference is that firms tend to accept an "overload of bureaucracy", when they get extra money for it (a "greening factor", so to speak). This is what is missing in the private sector-oriented sustainable finance architecture of the European Union. It creates bureaucracy without any link to concrete processes of transformation, and no financial gain associated with it. It also does not entail any thoughts on demand-side politics that would help to create green profits and markets to florish, which both, industrial firms and their investors would need.

5. Conclusion

The study at hand applies an institutional logics perspective to understand the current political crisis of the European sustainable finance and Green Deal strategy. The institutional logics perspective helps seeing and identifying different forms of sustainable finance and sustainable evaluation. Applying insights from comparative political economy, the institutional logics perspective, and the convention school of economics, the study identifies institutional conflicts and comprises of sustainable finance in the regional economy. Based on a field study from the industrial region of East Westphalia-Lippe two distinct institutional logics of sustainable finance have been reconstructed: the institutional logic of market transparency vs. the institutional logic of production. The field study has been conducted between 2023 and 2026 (comprising of field observations, focus groups and problem-centred interviews) and grasps the high-time of the European sustainable finance strategy, as well as its downturn in 2025, leading to the European Omnibus-reform process. In 2023 and 2024, many regional actors, such as industry associations, engaged in informing their member firms about the importance of defining a sustainability strategy and documentation also for smaller firms, and banks, public agencies, industry networks, and accounting firms became active entering the emerging sustainability consulting field.

The political crisis in European sustainability politics is not solely due to the rise of right-wing authoritarianism, although it is certainly related to it. The study at hand aims at identifying the crisis of sustain-

able finance from within – deciphering its own institutional pattern and structural form. According to this study, the within-reasons for the political crisis of the European sustainable finance strategy are twofold (see table 5): First, family- and manager-owned firms tend not to utilize capital markets and institutional investors for external financing. However, the ESG information infrastructure – primarily designed for large firms and banks – reaches these smaller firms, where it is perceived as overwhelming, chaotic, and poorly connected to concrete transformation processes. Second, managing and measuring are not unfamiliar concepts to smaller family- and manager-owned firms. Interestingly, the issue of misaligned technical knowledge and expertise found within financial institutions is similarly present in public sector funding programs. Nevertheless, in the latter case, an "overload of bureaucracy" tends to be tolerated, because it is directly linked to specific investments and financial gains.

Table 5: Sustainable finance conflict and compromise (own composition)

	Financial system	**Evaluation format**
Institutional conflict	Global (no SME focus)	Aggregate (arbitrary)
Institutional compromise	Regional (SME focus)	Concrete (production-related)

Thus, the solution for better acceptance of sustainable finance would lie in acknowledging that sustainable finance tends to take on another institutional form in the regional economy: detailed technical knowledge, concrete investment cases, public sector funding, and regional banks, industrial associations and public sector agencies engaging in networking and consulting activities (table 5). An institutional logic is not just a format of numerical choice or "information", but a world full of habits, processes, actors, organizations, judgment devices and practices coming together. It makes a difference, who evaluates from which perspective and stance.

A precondition of a meaningful compromise between the logic of (financial) market transparency and the logic of industrial production

would be that financial processes of evaluation do become much better aligned with technical formats of evaluation (which means a resetting of the institutional arena, different kinds of actors to become involved) and grounded in real-world industrial transformation processes. It would require (public) banks and financial actors to change in a meaningful way (Klüh et al. 2026; Mertens/Stockmann 2026; Mertens/Stockmann, this volume) and incorporate more industry-specific technical-sustainable forms of evaluative knowledge into their procedures.

From a political economy perspective, it is striking that the sustainable finance architecture did (in the beginning) not involve the competencies of classic industrial institutions of technical standards and evaluation, such as the TÜV, or industrial associations (like the VDI, the Association of German Engineers, or the VDMA, the German Mechanical and Plant Engineering Association). One of the problems of sustainable finance seems to be that the protagonists chosen to be the evaluating instance, are not well equipped to do so. In principle, technical expertise could be achieved by large private banks, too, but they play a marginal or insignificant role, so far in the regional sustainable finance ecosystem. If sustainable finance is to survive politically, it will only be through the involvement of technical and material expertise into a scheme that has been experienced as distant, abstract, ill connected, and massive with unclear consequences for a sustainable transformation.

Sustainable finance politics also needs to consider that the dominant form of sustainable financing in the regional economy comes from profits (Rossmann et al. 2026). Some of the protagonists of this study are about to develop and invest in green and climate-friendly materials or products but lack a market to sell them. If these green products do not find a demand and mass market, they will not realize the green profits, industrial firms *and* sustainable investors (Chiapello, this volume; Wullweber et al., this volume) seek for. Most probably, reporting requirements, alone, do not lead to a significant acceleration of sustainable market growth. Sustainable finance needs to be thought of as a demand-side problem, too, requiring public sector purchasing programmes and/or political guidelines to increase green outlet markets and opportunities for sustainable investments.

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Which Financial Infrastructures for Ecological Planning in Europe?

A Comparative Analysis of Finance as Planning

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Abstract

Recent debates on economic planning emphasize both existing planning capacities within capitalism and the need for new forms of ecological planning, increasingly enabled and facilitated by technological advances. Yet less is known about how ecological planning operates through existing institutions and financial flows, and how these could support more democratic planning. We address this gap by using financial circuits as a common framework to analyze how ecological priorities translate into investments and to identify existing planning capacities. We compare France and Germany, using China to contextualize our findings. France combines stronger centralized planning with weaker local financial transmission, while Germany has dense decentralized public financial infrastructures but weaker central coordination. Building on these complementary capacities, we propose Transformative Financial Circuits (TFCs), combining public financial infrastructures, federally coordinated planning, and decentralized participatory decision-making for democratic ecological planning in Europe. The analysis draws on literature, interviews, participatory observations, and discussions with scientists and practitioners involved in finance and the sustainability transition.

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1. Introduction

Inspired by the developmental success of countries like China, new technologies, and the failure of market-based approaches to achieve a consequential transition towards sustainability, the academic debate on democratic ecological planning is in full swing. Recent years have brought major knowledge gains in many areas, also with respect to the role of finance. Even though the literature makes frequent reference to the pervasiveness of planning in capitalism, few contributions ask how democratic planning could be modeled upon existing (financial) institutions and infrastructures. This chapter is an attempt to fill this gap. Building on contributions on "green economic planning" such as Ban/Hasselbalch (2025) and Ban et al. (2026), and along with Sorg (2025) and others, we propose to design new forms of democratic planning towards sustainability by combining the multilevel governance structures of finance with centralized and decentralized forms of participatory political decision-making.

To do so, we examine the conditions for enhanced coordination and planning in two countries, Germany and France. We then synthesize and contextualize our findings and sketch a governance structure for the EU. Our article is organized as follows. In the next section, we review the literature and its gaps, focusing on governance and organizational dimensions of democratic planning. A first finding is that the literature lacks comparative evidence on types of implementations under current politico-economic conditions, in particular when considering the role of multi-level governance and finance. A second insight is that existing evidence highlights the possibility of combining webs of financial institutions and regional forms of ecological planning. This combination might give rise to transformative "financial circuits", which we conceptualize on the basis of Eve Chiapello's contribution to this volume (see also Chiapello 2020 as well as Chiapello/Violle 2025). Section 3 juxtaposes the French and the German institutional set-ups. This comparison reveals two distinct pathways for developing transformative financial circuits. The section also contextualizes and synthesizes these experiences by considering further cases of finance as planning, particularly China. Section 4 proposes a combination of institutions and governance arrangements from France and Germany a European architecture for democratic planning. Section 5 summarizes our main conclusions, highlighting the need for further

research on how democratic planning could benefit from existing institutional arrangements.

2. The Planning Debate's Revival and its Gaps

On the surface, the recent debate on economic planning echoes controversies that have persisted for many decades. Beneath this surface, contributions expand the notion of planning and conceive new approaches (section 2.1). Some of these approaches would require overthrowing the current economic system, while others could evolve more gradually (Sorg/Groos 2025; Hebenton/O'Neill 2024). However, the role of existing institutions as a foundation for these infrastructures has not been sufficiently analyzed (section 2.2). In particular, we see a need to study the potential role of (public) financial institutions, the foundational elements of former and emerging centralized planning agencies, and new organizational forms of participatory regional ecological planning. These institutions could play a crucial role within holistic infrastructures for socio-ecological democratic planning. To understand this role, it would be helpful to analytically integrate these institutions and infrastructures. In our view, the concept of financial circuits, as put forward by Chiapello in this volume, could serve as framework for such integration (section 2.3).

2.1 The Revival of the Planning Debate

The revival of the debate on planning has been strongly influenced by three developments.[1] First, a recognition that planning is already present and pervasive within capitalism, both in the real sector and in financial institutions, such as sovereign wealth funds, development banks, and central banking (Sorg 2023). Second, a perception that ecological emergencies have widened the scope for planning arguments (Ban/Hasselbalch 2025). Third, a hope that new digital tools could fundamentally alter the socialist calculation debate (Koch 2024; Dapprich/Greenwood 2024).

[1] This so-called "revival", which we rather arbitrarily situate in the years from 2015 onwards, sometimes shrouds numerous valuable contributions from the 1980s, 1990s, and 2000s. For an overview and further references, see, for example, Adaman and Devine (2022).

Recent surveys provide a first assessment of the state of the art (Jones 2020; Hahnel 2021; Nishat-Botero 2024; Sorg/Groos 2025; Groos/Sorg 2025). A central insight is that existing contributions (such as Phillips/Rozworski 2019 and Braun 2021) have successfully shifted the debate from asking whether plans *or* markets achieve better coordination, to who plans for whom and through which institutions and with which role for markets (Kampourakis 2023). Moreover, models of practical implementation receive increasing attention. Focusing on the socio-ecological dimension, Tremblay-Pepin (2022) distinguishes three classic models: "Negotiated Coordination", based on social ownership and participatory negotiation (Adaman/Devine 2022; Devine 2002); "Participatory Economics", relying on iterative councils for consumption and production planning (Albert/Hahnel 1992, 2002); and "Computerized Central Planning", using algorithmic computation to coordinate production (Cockshott/Cottrell 1993). Tremblay-Pepin (2022) argues that these models insufficiently address environmental challenges and proposes combining their strengths with insights from ecological economics and a biophysical understanding of the social metabolism. This also raises the question of the institutional infrastructures through which such forms of ecological planning could be implemented.

More recent contributions have adapted or extended these models by incorporating digital platforms (Saros 2014), more centralized forms of coordination and price setting (Laibman 2002), as well as commons- and degrowth-based approaches (Vettese/Pendergrass 2024; Groos/Sorg 2025). Some proposals also integrate insights and tools from cybernetics and environmental systems theory (Heyer/Zeug 2024). Yet these increasingly sophisticated models provide limited guidance on open how ecological planning can build on existing institutional and financial infrastructures and connect different levels of governance.

2.2 Tensions and Gaps

Despite impressive advances in modeling democratic planning, several gaps and tensions remain (see Nishat-Botero 2024; Ban/Hasselbalch 2025; Sorg/Groos 2025). From our perspective, the biggest tensions emerge in the perception of the potential role of information technologies, the relative importance of centralized inputs on ecological boundaries versus decentralized inputs on preferences and productive condi-

tions on the ground, and the degree of "misalignment of scientific and political time horizons" (Ban/Hasselbalch 2025: 289): Most of the proposals mentioned would require a revolutionary move towards ecosocialism, communism, or towards a commons-based economy – a move that appears unrealistic at the current juncture.

In what follows, we focus on those approaches that start from the status quo and propose to transform it by integrating ideas of democratic and ecological planning within current macro-financial regimes. In particular, we argue that combining the concept of *democratic planning for degrowth*, as presented by Durand et al. (2024) and Hofferberth et al. (2025), with the approach of *green economic planning* outlined by Ban and Hasselbalch (2025) and Ban et al. (2026) offers a promising starting point. Although these approaches differ sharply in their assessment of the extend of change required (in particular with respect to the growth-degrowth nexus and the democratization of economic decision-making), they share the view that planning needs to be linked to past and current approaches of macroeconomic coordination. While Durand et al. (2024) emphasize investment planning, sectoral downscaling, and multilevel democratic deliberation over targets, Ban and Hasselbalch (2025) concentrate on "statecraft".

On the surface, *democratic planning for degrowth* and *green economic planning* envision different roles for current capitalist structures and private capital. Durand et al. (2024) treat financialized capital as something to be disciplined and democratized; Ban and Hasselbalch (2025) treat private capital "as a partner" to be employed within a hierarchical but negotiated system. In our view, the idea of *finance as economic planning* in Sorg (2025) can provide a bridge between these two vantage points. By making the theoretical claim that "planning" is a pre-existing, dispersed feature of financialized capitalism, he lays bare the common denominator of both approaches: there is no need to invent planning from scratch, but a need to redirect capacities that already exist. This supports the argument of Ban and Hasselbalch (2025) that corporate and financial-sector planning provides institutional knowledge from which the state can learn and benefit. But it also underscores the need to democratically restructure planning mechanisms rather than leave them in private hands, as emphasized by Durand et al. (2024).

Starting from this observation, we identify two important tasks for the social sciences. One task is to provide an analytical framework

that can be used to understand how current forms of finance can be transformed into more public infrastructures for democratic planning towards sustainability. We propose such a framework in the next section. A second task would be to identify institutions and infrastructures from which such a system of planning towards sustainability could be developed. These institutions and infrastructures can be material (like central banks or ministries of finance) or ideational (like the intellectual inheritances of indicative planning in the past that can act as potential models for new forms of planning). They should span over different levels of governance, be adaptable in scale and scope, and be situated at the nexus between finance and democratic politics. Finally, they should consider the ambiguous need to both strengthen central steering capacities and decentralized forms of deliberation.

When discussing financial institutions, scholars of democratic planning have so far focused on central banks, the international bodies that coordinate them, and asset managers. The many other institutions and organizations that might constitute elements of planning infrastructures remain at the margin: Ministries of finance are only mentioned in historical accounts of post-war planning, while development and promotional banks are mostly seen as representing the weak de-risking state that needs to be overcome. Many other financial institutions and infrastructures are rarely mentioned at all, such as payment systems, commercial banks, or the countless financial entities that the Chinese Communist Party (CCP) employs in its attempts to steer the economy (see section 3.3 below).

In our view, there are three areas in which the literature should dig deeper to find institutional financial infrastructures capable of supporting democratic planning aimed at sustainability. First, and in line with Ban and Hasselbalch (2025: 295), we see a need to intensify research on current and past "hierarchical coordination institutions", for example, those that have "historically characterized indicative planning". In particular, rudiments of former *and* emerging new centralized planning agencies (including their interlinkages with political institution, such as the system of party representatives in Chinese companies) should be studied more intensively, even if they are not always a posterchild of democratic decision-making.

Second, there is a need to explore public and hybrid multilevel governance structures that could enhance the state's capacity to steer financial decisions. For example, development and promotional banks

operate at the global, supranational, national, and subnational levels (Mertens/Stockmann 2026; Mertens et al. 2021). They can be considered the core infrastructure of weak de-risking states but could also be conceived as key agents of a transformative state (Klüh et al. 2026a). More recently, there have been attempts to actively employ development banking to achieve additional geopolitical coordination, such as the New Development Bank (Wang 2017). In the case of Europe, even the (supranational) central bank has national counterparts, which sometimes still feature regional offices and implement more "spatial" monetary policy (Sokol/Pataccini 2021). More importantly, locally incorporated public and cooperative banks form networks and multi-level governance structures that could be used for policy transmission (Klüh/Naji 2025). Non-bank financial institutions such as guiding funds, also feature multi-level structures (Ngor et al. 2021). Recently, proposals have emerged to set up regional capital pools or asset managers to counteract the concentration of power in global asset management (Becker 2025, 2024).

Third, there is a need to link knowledge about the role of local actor networks at the nexus of finance and the sustainability transformation (see Knoll et al. 2025 for an introduction to these networks) to the planning debate (Fofana/Hallosserie 2025; Hallosserie et al. 2025). Such integration would challenge the tendency to see planning as an exercise in optimization or rational-instrumental calculation and instead reframe it as a deeply political process of collective sense-making and capacity-building. This approach would enable researchers to formulate conditions under which planning could handle the key role of fundamental uncertainty, value pluralism, and power asymmetries in the socio-ecological transformation by integrating elements of deliberative democracy, agonistic politics, adaptive learning, and reflexive governance.

2.3 Financial Circuits as Infrastructures of Planning

In the previous section, we claim that (public) financial institutions such as development banks, public commercial banks, and investment funds, rudiments of former and emerging new centralized planning agencies, as well as new organizational forms of participatory regional ecological planning, could play an important role within an integrated

framework of socio-ecological democratic planning. But how can these entities be analyzed within a coherent framework? One that is sufficiently sociological and political to allow for a deeper understanding of the conditions under which a transformation towards sustainability could be achieved, yet also sufficiently financial and economic to realistically describe the status quo? The existing literature offers only a few starting points for such an integrated perspective. In our view, the concept of sustainable financial circuits (FCs) as proposed by Chiapello in this volume, could serve as a foundation for developing such a framework.

The concept of FCs (Chiapello/Violle 2025) was proposed to shift "attention away from the financial market system toward the full set of monetary channels connecting states, banks, firms, and households" (Chiapello: 298, this volume). Financial circuits "encompass all interconnected flows of money, both public and private, together with the institutional arrangements that structure them" (ibid.). In this way, finance is reconceived as part of a complex system rather than as a self-contained solution. FCs combine infrastructure studies (Star 1999) with the sociology of money, in particular Zelizer (1994) and can be defined as follows:

> "…as an infrastructure that enables money to circulate between actors while simultaneously shaping their resources and capacities for action. Among its functions, this infrastructure earmarks money. It consists not only of physical devices but also of legal rules, accounting standards, procedures, calculation tools, and other socio-technical arrangements." (Chiapello: 299, this volume)

The literature on democratic planning can benefit from such a perspective, as infrastructures localize interventions "while the network itself remains global." Countless actors occupying low, medium, and high positions within hierarchies must collaborate and expand existing practices. These practices cannot simply be dismissed; rather, they need to be transformed – aligning closely with our focus on existing institutions.

To facilitate this transformation, Chiapello proposes a two-step approach. First, there should be a shift from the current superficial layering of sustainability criteria onto conventional financial circuits toward a deeper reform that enhances the financial sector's capacity to act. Examples of such measures include granting specialized and in-

dependent organizations the right to sell sustainable finance products, requiring actors to allocate a portion of their portfolios to investments that are not immediately profitable, encouraging longer holding periods through regulation, and promoting direct investments in essential social infrastructure.

Second, a move toward broader FCs should incorporate so-called upstream and downstream elements (for a concrete application, see Klüh et al. 2026b). Upstream, we find the numerous macrostructures of money creation and allocation, such as central banks, public development banks, and other financial intermediaries "supported by specific public resources". The origination of these resources must also be understood, which implies FCs must be connected to tax systems and fiscal institutions, and thus the political system. Downstream, we find the mechanisms that enable sustainable projects in the first place. These include "industrial policies, regulatory standards, subsidies, and guaranteed demand" (Chiapello, this volume) but also the complex actor networks that characterize sustainability transformations on the ground (Knoll et al. 2025).

We believe that looking at democratic planning through the lens of the resulting "transformative financial circuits" (TFCs, our term) can facilitate the transition from current financial infrastructures to new infrastructures of democratic planning aimed at sustainability. This lens offers both an addition and a corrective to existing models. Most importantly, it highlights the role of infrastructures rather than focusing solely on decision-making rules. Existing models discuss who makes decisions and according to which procedures. Chiapello's approach reminds us that, in addition, the material channels themselves – accounting systems, IT infrastructures, clearing systems, and legal frameworks – have their own dynamics and generate path dependencies. Democratic planning would therefore require not only new decision-making procedures but also newly constructed financial infrastructures; otherwise, the old "tracks" (IFRS standards, bank clearing, EU monetary architecture) would continue to shape and limit any democratized decision. TFCs concretize the multilevel governance structures necessary for ecological planning by conceiving it as an ensemble of specifically tailored, democratically controlled, interconnected circuits.

3. *Juxtaposing Existing Financial Infrastructures in Planning?*

The preceding section claims that a combination of centralized infrastructures of planning, multilevel infrastructures of finance, and decentralized infrastructures of participatory planning can be conceived as a specific form of transformative financial circuit (TFC). These TFCs can serve as meta-infrastructures. In this section, we explore two real-world examples of this assemblage: the French case (section 3.1) and the German case (section 3.2). Our analysis is mainly based on a document-based description of the history and current configuration of planning and finance in these countries. It also uses interviews and participatory observations from a research project on public banks sponsored by the German Ministry for Research, Technology and Space.[2] Our aim is to identify both gaps in existing circuit infrastructures and already existing institutions that might facilitate democratic ecological planning. We argue that France and Germany can be seen as complementary forms of TFCs. Combining these forms could serve as a European version of the successful features of circuit infrastructures known from other countries, such as China (section 3.3)[3].

3.1 France

Although ecological planning has become a prominent concept only recently, it is rooted in the long history (Desrosières 2000; Rosanvallon 1990). Understanding the current infrastructures for ecological planning requires situating it within the historical experience. Planning occupied a central place in French public policy from the end of the Second World War until the 1970s. It covered industrial, social, economic, agricultural and labor policies as well as spatial planning. During this period, the *Commissariat Général au Plan* (CGP) coordi-

[2] For a detailed description of the main body of the empirical material, see Klüh/Naji 2025; in addition, we integrated yet unused material from several research visits in France and two workshops on the role of banks in planning.

[3] France and Germany should not be seen as representative of diverse European political economies, but are used as contrasting cases highlighting complementary capacities for ecological planning. China provides an additional functional reference, illustrating how financial circuits can connect upstream planning and financial institutions with downstream mechanisms of investment and implementation.

nated sectoral commissions in which experts, representatives of the state administration, employers, trade unions, and civil society met on a regular basis. Every three years, Parliament adopted a planning law based on reports prepared by the CGP. These plans established objectives and indicators.

The three decades between 1945 and 1975 were marked by reconstruction, rapid economic growth, large-scale infrastructural development, the emergence of a mass-consumption society, and substantial environmental and health costs (Bonneuil/Frioux 2013). During this period, the banking system and the central bank were not passive intermediaries but active instruments of state-led "indicative planning" (Monnet 2015). Planning enjoyed broad political support, except from the economically liberal right. It constituted one of the main instruments through which the French state organized economic development.

Sorg (2025) interprets the French experience of credit control as a form of planning. As Monnet (2018) shows, economic development during the 1950s and 1960s was steered through politico-administrative institutions such as the Banque de France, which established and monitored sectoral credit ceilings. These mechanisms formed part of the plans that organized sectoral production as well as social and cultural infrastructures over multi-year periods. Financing combined credit controls, central bank interventions, and the Treasury circuit (Monnet 2018; Lemoine 2016): Commercial banks were required to maintain a significant share of their liquidity with the Treasury, thereby enabling the state to direct financial resources towards planning priorities.

A financial planning infrastructure organized the circulation and allocation of financial resources between the state, the central bank, and commercial banks. Planning funds were collected and directed in the context of a dirigiste economy, in which the state had the legislative and administrative capacities to direct financial flows towards shaping agricultural and industrial development. From the 1970s onwards, however, this model progressively weakened. Governments adopted neoliberal reforms, privatized banks and insurance companies and deregulated finance. Employment and production became more dependent on international economic dynamics. In 1992, the Eleventh Plan, initially intended to cover the period 1993-1997, was abandoned, officially marking the end of the planning system. The weakening of planning resulted from declining political support, but also from the

erosion of the state-controlled financial infrastructure through which planning was translated into financial flows. Financial liberalization reduced both the state's capacity to steer these flows and the volume of financial resources subject to planning allocation. Despite this institutional decline, planning never completely disappeared from the administrative landscape. Bodies succeeding the CGP maintained institutional continuity. This historical legacy also remained present in the political and administrative imagination, even as planning became increasingly associated with inefficiency and authoritarianism.

The renewed emphasis of ecological planning reflects this historical legacy. In the 2020s, President Macron appointed a Haut-Commissaire au Plan and created the Secrétariat Général à la Planification Écologique (SGPE). Following his re-election, ecological planning became an explicit component of his program. Macron adopted this concept in the run-up to the second round of the presidential election, in order to win over the left in the vote against Marine Le Pen (Mollier-Sabet 2022).

The new planning institutions differ fundamentally from those established in the post-war period. They no longer have the same number of employees, the same forms of deliberative social democracy, or the same capacity to influence economic and political decisions. Nevertheless, their creation illustrates the renewed political legitimacy of planning across the political spectrum. The SGPE is organized into five departments covering natural resources, decarbonization and funding, mobilization and transitions, territorial implementation, and digital tools and data. Its role is to coordinate planning across ministries and to monitor climate objectives. It develops sectoral transformation scenarios covering transport, housing, production, food, ecosystems, biodiversity, and consumption. Its first report was published in 2023 and updated in 2024. Prepared through a process of consultation and co-construction involving different actors, the report establishes objectives up to 2030, along with indicator pathways used to monitor implementation. The Secretariat also develops scenarios concerning the reduction of material use. However, respective objectives are not legally binding (Viennot 2025).

Despite this architecture, ecological planning in France faces important criticisms. First, the human resources allocated to the SGPE are extremely limited. Moreover, ecological planning governance suffers from a high degree of fragmentation at the national level and a

lack of multilevel governance structures (Lindgaard 2025).[4] While the SGPE produces robust expertise and clearly identifies the gap between existing trajectories and desired objectives, it lacks the capacity to support political decision-making, organize trade-offs, and ensure coherent coordination between ministries. Finally, ecological planning is constrained by financial resources.

The lack of funding and implementation problems become especially acute at the local level. For example, local authorities have developed adaptation strategies in territories affected by droughts, floods, and rising sea levels. However, these initiatives face significant financial constraints. In contrast to Germany, public banking instruments remain comparatively limited, especially at the regional level. *Caisse des Dépôts et Consignations* (CDC), the main investment vehicle of the French state, is regularly criticized, particularly regarding its role in climate and sustainable finance (see, for example, Reclaim Finance 2025). To consolidate public financial support for businesses, the French government created *Bpifrance* through the merger of three state-backed institutions. The objective was to integrate activities on loans and guarantees for small and medium-sized enterprises, long-term strategic equity holdings, and venture capital. Still, the volume of public loans and grants is lower than in Germany, and the number of branches of French public banks is smaller. In addition, the competitive structure of the French banking system prevents *Bpifrance* from offering interest rates below those in private banking markets. Overall, important gaps remain, particularly in the financing of disruptive and high-risk innovation requiring patient capital (Cour des Comptes 2023; Deffains-Crapsky et al. 2026) and to support "companies with disruptive social and/or environmental innovations that require patient capital and significant risk-taking" (Deffains-Crapsky et al. 2026: 215; Amiotte Suchet 2026).

While France lacks local banking structures to bring sustainable finance "down to earth" (Knoll et al. 2025), it has developed local structures of decentralized deliberation that may facilitate implementation

[4] At the national level, several strategic planning processes and sectoral roadmaps coexist and are conducted in parallel. This proliferation of initiatives reflects a renewed institutional enthusiasm for planning at the central level, while at the same time creating significant coordination needs between partly overlapping planning processes (Rüdinger 2023).

on the ground. The territorial implementation of the National Biodiversity Strategy provides an example: regional biodiversity strategies and committees bring together state authorities, local governments, socio-economic actors, associations, and scientists to translate national biodiversity objectives into territorially adapted priorities and actions (Ministères Transition Ecologique, Aménagement du Territoire, Transports, Ville et Logement 2024).

Despite recent efforts to territorialize ecological planning, local planning activities remain only partially integrated into a coherent multilevel governance structure. Persistent challenges exist regarding coordination across governance levels and the alignment between nationally defined objectives and locally identified needs (Hallosserie et al. 2025). This critique mirrors academic analyses of the limitations of current ecological planning. Viennot (2025) characterizes the French system as one composed of numerous institutions and legal instruments producing valuable expertise but lacking overall coherence. According to this diagnosis, France requires an institution with sufficient democratic legitimacy to orient, coordinate, and communicate ecological planning. Such an institution would organize multilevel participatory deliberation, elaborate and monitor sectoral scenarios over time, arbitrate competing objectives, structure public debate, and train the actors involved in ecological planning.

The current financial circuit of French ecological planning is based on a reactivation of France's historical planning experience. It is characterized by the centralized definition of planning objectives, now applied to climate and environmental domains. Upstream, the circuit connects centralized planning institutions such as the SGPE with public financial institutions such as Bpifrance and the Caisse des Dépôts et Consignations; downstream, it connects these structures to local collectivities and territorial actor networks. However, the connections between these upstream and downstream components remain weak, and this centralized orientation relies on a financial infrastructure whose coordination between institutions, control, and volumes of financial resources are considerably weaker than during the 1940s-1960s. The current financial circuit remains insufficient to fully concretize the stated ecological and democratic objectives.

3.2 Germany

What role did democratic planning play in West Germany?[5] While the political elite was ideologically strongly committed to the ordoliberal market economy and maintained an explicit distinction from the French "planification" there were certainly elements of a planned economy or dirigisme –especially during the early postwar and reconstruction phases. Before the currency reform (1945-1948), price controls, food ration cards, and compulsory allocation of key goods prevailed in the occupation zones until 1948 – a direct legacy of the wartime economy. In particular, the Bizone Economic Administration centrally managed raw materials and production capacities, particularly in the coal and steel sectors (Nicholls 2000).

After the currency reform, the often cited ordoliberal "big bang" approach was accompanied by a surprisingly large set of selective interventions (Weber 2021). The Investment Assistance Act from 1952 provides a prime example of a genuinely interventionist policy. Companies in thriving sectors were legally required to provide loans to the coal, steel, and energy industries to address capital shortages. Similarly, the allocation of funds from the European Recovery Program was state-controlled, with priorities given to key industries such as energy, transportation, and basic materials. The Kreditanstalt für Wiederaufbau (KfW), founded in 1948, channeled targeted, long-term, often subsidized loans into priority sectors – reconstruction, housing, infrastructure – and later supported SMEs as well as export credits. Social housing construction in the 1950s relied heavily on government-directed, low-interest loans and public subsidies, with capital allocation operating outside market mechanisms. Agricultural markets were regulated

[5] Because of space limitation, we focus on West Germany. However, we believe that reflecting on the Eastern experience would greatly enrich the debate, not only because of the lessons that can be drawn from the early economic success and later failure of the German Democratic Republic, as described in Steinitz (2006). First, it is noteworthy that some capitalist institutions, which we believe could provide valuable infrastructures for democratic planning (such as the public savings banks, or Sparkassen) were also present in the GDR. Second, the transition from a centrally planned economy to a market economy in the 1990s passed through a brief mixed system phase, the lessons of which have not been conclusively analyzed. Finally, the way in which central planning is remembered in the East might offer valuable insights into the political feasibility of different forms of democratic planning.

through intervention prices, import quotas, and market regulations – similar to those later seen in EEC and EU agricultural policy. The predecessor of the EU, the European Coal and Steel Community (1951/ ECSC), subjected coal and steel production to supranational controls on volume and price (Denton et al. 1968; Abelshauser 1975).

From the late 1960s onward, the system increasingly transformed into one of macroeconomic management. However, over time, these Keynesian tendencies were replaced by neoliberal reforms that concentrated macroeconomic steering within the conservative Bundesbank (Denton et al. 1968). The financial sector became the primary channel through which the central government and the Länder could implement policy. Unlike in France, the major banks were not nationalized. There was no equivalent to the French *encadrement du crédit.* Instead, the banking system operated as a multi-tiered structure in which economic policy priorities were transmitted from the federal and state levels down to individual borrowers – not through direct government lending, but through a finely balanced interplay of public, cooperative, and (in the case of savings banks) municipal institutions (Klagge 2023).

Development and guarantee banks serve as the primary "translators" of policy. They combine federal funds (KfW), EU funds (ERDF, ESF+), and state funds into programs tailored to specific regions (e.g., building renovation, startup support, structural transformation in coal-mining regions). In addition to KfW and its subsidiaries several other public institutions play an important role, for example the Landwirtschaftliche Rentenbank. On top, each federal state has at least one development bank of its own (Mertens/Stockmann 2026). These are supported by chambers of commerce, trade associations, and credit institutions. In some cases, state-level promotional and guarantee banks are partially integrated with the Landesbanken (Polikhronidi/Scherrer 2017).

A crucial element of the system is the Savings Banks Finance Group (see Klüh/Naji 2025 for details), which is complemented by an impressive number of cooperative banks following similar strategies with multiple mandates. This networked organization of diverse actors, supported by local financial circuits covering the territory, represents an infrastructure where translations between professional worlds are common (Knoll et al. 2025). However, coordination among the local networks is lacking. Although carbon neutrality goals are regularly reiterated by German governments, the concrete integration of climate

policies and biodiversity preservation faces a problem within local networks.

The described infrastructures offer a promising nexus for ecological planning within a democratic framework. First, they enable regional feedback between municipal owners, local council members on boards of directors in the case of savings banks, and local civil society in the case of cooperative banks (Klüh/Naji 2025). Unlike a central state bank, local democratic bodies can genuinely influence credit allocation. This represents a structural advantage over purely technocratic, top-down planning. Second, these infrastructures connect different levels of government, thereby improving the scalability of proven instruments. The existing KfW infrastructure has already been successfully repurposed for ecological goals – such as building renovation programs, renewable energy subsidies, and electric mobility initiatives. The transmission system already exists and would not need to be created from scratch if a democratically decided "ecological transition" is to be accelerated (Marois 2021). Third, the diversity of the financial landscape creates new forms of resilience: the three-pillar structure prevents a single misallocation from causing systemic consequences, as was possible in more centralized systems (Burghof/Gischer 2024).

At the same time, structural limitations for ecological planning are abundant. First, there is no clear control over credit volumes: unlike the historical French *encadrement du crédit*, Germany lacks a mechanism that imposes binding limits on the volume of credit for "non-ecological" purposes (e.g., fossil fuel investments). Control is exercised exclusively through positive incentives (such as more favorable terms for green projects), rather than through prohibitions or quotas on non-green projects. Democratic ecological planning in the narrower sense (target-based with binding sectoral controls) would require an additional instrument, that is lacking in the existing system. Second, logics of creditworthiness and profit remain dominant. A savings bank cannot simply cross-subsidize a politically desirable but uneconomical project without assuming risks that would be sanctioned under regulatory law. The "democratization" of lending conflicts with the stability logic of banking regulation (Basel III/CRR). Third, fragmented jurisdiction hinders coherent planning: 17 state development banks, each with its own programs, along with 337 savings banks and 646 cooperative banks possessing local autonomy, make implementing a coherent na-

tional planning framework – as required by a plan in the French sense – structurally difficult. The system is designed for incentive coordination, not directive coordination. Finally, democratic control is rather indirect. The "democratic" component in savings banks (municipal committees) and cooperative banks (members' meetings) relates to institutional governance, not to overarching macroeconomic goal-setting. There is no equivalent to an Economic and Social Council that makes binding decisions on credit allocation in line with collective environmental goals (Klüh et al. 2025).

Most importantly, there is a lack of more centralized planning institutions. Ministries of Finance and the Economy at both the federal and state levels, as well as expert bodies, have a strong ideological bias against planning, originating from the ordoliberal ideology prevalent in German policy and business circles. Recent attempts to increase guidance on technologies for heating systems and other aspects of the climate transition, for example, have led to a fierce backlash against any state intrusion in business decisions (Klüh 2026). Similarly, the European Green Deal, which also included elements of clearer guidance on the allocation of funds, was fiercely opposed in Germany.

This contrasts sharply with the local level, where participatory planning is considered a routine procedure. Especially, in situations of structural change, municipal leadership (such as mayors and the powerful district administrators) activates complex actor networks. Within these networks, local financial institutions play a core, if not the key, coordinating role. In our empirical research, depictions of monetary and financial flows frequently reflect the language and logic of financial circuits (Klüh et al. 2025; Klüh/Naji 2025). For example, one of our interviewees summarizes the situation in a structurally weak region as follows:

> "The mining pensions were particularly high, and that generated a significant volume of deposits for the savings bank, which it could, of course, invest at favorable rates. Ultimately, this ensured high profitability through portfolio investments, and it was also relatively low-risk. But of course, it's not the savings bank's purpose to be a securities firm; rather, we naturally need a lending portfolio, which must grow. Normally, one would place a portion of the deposits in the local lending business. However, this wasn't possible due to a lack of demand. And so, while the Sparkasse was profitable, it wasn't fulfilling its purpose."

He then goes on to explain that this insight was a motivation to set up a process of regional planning:

> "Strictly speaking, the savings bank can't directly engage in regional development. The county and the cities have their own economic development agencies. But it's helpful to try to focus their activities on a single goal. … There are certain existing business sectors. But perhaps we … should invest in others. Then we can tell our own economic development agencies: "Listen, you need to focus more in this direction." … A political consensus needs to be built, and of course the savings banks can do this as well, because they also have close ties to the local authorities."

Taken together, the German system is a decentralized, condition-driven transmission system with considerable potential for democratically guided, incentive-based ecological reorientation. However, for "democratic ecological planning" in a stronger, dirigiste sense – comparable to the French *encadrement du crédit* or binding sectoral credit steering – the system lacks key instruments: binding volume controls, an overarching planning authority, and mechanisms that go beyond mere interest rate subsidies. The debate over "green credit steering" or a possible reform in banking supervision (e.g., differentiated capital requirements for fossil fuel versus green loans, which the ECB and EBA are also discussing) targets this gap but would merely add another financialized layer to existing financial circuits – much in the sense of Chiapello's steps that focus on the ability of the financial sector's capacity to act. To go beyond sustainable finance and create new forms of circuits – Chiapello's second step – more upstream integration with central planning and fiscal entities, as well as more downstream integration with actor networks, would be necessary.

3.3 Further Evidence and Synthesis

The preceding analysis shows that the French and the German political economy face very different challenges for using finance as an infrastructure for democratic planning. Achieving consistent sustainable development in a centralized system like France's is, in many ways, orthogonal to doing so in a federal system like Germany's. Still, banks and other financial institutions face similar challenges despite

the vastly different structures of the two financial systems and the strong dominance of capital market-oriented actors. There is considerable interest in the German system of regional banks, as it is seen as offering potential for better integration of the real and financial economies, as well as a financing landscape less oriented toward the needs of financial centers. Furthermore, in both cases, two largely mutually exclusive perspectives coexist regarding the necessity of new approaches and ways of thinking. In both Germany and France, debates are emerging regarding the limits of green growth and market-based solutions. In France, there is also a certain openness among actors in the financial system to discuss the necessity of planning elements and the significance of the limits to growth. However, these trends are overshadowed by calls to scale back European regulations and avoid overburdening either the financial or the real economy. Finally, particularly concerning the role of central banks, there are significantly differing positions that also reflect divergent conceptions of transformative statehood.

Examining Germany and France reveals two contrasting yet complementary settings. France has recently built up the institutional capacity for nationwide "planification écologique" (ecological planning), with transformation coordinated at the ministerial level. However, this planning has struggled in its implementation, largely due to a centrally organized administration and the absence of public financial institutions, which transmit ministerial strategy at the local level. In contrast, Germany features an extensive network of local savings banks, cooperative banks, and promotional banks capable of financing projects on the ground. However, Germany lacks a similarly strong, centrally coordinated institutional planning structure that sets coherent strategies and signals for long-term decarbonization goals.

In France, planning is accepted but tends to become overly centralized and technocratic. In contrast, Germany faces a coordination problem with planning, as it tends to be too fragmented. The role of local public financial institutions, such as savings banks, shows that federal systems already possess elements of democratic investment control, while centralized systems rely more heavily on national control. However, both systems face the same structural challenge described by Sorg (2025): a sustainable transformation requires understanding the financial system itself as a political planning instrument and designing it accordingly in a democratic manner. A convincing European ap-

proach to transformation would not consist of choosing the "better" system but rather of productively combining their respective strengths. This potential unfolds precisely where the shortcomings of one system are offset by the institutional resources of the other.

China presents a compelling case of how these financial circuits have been developed out of existing institutions – initially those from the era of centralized planning (see Weber 2021 for a general overview), followed by the institutions of the reform era of the 1990s and 2000s (see Ngor et al. 2021 as well as Rainer Land in this volume). Public banks have played, and continue to play, a crucial role in the planning process and have recently been complemented by non-bank financial institutions such as "guidance funds". In a way, Chinese economic planning can be described as a meta-infrastructure of complex transformative financial circuits (see Das 2026 for a similar perspective based on more classical and applied terminology). The *policy-bank circuit* is closest to the classical planning logic comprising institutions such as the China Development Bank, the Agricultural Development Bank, and the Export-Import Bank, which form a circuit dedicated to state-directed, often below-market-rate financing of infrastructure and strategic sectors (Das 2026). The *state-commercial bank circuit* ties together China's Big Four and other large banks, which are nominally commercial and profit-oriented, but operate as a semi-planned circuit through PBOC "window guidance," relending facilities, and reserve-requirement differentiation (Das 2026). The now fragile LGFV-land-finance circuit represents a historically crucial, largely off-budget circuit through which municipalities finance infrastructure via so-called local-government financing vehicles (LGFV), land sales, and shadow-banking instruments (Kozhevnikov 2019). The *public-guidance-funds circuit* involves state-backed venture and private-equity vehicles that blend fiscal and financial logics to create institutional infrastructures that differ sharply from bank-lending circuits. The direct-financing/capital-markets circuit aims at creating deeper bond and equity markets alongside bank-based finance (Das 2026). Finally, an increasingly important *wealth-management circuit*, an unplanned, semi-autonomous circuit that pools private savings, is now being formalized and integrated into the overall architecture by state planners, rather than merely repressed.

What ties these circuits together is a complex web of institutions consisting of numerous private and public entities, strongly shaped by

the Communist Party's presence at all levels of governance. In Chiapello's words (in this volume): "thousands of actors operating in a distributed manner, many of whom occupy low positions in existing hierarchies and work behind the scenes." (p. 299) This web is not guided by a single plan but by a multifaceted governance layer: the PBOC's dual-pillar framework, differentiated reserve requirements, macroprudential assessment, and – increasingly – direct intervention by central entities in financial and capital markets to ensure scarce resources are concentrated on strategic sectors. "Ultimately, all circuits are interconnected: there is no purely private circuit independent of public ones." (p. 301).

4. A European Transformation Scheme

It is well known that the political economies of France and Germany differ markedly. With respect to the political, financial, and administrative infrastructures upon which a democratic planning of the sustainability transition could be constructed, our analysis shows that the French and German systems exhibit complementary strengths and weaknesses (Table 1). In France, the main challenge lies in creating multilevel governance structures that link technocratic centers with the

Table 1: Features of French and German financial circuits

	France	**Germany**
Attitude	In principle, open for more planning	Principally skeptical on planning
Coordination	Relatively coherent, top-down	Fragmented and complex
Democracy	Transparency, but risk of technocratic control	Greater local participation
Financial system	More easily controlled centrally but reduced volume of money	Pluralistic, locally rooted with substantial volume of money
Implementation	Problems with local adaptation	Problems with cross-sectoral coordination

local level, also in terms of monetary flows. In Germany, the challenge is to strategically and centrally coordinate existing decentralized structures of finance and planning.

Combining elements of the two systems into a European transformation strategy could be a first step towards more ecological and more democratic planning. In concrete terms, this would take the form of a combined set of central guidelines (e.g., taxonomy, investment programs) and decentralized implementation (e.g., by banks, municipalities, regions) in a multi-stage democratic investment planning process integrating three elements:

1. A long-term transformation strategy that spans multiple sectors and leverage the strengths of a centralized approach. To this end, the Commission could establish planning bodies modeled after France's Haut-Commissariat à la Stratégie et au Plan, but with stronger democratic accountability. Such bodies would leverage the strength of a centralized approach: clearly defined objectives, institutionalized foresight through planning authorities and scenarios, and an ability to bundle large investment programs.

2. Decentralized investment management utilizing regional and local financial institutions. The German model – with its combination of national and local development banks and public/cooperative commercial banks – offers a blueprint. It features regional lending tailored to local transformation pathways, institutional proximity to local governments and the real economy, and relative stability in the face of short-term market dynamics. A European approach could build on this concept by establishing a network of public or public-interest banks, increasing the involvement of regional actors in investment decisions, and creating regional transformation funds (Klüh et al. 2026b).

3. Stronger political oversight of the financial system, as proposed by Sorg (2025). This would direct capital allocation specifically toward sustainable sectors. Public and private financial actors would be integrated into a joint strategy that defines clear criteria for prioritizing "sustainable" investments. Centrally established guidelines (e.g., taxonomy, investment programs) and decentralized implementation (e.g., by banks, municipalities, regions) would thus go hand in hand.

Such a three-pronged approach would combine both models in a way that addresses two main concerns about democratic planning. The problem of *excess technocracy* would be mitigated by local participation and decentralized financial institutions. The problem of *excess fragmentation* would be reduced through clear strategic guidelines and coordinating institutions. The combination of French and German governance elements would enable a system that is neither purely top-down nor purely bottom-up but rather organizes a structured interaction between different levels.

A "federally coordinated investment planning", in which the EU sets the direction (decarbonization, resilience, social balance), member states develop concrete strategies, and regions and local institutions manage the actual investments would not only link governance levels politically, but also materially, it would create a new transformative financial system, which would be largely public and strongly democratized (Klüh 2022). It combines the strategic capacity of centralized systems with the institutional diversity of federal structures, thereby developing a form of democratic planning that is both capable of acting and firmly rooted in society.

5. Conclusion

Europe needs a clearly defined transformation strategy that spans multiple sectors (energy, industry, mobility) and levels of governance. Recently, many observers have pointed to China as a system that has been able to use financial infrastructures to combine central steering and planning with decentralized implementation. Would it be possible to transfer elements of this system to the EU while simultaneously democratizing the planning process? The preceding analysis suggests that Europe features infrastructures that could be used for such a purpose. It has networks of developmental, public savings and cooperative banks that operate across multiple governance levels. Its multilevel governance framework has enabled regional and local co-design of investment priorities.

Important Projects of Common European Interest (IPCEIs) already function as a Western analogue to Chinese guidance funds. Cross-country co-financing for strategic sectors is gaining ground, with high aid intensity. The Commission works alongside the EIB on financial

structuring. This structure allows member states to finance major cross-country projects, with two battery and four hydrogen projects approved so far. The 2025 Clean Industrial Deal State Aid Framework (CISAF) pushed this further by introducing new aid categories, allowing state equity, loans, or guarantees to draw in private investors.

However, all these initiatives still represent superficial additions to a sustainable finance architecture that is simply transplanted onto financialized logics. To effect real change, a move towards more transformative financial circuits is necessary. Such a move could be realized in Chiapello's two-steps approach. At a minimum, this first step would require reviving the original momentum and strengthening the European Green Deal. Building on such a deal, more radical (but currently unlikely) changes could be envisioned, such as those proposed by Klüh et al. (2026b).

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The Climatization of State-owned Investment Banks? How Institutional Logics Shape Green Finance

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Abstract

State-owned investment banks (SIBs) are widely regarded as critical vehicles for financing the green transition, yet scholarship knows little about how firmly climate concerns have been anchored in their mandates, business models and organizational routines. This chapter addresses this gap by adapting Aykut and Maertens' framework of climatization. It combines this framework with an institutional logics perspective that specifies the conditions under which climatization unfolds. Drawing on a survey of all 19 German SIBs and 27 expert interviews, we identify three patterns. First, climate is absorbed into an elastic sustainability frame in which decarbonization figures as one action field among several; second, climatization is predominantly driven by regulation, producing an increasingly sophisticated organizational infrastructure that, however, remains largely separate from allocation decisions; third, SIBs climatize as mediators between political will and financial markets rather than as public political actors with a stake in climate outcomes. We conclude that the limits of public climate finance are not primarily effects of the current backlash, but

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are inscribed in the very institutional designs of state-directed finance in democratic capitalism.

1. Introduction

When the Paris Agreement and the UN Sustainable Development Goals (SDGs) marked their 10th anniversary in 2025/2026, international climate action had reached an impasse. Persistent political-economic gridlocks at the annual COP meetings were joined by the US administration's decision to withdraw from the Paris Agreement, bolstering widespread concerns over a multi-scalar backlash to climate policy (Patterson 2023). As the introduction to this volume documents, the standstill and dismantling of (somewhat) ambitious climate and sustainability policies has been especially prominent in the self-declared frontrunning European Union (EU), encompassing a partial overhaul of its sustainable finance architecture (cf. Mertens/Van der Zwan 2025). However, the extent to which this backlash can substantially undo changes at the level of bureaucracies, international organizations and (public) financial institutions may largely depend on the degree of previous institutionalization of climate concerns in these venues over the past decade. How firmly sustainability practices have been integrated into an organization's mandate, activity and professional structure is a key indicator for their resilience should the green transition continue to face significant headwinds.

This chapter explores the institutionalization of climate concerns in the case of state-owned investment banks (SIBs), a central type of organization at the state-finance nexus. SIBs are largely understood to be a critical vehicle for financing the green transition (Geddes et al. 2018; Marois 2021; Mertens/Thiemann 2023; Mertens/Stockmann 2026). In fact, data from the Climate Policy Initiative (2023) has shown that national development banks were the single largest provider of climate finance in the last decade, joined by their multilateral counterparts and other state-owned financial institutions. Due to this dominance, public funding is much more central to mitigation and adaptation than the mainstream sustainable finance discourse regularly implies. And as long as global climate action rode with the wind in the early 2020s, these organizations published roadmaps and taxonomies to support large-scale decarbonization while their public owners increasingly

grew wary about state-bank leaders who would ignore the challenges posed by climate change.[1]

While scholarship has a solid understanding that SIBs matter in the climate transformation, it lacks a clear understanding of how strongly this role is anchored in their governance and mandate, their business models, policy activities and financial instruments. As government-mandated, public-purpose financial institutions, SIBs have long been researched for how they fulfill their missions and how they deal with competing demands, politicization and new challenges (see e.g., Babb 2009; Mertens/Thiemann 2022; Weaver 2008). Opening the black box of organizational adjustment towards imperatives of climate change has, however, rarely occurred within the remits of political economy and economic sociology.

We seek to address this gap by mobilizing the framework of *climatization* that Aykut and Maertens (2021) built for the analysis of climate change-induced developments at international organizations. It offers a heuristic for assessing climate-directed practices and their underlying motives, which makes it a promising starting point for the case of state banking. To account for the specific characteristics of the state-finance nexus, we add insights from the early literature on *institutional logics* (Alford/Friedland 1985). Supporting the analysis of macro-structure and agency at the organizational level, we offer a framework for examining how organizations at the state-economy boundary adjust to demands for decarbonization. Our empirical application of the framework is based on an in-depth qualitative study of the German system of SIBs, comprising 27 expert interviews and a comprehensive survey of key business data and communication material of all 19 German SIBs on the federal and state levels.[2]

Our analysis shows how the intersection of logics of accumulation and competition, logics of political control and legitimacy, and logics of allocation produce specific forms of climatization at SIBs that are more attuned to adaptation to change than to ambitious climate action. Despite genuine attempts to integrate sustainability in their business

[1] The most prominent case at the time was the replacement of David Malpass as World Bank president by Ajay Banga (see Financial Times, 20 October 2022).

[2] We draw on the same dataset as Mertens and Stockmann (2026) but shift the focus from state capacity to a meso-political economy of organizational change in the green transition.

models, the core task of SIBs is to translate political priorities into financial products. This can create barriers to sustained climate action within the organization – especially once changes in government and the (geo-)economic environment occur. Consequently, we conclude that the limits of sustainable finance do not simply result from backlash politics: they are structurally engrained in the contradictions between institutional logics. This, in turn, makes it harder for state institutions to withstand external pressure to scale down climate action.

To substantiate this assessment, we first discuss SIBs' principal role in green finance (2), before delineating our conceptual framework (3) and empirical strategy (4). In the ensuing analysis, we apply the framework to examine the climatization of SIBs in the German political economy (5). We conclude with broader implications for a political economy of green finance and climatization (6).

2. SIBs and Green Finance

SIBs are financial institutions that are majority-owned, and governed or overseen, by states and their ministries. Employing a broad repertoire of financial instruments such as equity, grants, loans and bonds, they are usually equipped with state guarantees to fulfill a mandate that lays out specific public objectives. As a result, SIBs across the globe may differ, among other things, in the type of financial support they provide to areas such as infrastructure, housing, SMEs, education or agriculture (see e.g., Griffith-Jones/Ocampo 2018; Mertens et al. 2021).

Scholars have long debated the risks and rewards that are associated with this type of financial institution. Economists have largely converged on the view that SIBs can be instrumental to fixing "market failures", the biggest of which arguably is the continuous financing of fossil fuels despite rising GHG emissions and ensuing climate change (Stern 2008). We align with the more complex perspective of heterodox (political) economists, who have emphasized that SIBs are key for addressing major societal challenges:

> "In their challenge-led role, SIBs are not simply fixing failures from markets; they are shaping and creating new technologies, firms and sectors, and, ultimately, markets – all of which will help to address a societal challenge." (Mazzucato/Penna 2016: 318)

In this sense, green finance at SIBs may encompass a more ambitious use of financial instruments, aiming to mitigate ecologically harmful economic activities, increase their ecological sustainability, or enable their adaptation to climate change (Babic 2024: 3). SIBs can focus on specific innovations or entire sectors and develop new financial products and business practices for this purpose. In doing so, they take on a central role at the intersection of environmental and financial governance. Their most important function may be the provision of (concessional) patient capital that addresses the longer time horizons of green projects (also see Wullweber et al., this volume).

Against this background, several studies examine what SIBs or development finance institutions bring to the table in an emerging green finance regime. For instance, Geddes et al. (2018) analyze the role of the Australian Clean Energy Finance Corporation, the British Green Investment Bank, and the German KfW in processes of national structural change. They show that the role of these institutions in furthering energy transitions moves beyond the provision of finance, highlighting how SIBs help to address technical and commercial risks as well as revenue uncertainty. In a similar vein, Zhang (2022) has emphasized that SIBs, partly through advisory services, support general policy coordination in green industrial policies. Still, progressive academics and NGOs, while sympathizing with these accounts, have pointed to the contradictions in the field: many SIBs and development finance institutions have considerable assets in the fossil fuel sector, thereby not fully exploiting their potential for just energy transitions (Marois 2021; Oil Change International 2026).

This is much in line with more critical approaches in political economy, stressing that SIBs and development banks can fall prey to the interests of private capital if their de-risking instruments do not come with stricter (green) conditionalities (Gabor/Braun 2025; Bulfone et al. 2025). Prioritizing financial de-risking and the mobilization of private capital can impose structural limits to SIBs' capacities for fostering deep decarbonization and transformative change (Mertens/Stockmann 2026; Viens 2026; Mocanu/Thiemann 2025).

Taken together, this literature establishes that SIBs matter and where their aggregate limits lie. What it does not tell us is how climate concerns travel into an organization's daily business. We therefore ask: How are climate concerns integrated into day-to-day operations, and how are they aligned with the institutional logics that govern state-directed finance?

3. Conceptual Framework: Climatization and Institutional Logics

Our framework combines two bodies of work that have not yet been brought together: climatization, which specifies what climate-related practices look like, and institutional logics, which specifies what conditions them. We review each in turn before adapting the combination to SIBs.

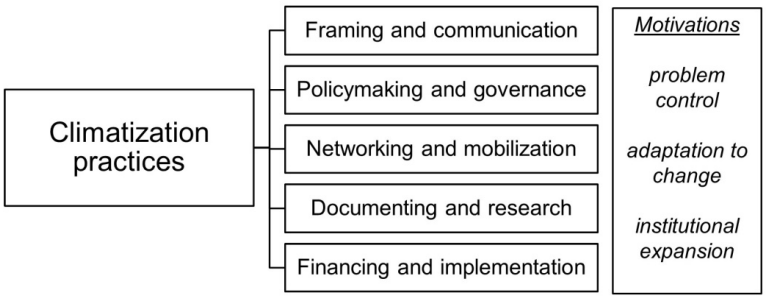
The question of the transformative ambition of (global) climate governance is raised by the "climatization" approach put forward by Aykut and Maertens (2021). They define climatization as

> "[…] the process through which an issue, actor or institution is framed as related to anthropogenic climate change and relevant to climate politics. More specifically, this frequently leads to the extension of the jurisdiction of climate governance institutions, the inclusion of the climatized issues, actors or institutions in climate policy networks, and their treatment according to the dominant logics of the international climate regime" (Aykut/Maertens 2021: 502).

Correspondingly, the authors conceptualize climate change – and the ensuing international agreements, notably the Paris agreement 2015 – as directly affecting a wide variety of sectors that can lead to a change in both discourses and practices. In this sense, climatization (1) "can come in different forms and degrees, often appearing as purely symbolic or strategic, and less often as precautionary or even transformative" (ibid.: 504); (2) "may well challenge established hierarchies by setting new priorities, disrupt established routines in many settings and organizations, and empower new actors and their issues and solutions." (ibid.: 513); and (3) is accompanied by "ambiguities, frictions and resistances" (ibid.: 504).

Aykut and Maertens propose a multi-part grid, which maps five sets of practices and three distinct, yet empirically overlapping, motives that are underlying actors' climatization moves (Figure 1). These motives contribute to understanding climatization as a power-driven dynamic, that is, "a social process in which actors advance their framings, build coalitions for specific solutions, or extend their sphere of action and legitimacy" (Aykut/Maertens 2021: 12). In this regard, climatization may reinforce existing power relations and routines, *or* it can wield disruptive potential, uncovering inclusion and exclusion mechanisms of (global) governance, patterns of responsibility and questioning established routines of actors and institutions.

Figure 1: Climatization practices and motivations



Source: own adaptation from Aykut/Maertens (2021)

While building on earlier uses of the term climatization (e.g., Oels 2013; Grant et al. 2015), Aykut and Maertens themselves state the wish that their original analytical grid may "be expanded and refined by future research" (Aykut/Maertens 2021: 507) and that "further research is needed to obtain a more fine-grained understanding of such encounters, when two fields overlap or expand into each other's territory" (ibid.: 514). Indeed, the climatization framework has so far seen little conceptual development or empirical application in fields such as (climate) finance or political economy more broadly (for an exception see Maechler 2026). Exploring the merits of the concept for the organizational dynamics at SIBs thus requires adaptation, not least because it was developed to analyze international organizations' – not domestic financial institutions' – increasing linkage to climate issues.

Our entry point is Aykut and Maertens' observation that the form and degree of climatization is beset by "ambiguities, frictions and resistances" and not per se unfolds as a transformative "climate logic" in the sense of a new dominant normative-practical orientation. Rather, climatization is dependent on actors' and institutions' own respective and previous "social logics and mechanisms" (ibid.: 503).

As a baseline scenario for what kind of social logics affect climatization at SIBs, we take cues from an older strand of the so-called institutional logics perspective that emphasized the "power of contradictions" arising from the institutional development of democratic capitalism (Alford/Friedland 1985). In this perspective, an "institutional logic" is

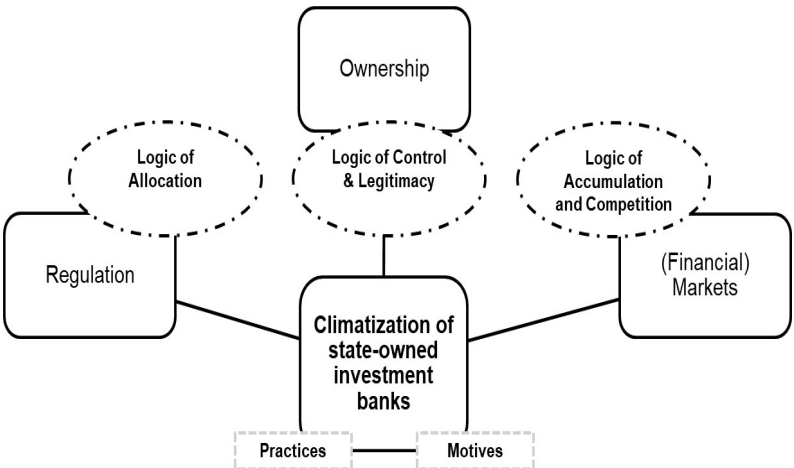
> "an empirically and historically variable combination of explicit norms governing behavior […], a legal rule with a sanction attached […] and an implicit premise of action that permeates all social relationships […]" (Alford/Friedland 1985: 428)

From the macrostructure of the capitalist, democratic nation-state, Alford and Friedland derived three, potentially contradictory logics that govern society and, by our extension, SIBs. First, a logic of accumulation and competition that emerges from capitalism and requires the reproduction of economic growth and the imperatives of capitalist market dynamics. Second, a logic of political control and legitimacy, based on the institutions of democracy. Third, a logic of rationalization and allocation that is derived from the (potentially autonomous) bureaucratic apparatus of the state and its regulatory powers (Alford/Friedland 1985: 429ff.).

While the institutional logics perspective has seen significant expansion and application within different strands of sociological institutionalism, we strive for a parsimonious heuristic that facilitates a better understanding of climatization processes at SIBs. From the existing scholarship on development banking (Griffith-Jones/Ocampo 2018; Mertens et al. 2021), we are able to extract three channels through which the social/institutional logics of SIBs are usually constituted: regulation, ownership, and (financial) markets. These channels are expected to affect the degree and form of climatization. In this sense, discourse and practices of SIB's (non-)alignment with climate action are results of their institutional embeddedness.

In summary, and in line with the original climatization framework, we treat SIBs as long-established institutions that have been there 'before' climate change emerged as a pressing issue of (global) governance. As a consequence, they follow established practices and logics that become subject to processes of climatization. We therefore expect climatization at SIBs to proceed by addition rather than integration, and to position them as *mediators of* rather than *advocates for* climate policy.

Figure 2: Heuristic model of how institutional logics shape the climatization of SIBs



4. *Empirical Strategy: Climatization and German Sibs*

In this section, we first provide a brief overview about the empirical case and the material available for analysis. In a second step, we operationalize the climatization framework and explain our coding approach.

4.1 Case Selection: Assessing the German SIB System

In the empirical part of this paper, we utilize the adapted climatization framework to analyze the German SIB system for two main reasons. First, Germany, which had long been applauded as a frontrunner in energy transition amid persisting challenges of structural transformation in certain regions, has been facing increasing political tensions. This includes the question of how to sustain and finance a low-carbon transition domestically. In 2021, the Federal Government's Sustainable Finance Advisory Board (SFB) recommended making use of SIBs and advancing them to become "transformation banks" (SFB 2021). Accordingly, centering climate goals at SIBs was acclaimed as a political strategy within elite discourse. Second, Germany has one of the most encompassing SIB systems among (European) industrialized countries.

It comprises 19 federal and state-level institutions that differ considerably in size, development and business structure. This makes the German SIB system a worthwhile initial case for applying the climatization framework, as we would expect to observe a range of climatization practices and motives among SIBs.

To gain insights into the dynamics of climatization within the German SIB system, we collected comprehensive empirical data. A survey of business and sustainability reports and additional publications of the 19 banks provided us with key business data of the SIBs, including those related to climate funding. Moreover, in this survey, we gathered information about the SIB's governance, legal structure and frames in their sustainability-related communication. Alongside this survey, we conducted 27 interviews with experts in the German SIB landscape, including SIB staff, policymakers and stakeholders. In this part of the study, we did not aim to gather representative insights into all 19 German SIBs but primarily focused on selected cases, reflecting different SIB sizes, the federal and regional level, and Western and Eastern German states. The interviews were conducted between February 2024 and March 2025 and were based on a semi-structured questionnaire, targeting different aspects of SIB practices and relations that could not be traced through desk research. The data was incorporated into an abductive content analysis using MAXQDA. The analysis was abductive in the sense that we used the adapted climatization framework as a deductive code set, but remained open to refining the code framework and inter-code relations during the process.

4.2 How to Observe Climatization in Sibs: Coding Approach

As introduced above, Aykut and Maertens have proposed a set of practices and motives to understand climatization. In the following tables, we provide a summary of their original content, and how we expect to observe them in the context of SIBs. Operationalizing *climatization practices* (Table 1) for the case of green finance at SIBs also implies that certain practices, e.g., financing and implementation, will most likely be of greater importance than for international organizations, as implied in the original climatization framework. Others, such as mobilization, may be of less importance.

Table 1: Categories of climatization practices

Category	General Description	Application to SIBs
Framing & Communication	Rhetorical practices of agenda-setting and urgency in climate policy; acclaiming/denying responsibility	SIBs situate themselves (are situated) as actors in climate policy; key activities of SIBs are linked to climate issues/climate policy; SIBs claim a responsible role in the climate transition (or reflect on such)
Policymaking & Governance	Adoption of external climate policy measures and formation of internal governance structures; can include lobbying.	SIBs engage in/are invited into political discussions about general climate-related policy measures, adopt climate-related policy and regulation and the processes by which they do so; establish internal climate-related organizational structures and processes
Networking & Mobilization	Public advocacy for climate causes/solutions; building or including actor networks; protest behaviors.	SIBs highlight the involvement of other actors in their structures (i.e., boards, institutionalized forums); engage in (financial sector) networks dedicated to climate and sustainability challenges; advocate for/establish climate-related instruments with other (financial) actors
Documenting & Research	Production/distribution of climate knowledge, metrics and forecasts, including reporting on risks and performance	SIBs establish or implement climate-related benchmarks and metrics to assess their own performance; SIBs publish climate-related expertise
Financing & Implementation	Direct steering of operations and interventions: climate-proofing, funding third-party projects, technical assistance.	SIBs establish proofing systems with direct impact on their investment and promotional business; SIBs exclude certain sectors from their business; SIBs set up dedicated programs to support decarbonization; SIBs provide additional services to customers to support the implementation of climate-related projects/ programs

Concerning *climatization motives* (Table 2), we operationalize these as different degrees of SIB responses to decarbonization imperatives. While they express diverging levels of ambition, it is important to note that Aykut and Maertens point out the strategic or non-strategic use of climatization practices. Accordingly, motives should not be misunderstood as necessarily strategic choices of SIBs. Lastly, other than practices, motives are formulated on a more abstract level, requiring greater interpretive caution. As (self-)constructed objects they will often coincide with framing and communication practices.

Hence, in the following analysis, we treat the original grid as the analytical frame while retaining conceptual openness and flexibility. We believe this helps expanding the scope of the climatization framework.

Table 2: Categories of climatization motives

Category	General Description	Application to SIBs
Problem Control	Engaging in climatization practices to react to and control climate-induced problems, aiming for real-world impact beyond the organization.	Climate change is presented as a "problem" to core SIB activities; practices of SIBs are framed as reacting to (quick/ disruptive) developments in climate policy and or external (climate-related) shocks; market dysfunctionalities/allocation problems are addressed by SIB action
Adaptation to Change	Proactively initiating organizational or operational change to deal with a changing environment driven by climate change.	SIB practices are framed as being able to deal with 'new' societal demands and expectations; practices of SIBs are framed as preventing/controlling negative effects on SIB operations
Institutional Expansion	Widening the scope of organizational capacity and authority to obtain a more central role in climate action.	SIBs pursue an expansion of their competencies/capacities in the context of the climate crisis; SIBs frame their actions as a "shaping" or "challenge-led" role

5. Case Analysis: The Climatization of German Sibs

In presenting our results, we do not proceed category by category. Instead, we disentangle three patterns that cut across the dimensions of the framework. Taken together, these patterns characterize the particular form climatization assumes at the state-finance nexus. First, we show how the guiding term of "transformation" displaces climate as the reference point of SIBs' framing and financing practices. Second, we trace how regulation has become the principal engine of internal governance and documenting practices, and why this engine stalls at the boundary of the funding book. Third, we examine how SIBs enact climatization as mediators rather than as public political actors, and how this shapes the networks they build and do not build.

5.1 The Contested Meaning of Transformation: Framing, Mandates, and Ownership

Climate and sustainability have become a focal reference across all German SIBs, publicly backed under the heading of "transformation banks" (Deutsche Bundesregierung 2021; SFB 2021; Teubler et al. 2022). This is not merely rhetorical or ceremonial. Our survey shows that "environmental protection" formed part of most German SIBs' initial mandate; in the 2000s, several banks additionally received an explicit mandate in the areas of renewable energy or energy efficiency; and more recently three state-level SIBs – those of Baden-Wuerttemberg, North Rhine-Westphalia and Schleswig-Holstein – obtained mandates covering climate protection and adaptation. In the terminology of our framework, framing and communication practices are well established and are backed by policymaking and governance moves at the level of the mandate itself. They are also collectively codified:

> "SIBs consider sustainability to be an important part of their public mandate and a central guiding principle of their business activities. Sustainability aspects are an essential element of the corporate culture of SIBs and their respective business and risk strategies. Based on this responsibility, the SIBs promote the transformation toward a sustainable economy and society and are committed to their social responsibility and to intensive dialogue with their stakeholders" (Sustainability Declaration of the Conference of German SIBs: Förderbankenkonferenz 2023).

What is striking about this codification, through the lens of the climatization framework, is its reference point. It is not "climate" but "sustainability" that anchors the declaration, and the same holds across corporate reports and interviews, where interviewees routinely locate "the entire ESG basis […] in the DNA of SIBs" (Interview 5).[3] This matters analytically, because climatization in the sense of Aykut and Maertens presupposes that an issue or actor is not only linked to climate change but treated according to the dominant logics of the climate regime. What we observe instead is the absorption of climate into a broader and more elastic sustainability frame, in which decarbonization figures as one action field among several. Data compiled by the German public banking association illustrate the point: of some 250 promotional offerings that German SIBs classified as addressing "transformation," 84 per cent address a single transformation area only, and just 16 per cent cut across several (VÖB 2023). Climate and the energy transition sit alongside circular economy, mobility, agri-food systems, pollution, digitalization and social objectives as parallel program silos rather than as a cross-cutting orientation. This suggests that climatization at SIBs proceeds by addition, not integration.[4]

This elasticity is not as much incidental as it is productive, because it is what allows the meaning of "transformation" to remain both contested and flexible. One interviewee pinpointed this ambiguity:

> "Does transformation bank mean, as it is perceived by the public, that I have a really great, clean balance sheet – or is my job to help the economy get there?" (Interview 7)

In our material the second reading clearly dominates, and it structures how SIBs understand climate finance. A "do no harm" perspective, expressed in thresholds and sectoral exclusion lists, is the most limited: such lists are now commonplace, but their everyday relevance is mixed.

[3] The full list of interviews can be found at the end of this chapter. Translations were done with the support of Claude Opus 5.

[4] One illustration of which is the dominant framing used by leading federal KfW as being "the digital transformation and promotional bank" helping the "twin transition". There are, however, good reasons for following a broader conceptualization of sustainability; one which includes issues of biodiversity or planetary boundaries as well as equity and justice perspective. Whether such a more demanding understanding is actually implied in this elastic frame is a different question.

One interviewee describes exclusions as "really a marginal issue" (Interview 23) and they are criticized from within because they are seen to obstruct the accompaniment of carbon-intensive firms (Interview 2). Innovation finance, supporting technologies that cannot yet attract commercial capital, is less pronounced (Interview 15). Dominant is transformation finance in the narrower sense, i.e., funding that decarbonizes established businesses and infrastructures. The choice among these is not simply a technical matter of portfolio classification. It determines who is eligible for public credit, and it legitimizes continued lending to sectors that a "clean balance sheet" reading would exclude. This a legitimation that SIBs, given their mandate to serve regional economies without discrimination, both need and supply.

The consequence, we suggest, is a framing practice that operates defensively rather than as ambitious agenda-setting. Even the label itself has become politically costly. As one interviewee at the lead institution put it, the term "was then pretty much burned by the political squabbles […] Besides, it feels as if everyone understands something different by transformation, and overall it no longer has positive connotations" (Interview 24). Where the climatization framework anticipates that a climatized actor extends its jurisdiction and pushes climate framings outward, German SIBs are managing a contested vocabulary inward. The logic of accumulation and competition supplies the terms in which climate objectives must be justified as support for the existing industrial base whereas the logic of political control determines how far that justification can be stretched.

5.2 Regulation as Engine and as Ceiling: Internal Governance and Documenting Practices

To the extent that framing is contested, or non-binding, internal organizational change is comparatively well advanced – and it has a clearly identifiable driver. Practically all German SIBs have by now established organizational units for sustainability-related tasks, ranging from directorates at the larger banks to single staff positions at the smaller ones. Here too, sustainability rather than climate is the reference point, and climate-specific concerns are addressed most prominently with regard to the banks' own corporate operations, where scope emissions are measured and reduction strategies developed. This is the least con-

sequential arena of SIB activity, as interviewees themselves readily concede, but it is the one where reporting frameworks work most directly.

One main engine of this internal development, according to our data, is regulation. Sustainability- and climate-related rules specific to the banking sector, together with overarching frameworks such as the EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD), are consistently described as the decisive impulse for organizational change. In the context of our framework, this is a regulatory channel feeding a logic of rationalization and allocation, and it operates with considerable force because it converts a contested political aspiration into a compliance requirement. Sustainability managers, who often are "lone wolves" in smaller institutions, are outspoken about instrumentalizing it:

> "Our greatest ally is regulation. But that is also a double-edged sword." (Interview 4)

The double edge has two components. The first is about resources. Regulation legitimizes engagement with climate concerns, but it also allocates capacity to compliance rather than to strategy. Interviewees describe management boards that reason strictly along the boundary of obligation: "as long as the bank does not have to do something, we do not do it either. The management board says quite quickly: 'Do we have to do this? Are we regulatorily obliged or forced to? Yes or no?'" (Interview 10). One sustainability manager draws the implication with unusual sharpness: "personally I find it somewhat difficult that this ends up being the driver. Because regulation is, in the end, regulation, and then it is about compliance. […] Actually, sustainability begins where compliance and regulation end" (Interview 11).

The second component is that the regulatory frame is a poor fit for the business SIBs actually conduct, which turns compliance into a site of conflict rather than of ambition. German SIBs, via the VÖB, lobbied intensively against their inclusion in the German transposition of the CSRD, arguing that transformation finance is not comparable to the business of other banking actors (VÖB 2024). Their objection is not without substance since the EU's sustainable finance architecture is calibrated to large, capital-market-financed corporations, while the core clientele of state-level SIBs – municipalities and SMEs – falls below the reporting thresholds. Surveys of SMEs confirm the mis-

match from the other side. Reporting obligations reach them indirectly through value chains without necessarily improving their access to green capital (see Knoll, this volume). The strongest driver of climatization inside SIBs is simultaneously the object of their most sustained collective political intervention; and it is conducted, notably, in defense of the state-banking field rather than of climate objectives.

Where the regulatory engine has been most productive is in documenting and research practices. Across the German system, SDG mapping, i.e., the attribution of funding volumes to specific Sustainable Development Goals, has emerged as a mainstreamed practice, used by 14 SIBs as of 2024. Its diffusion is not purely compliance-driven and interviewees describe it as an instrument of internal mobilization:

> "For many SDGs were a foreign concept. When we started the mapping and got a lot of colleagues on board, they started to develop an understanding for the topic and that we as an SIB could make an impact. Everyone who was just seeing their own program was now seeing the big lines. That's beautiful and it changed minds." (Interview 2)

Documenting practices, in other words, do organizational work that framing alone does not. They build a somewhat shared understanding of impact across departments and thereby underpin what might be called a climate identity within the bank. Some interviewees explicitly distinguish this from compliance: "we did it [impact measurement] more out of our SIB role. We want to understand what we achieve with the money we deploy" (Interview 13). Still, this internal work rests on a cultural foundation as much as a procedural one. Interviewees describe colleagues who deliberately chose an SIB over a commercial bank in order to make a societal contribution (Interview 8), and sustainability managers stress that their agenda advanced only where the management board legitimized it (Interview 16). That commitment nonetheless operates within a firmly delimited role, which one interviewee summarized as "we are the waiter not the cook" (Interview 24). Accordingly, a problem-control motive is clearly present in the organizational culture of German SIBs, but it remains bounded by a self-understanding that leaves the definition of goals to the public owner and the implied political function.

Yet this is also where the regulatory engine reaches its ceiling. The methodologies diverge substantially: some SIBs assign a program's

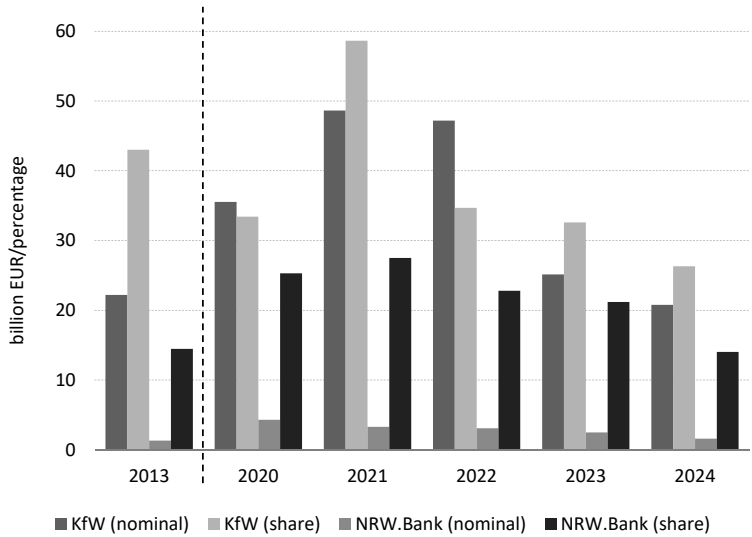
contribution proportionally across several SDGs, others allocate a program wholly to a single goal as soon as it has a positive impact. The resulting figures are barely comparable across banks, and they capture estimated positive impact only, since data on trade-offs or on realized effects are difficult to obtain (NRW.Bank 2024; IB.SH 2021). More fundamentally, the mapping does not travel into allocation decisions:

> "The SDG mapping helps to underline and to display this, above all in which areas we promote sustainable development. […] It makes things a little more transparent, but it is no more than that. It is not a steering instrument." (Interview 10)

The same disjunction appears in aggregate reporting on climate funding, where the figures cut against the direction of travel that a decade of climatization would lead one to expect. At KfW, the share of total funding reported as climate- and sustainability-related stood at 43 per cent in 2013. After peaking in 2021 at 59 per cent, it had fallen to 26 per cent by 2024. The NRW.Bank's share rose from 15 per cent in 2013 to 28 per cent in 2021, before falling to 14 per cent in 2024. Thus, Figure 3 displays a slightly modified bell-shaped evolution.

Some of this movement reflects policy turmoil rather than retreating ambition. The pandemic and the Russian invasion of Ukraine required the rapid mobilization of public funds through SIBs, shifting the relative composition of their portfolios even where recovery measures were officially framed as synergetic with climate objectives (Felder/Stockmann 2023). But the accounting basis is itself a moving target. Several SIBs do not report climate funding figures, others continuously develop and adjust measures and ratios that are difficult to validate externally. Whether the German SIB system as a whole has increased its climate impact therefore cannot be established from the system's own accounts. Documenting practices have become increasingly sophisticated and expanded impressively; but what they document is not comparable, and what they measure remains organizationally separate from what is decided.

Figure 3: Climate-related funding by KfW and NRW.Bank, 2013, 2020-2024



Sources: Annual sustainability reports of KfW and NRW.Bank. Note: own calculation of share of total annual funding in reported year. Data is not strictly comparable between banks, because it shows self-reported numbers based on banks' own (non-public) methodologies

5.3 Mediators, Not Advocates: Financing, Implementation, and Networking

The third pattern concerns the practices where the climatization framework leads us to expect the most visible expressions of SIBs as a climatized actor: financing and implementation on the one hand, networking and mobilization on the other. Yet it is precisely here that German SIBs are most restrained, both through the channels of ownership and (financial) markets.

On the financing side, climate imperatives have not substantively altered the instruments of promotional banking. Rather than generating new banking products, climate considerations have been built into existing funding lines, with established grant and loan programs tied to transformation-related objectives such as building energy efficiency. The instrument mix confirms this continuity: of the promotional

offerings addressing transformation, grants account for roughly 60 per cent and promotional loans for 37 per cent, with equity and mezzanine capital at 3 per cent; in the energy transition and climate protection field the ratio is reversed, with loans at 52 per cent with the latest data available (VÖB 2023). Innovation at the margins is real, as several SIBs have launched new loan programs with substantial interest rate reductions where sustainability criteria are met, or non-repayable matching components (Interviews 11, 27). Still, these remain incremental adjustments. On the refinancing side, green bonds remain the preserve of large institutions with access to international capital markets. Most medium and small SIBs lack a stable project pipeline and the fixed costs of a second party opinion outweigh a negligible funding advantage (Interviews 2, 10). One political official summarizes the gap between mandate and portfolio bluntly: "the product portfolio has to pay into precisely this objective [climate], and at the moment it does not do so yet. […] The shares are simply far too small, and as long as these figures do not rise, we have not met the goal. So 'symbolic politics' is a strong term at the moment, but I do not yet see any effect" (Interview 19).

What constrains the portfolio is only partly the banks' own ambition. It is also the fiscal and legal environment in which their programs are set. The KfW's promotional volume for the sustainable restructuring of medium-sized firms fell by around 42 per cent in a single year, from €19.5 billion in 2022 to €11.2 billion in 2023; grant funding for non-residential buildings, which had reached €6.7 billion in 2022, was discontinued outright when demand exceeded budget ceilings (Table.Media 2024). Loan volumes are capped by EU state aid rules well below the scale of major transition projects, and consortium finance with commercial banks, the only route to larger tickets, plays a marginal role in practice. Here the logic of political control and the logic of allocation work against each other, as political ambition is expressed in mandates and programs, while budgetary discipline and state aid law determine what those programs can actually disburse. Interviewees experience the resulting volatility as the central obstacle to credible climate finance, describing funding stops as the equivalent of "slamming on the brakes" (Interview 26).

Implementation compounds these tensions rather than resolving them. Climate-linked products are more complex, and complexity depresses uptake, as one interviewee notes: "high complexity and less inflow

equals more service, in order to get companies to make use of these funds" (Interview 15). SIBs have responded by expanding advisory and outreach activity – coined a "beyond banking" approach by one interviewee – assuming a counselling role formerly performed by house banks or energy agencies (see also Geddes et al. 2018; Zhang 2022). But this expansion runs directly into the second-tier structure of German promotional banking (Mertens 2021). Since most products reach borrowers through house banks, SIBs depend on intermediaries whose interest in climate objectives is limited: "everything an SIB comes up with, it first has to transport via a house bank. And the house bank has to be willing to bring the product to the man or the woman" (Interview 7; cf. Mertens/Stockmann 2026). This is the logic of accumulation and competition in financial markets, operating not as a constraint on ambition in the abstract, but as a concrete ceiling on the conditionality SIBs can attach to their money.

In turn, networking practices reveal what climatization at SIBs does not include. Sustainability and climate questions are regularly discussed in supervisory and advisory boards. Climate actors such as environmental organizations, think tanks, and regional climate initiatives, however, are absent from these bodies, with few exceptions (cf. Ötsch, this volume). Where economic stakeholders are present, they pull in the opposite direction:

> "We get no pressure there towards more sustainability. It is rather that we should observe proportionality, that we should not burden small and medium-sized enterprises with the regulation and the requirements. I would not necessarily speak of a tailwind." (Interview 4)

Most notably, the absence is not problematized; some interviewees consider stakeholder engagement to be of little consequence, arguing it "wasn't even that important" (Interview 9).[5] Nor did we find any mobilization activity in the sense of the original framework. This is consistent with an explicit self-understanding of political neutrality: "we never enter the political battle. We are, after all, a neutral institution. We have almost all parties sitting on our supervisory board and have to get along with all federal and state governments. That is why we are apolitical" (Interview 24).

[5] Despite this general impression, KfW initiated a sustainability advisory board in 2026 also comprising civil society representatives.

The networks that have intensified are of a different kind. Most importantly, horizontal exchange among German SIBs through the VÖB, through regional formats, and bilaterally has become more important with regard to climate-specific challenges of product design and regulation. Here, KfW seems to act as a standard-setter whose sectoral guidelines and impact metrics others adopt as orientation. What coordinates this network, however, is the shared need to 'speak with one voice' toward politics, regulators and customers, as in the joint position on CSRD transposition. In this sense, climatization seems to strengthen a sectoral field rather than a climate coalition. German SIBs, in short, climatize as skilled mediators between political will and financial products, but not as public political institutions with a stake in climate outcomes that drives institutional expansion.

6. Conclusion

Our analysis has shown that climatization practices are part of German SIBs' institutional development. In this respect, we have demonstrated the applicability of the climatization framework beyond the field of international organizations, extending it to domestic financial institutions at the state-finance nexus. At the same time, the incoming 'climate logic' does not simply install itself. It is refracted through the logics of accumulation and competition, of political control and legitimacy, and of rationalization and allocation that constitute these organizations through the channels of (financial) markets, ownership and regulation. Yet, the effects of that refraction are neither uniform nor one-directional. The result is a piecemeal rather than transformative adaptation to the "dominant logics of the international climate regime" (Aykut/Maertens 2021: 502).

Three findings structure this assessment. First, our analysis documents how climate is absorbed into an elastic sustainability frame that is anchored in the SDGs rather than the Paris Agreement, distributed across parallel program silos, and translated into a contested notion of "transformation" that legitimizes accompanying carbon-intensive sectors rather than exiting them (cf. Elliott 2023; Shishlov/Censkowsky 2022). Second, climatization is predominantly regulation-driven and thus animated by an institutionally-focused "adaptation to change" motive rather than by "problem control", i.e., the intended solving of climate

challenges. It has produced genuine organizational infrastructure such as sustainability units, SDG mappings, and impact measurement projects, but this infrastructure remains organizationally somewhat separate from allocation decisions, and it is contested by the very banks it changes. Third, SIBs climatize as invisible mediators.[6] Their self-understanding as apolitical agents of the state, combined with a second-tier business model that makes them dependent on market intermediaries, forecloses both the advocacy practices and the stakeholder openings that the original framework anticipates, at least so far. This resonates with research warning that climatization may remain discursive without triggering substantial economic or structural change (Buu-Sao et al. 2024).

The dependence on political owners is the pivot on which all three findings turn, and it partly distinguishes SIBs from the international organizations for which the framework was designed. Fiduciary ownership is a far more direct line of influence than member-state control, and it cuts both ways. It can enlist SIBs in ambitious programs and it can also withdraw them. The KfW's Paris-compatible sectoral lending principles, adopted from 2021, offer a compact illustration. In December 2022 a draft sectoral guideline for oil and natural gas became public in which the restriction to 1.5°C-compatible commitments was to be suspended for a two-year exceptional period, explicitly opening financing scope for oil and diesel power plants, gas pipelines, LNG terminals and refinery modernization, justified by the need to replace Russian fossil energy supplies (DIE ZEIT 2022).

The episode is instructive in three respects. It shows how quickly geopolitical priorities can override climate commitments where ownership is direct. It shows that the design of the commitment matters as by targeting activities rather than borrowers, the guidelines left the counterparty relationship untouched. And it reveals the participatory gap. Only where environmental organizations mounted a public campaign, and where a Green-led supervising ministry held a vote on the bank's supervisory board, did the measure meet resistance. Here, a climate coalition formed specifically because the issue became publicly visible, whereas it is absent from the everyday governance of the system we have described.

[6] In one East German state, SIB officials declined to be interviewed for this study just before state elections, as "transformation" topics were not to be highlighted in the context of radical-right resurgence.

It would be tempting to read our findings as a story about the current backlash against climate policy, and there is no doubt that the backlash is real: In Germany, interviewees speak of "war economy" as a guiding frame and observe that "the Green Deal will be devalued anyway" (Interview 7). But the limits we have traced are not primarily backlash effects. They were inscribed in these institutions before the political weather changed, and the institutionalization of climate concerns is not necessarily robust across SIBs. Moreover, the central promise of market-oriented sustainable finance governance that disclosure and moderate incentives will redirect capital is not what is being tested here: the state owns these intermediaries outright. Yet the constraints that bind them are the same. To name a few, the second-tier on-lending model, banking supervision, state aid ceilings and the fiscal subordination of promotional budgets together ensure that public ownership does not translate into steering capacity. Our case suggests that the sociopolitical critique of sustainable finance cannot stop at the boundary of private capital. Where the state builds market-mimicking institutions to act on markets, it reproduces inside them the very limits that market-based governance was supposed to overcome. Public ownership is a necessary but insufficient condition for a finance that is capable of transformation. In this sense, our chapter confirms Marois' (2021) contention that the social forces to which SIBs are accountable are the central levers for transformation, not the banks on their own.

For the climatization framework itself, our application yields two proposals. The first concerns the interplay of practices. Our analysis shows that practices are not independent registers but transmission mechanisms. Documenting practices build the internal identity on which financing practices might later draw, framing practices without organizational anchoring unwind, and implementation determines whether financing has any effect at all. Assessing the depth of climatization therefore requires attention to the linkages between practices, and their embedding into existing social logics. The second concerns ownership. The framework's multi-level governance context, developed for international organizations, does not capture the directness of the fiduciary relationship that governs (domestic) public financial institutions (but see Kentikelinis/Stubbs 2025 on the IMF). Consequently, further applications must reflect on the specific social relations the entity under scrutiny obliges.

Where, finally, might a less market-centered approach begin? Our analysis points to leverage points rather than to a program. It would require a definition of climate finance precise enough to distinguish transformation from continuation – the recurring plea in our interviews for defining "certain things that we don't do" (Interview 16). It would require that impact measurement, now well developed as documentation, be connected to allocation; equity endowment and direct, conditionality-based lending rather than budget-financed grant administration, so that SIBs can act as banks rather than as business agents; and a governance opened beyond the elite stakeholders currently represented in their boards (cf. Klüh et al., this volume). Whether such a reorientation is politically viable is another question, one our material answers cautiously at best. But it locates the problem not in the insufficient 'greening' of an otherwise sound institutional design, but in a design that was never built to steer a low-carbon transition.

7. List of interviews

ID	Interviewees	Date
1	Senior Staff Members, Climate and Energy Agency of a German State	6 Feb 2024
2	Sustainability Manager, Small Western German SIB	6 Feb 2024
3	Funding Consultant, Small Western German SIB	18 Mar 2024
4	Sustainability Manager, Large German SIB	4 Apr 2024
5	Sustainability Manager, Mid-Size Western German SIB	11 Apr 2024
6	Director of Advisory Board, Small Western German SIB	16 Apr 2024
7	Directors, Association of German Public Banks	22 May 2024
8	Speaker, Board of Directors, Small Western German SIB	3 May 2024
9	Director, Western German State Ministry for the Environment	13 May 2024
10	Sustainability Manager, Mid-Size Eastern German SIB	31 May 2024
11	Sustainability Manager, Large Western German SIB	14 Jun 2024
12	Sustainability Manager, Small Western German SIB	30 Apr 2024
13	Chief Sustainability Officer, Federal German SIB	10 Jun 2024

ID	Interviewees	Date
14	Sustainability Manager, Large Western German SIB	10 Jun 2024
15	Director Funding Advisory, Mid-Size Eastern German SIB	18 Jun 2024
16	Sustainability Managers, Large Western German SIB	1 Jul 2024
17	Executive Director, Small Western German SIB	9 Jul 2024
18	Director, Eastern German State Ministry of Finance	21 Aug 2024
19	Director, Western German State Ministry of Economy	23 Oct 2024
20	Director Stakeholder Relations, Large Western German SIB	27 Oct 2024
21	Director, Federal Ministry for Economy and Climate Action	12 Nov 2024
22	Desk Officer Policy, Chamber of Industry and Commerce	19 Nov 2024
23	Director, House Banks and Customer Relations, Large Western SIB	28 Nov 2024
24	Chief Communication Officer, Federal German SIB	10 Dec 2024
25	Director, Western German State Ministry of Local Affairs, Housing and Digitalization	13 Jan 2025
26	Representative of German SIB Association	3 Feb 2025
27	Directors, Product Development & Strategy, Federal German SIB	13 Mar 2025

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Sustainable Finance without Hegemony: Civil Society and Trade Union Perspectives in Germany and France

Silke Ötsch[*]

Abstract

Almost ten years after the Paris Agreement, sustainable finance strategies face political setbacks. This article argues that the current impasse reflects a fundamental "double inability to achieve hegemony": the EU's market-driven framework is supported by technical experts but lacks broad societal legitimacy, while alternative eco-social perspectives advanced by civil society and trade unions remain fragmented and lack the material and institutional power to challenge the dominant paradigm. Drawing on Institutional Logics and Cultural Political Economy, the study analyzes positions of German and French civil society and trade union representatives to examine imaginaries and institutional and structural power shaping sustainable finance. Findings show that German actors favor state-interventionist, systemically transformative approaches emphasizing social justice, while French actors adopt more pragmatic, state-planning-oriented frameworks aligned with industrial policy and European fiscal instruments. Both groups criticize the EU's reliance on transparency and voluntary mar-

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ket mechanisms, advocating mandatory regulation, public investment, and distributive justice. The comparison shows that the EU's strategically selective regulation reinforces existing power imbalances rather than empowering transformative actors. The article concludes by considering whether eco-social coalitions can overcome this deadlock.

1. Introduction

Nearly a decade after the 2015 Paris Agreement, which committed a broad coalition of political and financial actors to redirect global capital flows, progress towards this objective remains limited and politically contested. The political momentum behind ambitious sustainable finance regulations appears to have weakened in several important respects, while key actors have diluted or reconsidered some of their earlier commitments. The analysis presented here, focusing on the positions of German and French civil society and trade union actors, shows that this rollback is not a surprise but the predictable consequence of a fundamental deadlock. This deadlock can only be understood by analyzing the interplay of cultural interpretations, institutional structures, and material power relations, which I examine here through the lens of institutional logics and Cultural Political Economy (CPE) (Sum/Jessop 2013).

Against this background, the article argues that the central problem is not simply the absence of sustainable finance initiatives but their inability to generate broad societal consent and transformative capacity. Sustainable finance has not achieved hegemony as a comprehensive political project. The market-oriented approach institutionalized at the European level has gained regulatory authority and support among financial and technical actors, but it has not generated broad active consent among civil society and trade unions. At the same time, the alternative visions articulated by these actors remain internally diverse and lack the material and institutional resources required to displace the dominant framework. The resulting situation is therefore not a simple opposition between one hegemonic project and one coherent counter-project, but a field of competing imaginaries with unevenly distributed institutional and material power.

Empirically, this article examines the constellation through a comparison of Germany and France based on expert interviews. The com-

parison shows how strategically selective EU regulation solidifies existing power asymmetries without sufficient societal support to strengthen the sustainable component of sustainable finance. The article is structured as follows: First, Section 2 outlines the role that civil society and trade union actors have played in the introduction of sustainable finance. Section 3 then presents the theoretical framework, combining the concept of institutional logics with CPE. Section 4 provides the empirical analysis: Sections 4.1 and 4.2 explain the research design, methodology, and context; Section 4.3 discusses the findings for Germany; Section 4.4 addresses the findings for France; and Section 4.5 compares the two country cases and relates them to the EU sustainable finance strategy. Section 5 concludes by examining the dual inability to achieve hegemony: on one hand, the EU's failure to secure broad societal consent for its sustainable finance project, and on the other, the eco-social actors' failure to establish a coherent and institutionally powerful alternative. The paper closes with an outlook on how this deadlock might be overcome.

2. Civil Society, Trade Union Actors, and the Political Embedding of Sustainable Finance

The introduction of sustainable finance in Germany and France has so far been less successful than its proponents had hoped. It has neither mobilized the necessary funds nor developed Germany into the "leading Sustainable Finance location" envisioned in the German government's strategy (Deutsche Bundesregierung 2021: 17). Political countermobilization, particularly business associations' campaigns against bureaucracy, has also contributed to the weakening of parts of the EU Sustainable Finance Strategy through omnibus legislation. These developments raise questions about the role of civil society and trade union actors in the political embedding of sustainable finance. Both groups could, in principle, contribute to the implementation of the strategy, provided that it aligns with their respective goals and institutional interests.

Research on civil society engagement presents a complex picture. Civil society organizations have achieved important successes in specific areas, including fossil-fuel divestment, resistance to fossil-fuel infrastructure, shareholder activism, and campaigns that pressure banks

through "corporate shaming" (Gava 2025; Newell/Carter 2024; Ötsch et al. 2025). At the same time, these successes have not fundamentally altered the structures of finance. Greenwashing practices persist (Gava 2025), while investors have shifted some fossil-fuel investments to shadow financial markets (Schairer et al. 2025). NGOs have criticized the EU's Non-Financial Reporting Directive as a "missed opportunity" because of its limited scope and weak accountability mechanisms (Cerrato/Ferrando 2020). Similar concerns apply to the dilution of the Corporate Sustainability Due Diligence Directive (CSDDD) (Ötsch et al. 2025).

The political significance of these developments becomes clearer when sustainable finance is considered historically. In the postwar period, sustainable finance emerged partly as a philanthropically motivated civil society project (Ter Horst et al. 2007). During its institutionalization through the United Nations, however, the agenda was increasingly shaped by representatives of the financial industry and corporations. ESG initiatives consequently reframed corporate responsibility as a contribution to shareholder value (Hilson 2024). This shift did not eliminate civil society engagement, but it changed the terms under which such engagement could influence financial governance.

Civil society successes have also provoked political counter-mobilization. The achievements of divestment campaigns, for example, contributed to counter-campaigns by the American new right and other right-wing civil society actors. These campaigns labeled the ESG policies of major asset managers as "woke capital" and promoted anti-ESG legislation (Hilson 2024). Thus, sustainable finance has become contested not only between civil society and financial institutions, but also within broader political struggles over the role of markets, corporations, and the state.

Although civil society organizations have helped initiate political processes around sustainable finance, their proposals have not consistently been institutionalized in long-term and effective programs (Kern et al. 2026). Their activities are constrained by significant inequalities in access to capital, agenda-setting, and organizational resources compared with financial institutions (Ötsch 2026). Cooperation with financial actors can create additional dilemmas. By adopting the language and logic of the financial sector, civil society organizations risk the "financialization of civil society activism," whereby criticism of the fundamental structures of the financial system is displaced by a focus

on incremental reforms (Cerrato/Ferrando 2020). Close collaboration with financial institutions may therefore weaken the critical impetus of civil society and encourage reforms that remain compatible with the interests of financial capital (ibid.).

Civil society should not, however, be treated as a unified actor. Different organizations hold divergent positions on sustainable finance and pursue different strategies for influencing financial governance (Feola/Jaworska 2019; Ötsch 2024). They differ in their assessments of market-based instruments, their relationships with financial institutions, and their willingness to challenge the structural organization of finance. This internal heterogeneity is important for the analysis that follows. Rather than assuming the existence of a coherent civil society alternative, the article examines the different institutional logics through which actors interpret sustainable finance and its possibilities for transformation.

Trade unions constitute a distinct but related group of actors. They have participated in sustainable finance initiatives on a case-by-case basis but have generally not been driving forces behind the agenda. Nevertheless, they possess significant and largely untapped potential to influence the transformation toward a socio-ecologically sustainable financial system. Trade unions occupy a specific position between capital and labor. Through participation rights, collective organization, and employees' capacity to shape transformation processes, they can influence the allocation and control of capital (Bartelheimer/Ötsch 2025; Ötsch/Bartelheimer 2026).

Trade unions have helped integrate the principle of Just Transition into political programs and policy initiatives such as the European Green Deal and the US Inflation Reduction Act (IRA). In the context of the European Green Deal, they have called for a stronger role for public finance and for a form of productive development that is compatible with labor interests (Jäger 2022). In addition, trade unions sometimes join eco-social coalitions, for example to advocate for supply chain legislation. In financialized economies, union-managed pension funds and their investment behavior also play a role (Liu/Goldstein 2022). These different forms of influence give trade unions resources that distinguish them from many civil society organizations, even though their capacity to use these resources remains politically and institutionally constrained.

Trade unions must also balance potentially conflicting objectives. They may seek to safeguard jobs in carbon-intensive industries in the short term while supporting climate-protection goals in the long term. It is not always clear to what extent this jobs-versus-environment dilemma (Räthzel/Uzzell 2011) reflects a substantive conflict or serves as a pretext for delaying climate action (Fritz/Eversberg 2024). Moreover, trade unions, like civil society organizations, are structurally disadvantaged compared with the financial industry and face risks of financialization and co-optation (Cerrato/Ferrando 2020). Their institutional resources therefore do not automatically translate into a coherent alternative model of sustainable finance.

The comparison between civil society and trade union actors reveals a common dilemma. Both groups can influence political debates and, in some cases, initiate regulatory processes or form eco-social alliances. However, neither has yet developed a sufficiently cohesive institutional logic or power base to challenge the dominant model of sustainable finance. Their positions are internally differentiated, their resources remain unequal, and their demands are often incorporated into policy frameworks that continue to privilege financial-market mechanisms.

Against this background, the following sections examine how relevant civil society and trade union actors in Germany and France interpret and assess the Sustainable Finance Strategy. Rather than offering a snapshot of individual positions, the analysis reconstructs the institutional logics underlying these interpretations and strategies. It also examines how the introduction of the strategy is shaped by competing interpretations and power relations. To do so, the article combines the theoretical frameworks of Institutional Logics and Cultural Political Economy, developed in Section 3, and applies them to the German and French cases. The analysis ultimately asks whether the alliances observed among civil society and trade union actors have generated an eco-social coalition with sufficient material, institutional, and discursive power to challenge the dominant model of sustainable finance.

3. *Institutional Logics and Cultural Political Economy: Analytical Tools to Grasp the Hegemonic Capacity of Sustainable Finance*

The concept of *Institutional Logics* is a central approach in organizational and social research that deals with the cultural and structural patterns shaping thought and action in different societal subsectors, such as the family, religion, the market, and the state (Thornton et al. 2015). Thornton and Ocasio (1999: 804) define institutional logics as: "Socially constructed patterns of symbols and material practices, assumptions, values, beliefs, and rules by which individuals and organizations produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality". The analysis of institutional logics helps to understand the clash of different logics in processes of change and to assess whether coalitions of interest or opposition emerge.

CPE, as developed by Sum and Jessop (2013), goes a step further. It not only asks which logics are competing but analyzes the entire process of how these logics are created by strategic actors, asserted in competition with others, and finally anchored in social reality. CPE understands social reality as emerging from the interaction of three dimensions: the *semiotic*, the *material*, and the *institutional*. The semiotic dimension comprises narratives and imaginaries; the material dimension includes capital, resources, and technologies; and the institutional dimension consists of rules and organizations that connect meanings to material practices and stabilize social compromises. Because social reality is too complex for actors to grasp in its entirety, this complexity is reduced through two related processes: *semiosis*, through which actors create meaning through imaginaries, discourses, and narratives, and *structuration*, through which selected meanings become embedded in material institutions, organizational practices, and social relations (Sum/Jessop 2013: 3).

Structuration is therefore not a purely administrative process. It is politically contested: it stabilizes some imaginaries and constrains others, while existing institutions also shape which new imaginaries can emerge and gain influence. In the case of sustainable finance, structuration refers to the process through which particular understandings of sustainability become embedded in regulatory frameworks, financial products, reporting requirements, organizational routines, and investment practices.

An *imaginary* (e.g., sustainable finance) is an interpretive framework that helps actors understand a complex area of their environment and align their actions accordingly. CPE analyzes how a variety of imaginaries emerge (*variation*), how certain ones prevail in social and political struggles (*selection*), and how they subsequently solidify in institutions, technologies, and practices (*retention*), thereby shaping social reality (Sum/Jessop 2013: 23-24). An imaginary is not just an idea, but it only becomes effective when it is reflected in material structures – and conversely, material structures shape the emergence of new imaginaries. While concepts such as institutional logics also recognize this connection, CPE places greater emphasis on the strategic, often conflictual process through which this connection is established (Sum/Jessop 2013: 21-22).

The concept of imaginary is closely linked to Gramsci's concept of *hegemony*. In CPE, imaginaries are understood as elements of strategic projects through which actors seek political, intellectual, and moral leadership by presenting their worldview as common sense. Hegemony is achieved not only when an imaginary becomes widely accepted, but also when it is institutionally and materially embedded through processes of structuration. Power therefore shapes which competing imaginaries are socially selected, retained, and translated into institutions, policies, and practices (Sum/Jessop 2013: 74). *Strategic selectivity* describes how social structures like institutions, the state, or financial markets are not neutral but favor certain actors, strategies, and actions over others (Sum/Jessop 2013: 49). This strategic bias is inscribed in the form, content, and functioning of the structures, which means that some actors and strategies are better positioned to take advantage of the associated opportunities or to circumvent constraints (Sum/Jessop 2013: 67-68).

This theoretical framework allows for a two-step analysis. First, institutional logics are used to reconstruct the underlying assumptions and values of civil society and trade union actors. Second, CPE is used to explain the power dynamics and perceived blockages behind the competing logics. Building on this foundation, the analysis advances by integrating CPE, which not only describes the competing logics but also elucidates the underlying power relations and the barriers identified by the interviewees. This combined approach allows for an empirical substantiation of the "double inability to achieve hegemony" thesis.

4. *Civil Society and Trade Union Positions in Germany and France*

This section examines the institutional logics of civil society and trade union actors in Germany and France. It first outlines the methods and the political context of the interviews before analyzing how participants understand sustainable finance, the imaginaries underpinning their positions, and the prospects for translating these imaginaries into successful political projects. Drawing on the categories of Cultural Political Economy, the analysis focuses in particular on their material and institutional dimensions.

4.1 Methods

The perspectives of trade union and civil society actors were collected between 2023 and 2025 through expert interviews, supplemented by analyses of publications from these actors and other relevant actors and organizations, as well as academic literature. Civil society and trade unions engage broad segments of society who might not otherwise participate in issues of sustainable finance and are crucial for ensuring the legitimacy of a political project. In the German context, these positions were gathered and analyzed through 24 interviews with 27 experts during a first qualitative Delphi survey round, which was complemented by a second round. The second round enabled inquiries into the positions during the implementation process, the interviewees' reflections on the introduction of sustainable finance, the confrontation with differing viewpoints, and the opportunity to refine statements and discuss interim results. The survey of the shadow case, France, took place in 2025, during which nine interviews were conducted. Additionally, a meeting of French trade unions addressing issues of socio-ecological transformation was attended.

The interviews were conducted based on a qualitative, problem-oriented guide and analyzed using qualitative content analysis (Kuckartz 2018). The selection of interviewees aimed to qualitatively capture a broad spectrum of relevant actors from civil society and trade unions who are active at the intersection of sustainability – particularly environmental issues – and financial systems. The sample (a list of interviewees and their abbreviations can be found in the appendix) included

representatives from trade unions, environmental associations, development organizations, associations addressing societal issues related to finance and the economy, as well as NGOs working specifically in the field of sustainable finance.

4.2 The Political Context of the Interviews

The interviews were conducted against the background of an increasingly institutionalized but politically contested European sustainable finance agenda. The European Green Deal, the European Commission's 2018 Sustainable Finance Strategy, and related instruments – including the EU Taxonomy Regulation, the Green Bond Standard, the Corporate Sustainability Reporting Directive (CSRD), the Sustainable Finance Disclosure Regulation (SFDR), and the Corporate Sustainability Due Diligence Directive (CSDDD) – provided the central policy framework. Although these instruments differ in scope and function, they share an approach that assigns a central role to private finance and capital markets. They seek to promote sustainable investment primarily through classification, disclosure, transparency, risk assessment, and the redirection of capital. This approach reflects the recommendations of the High-Level Expert Group on sustainable finance (HLEG), which, following Carney (2015), presents climate change as a source of financial risk. If climate risks remain unaddressed, non-sustainable assets may become "stranded assets." Conversely, policies that make climate risks visible and establish a path for carbon pricing may create new economic opportunities (Carney 2015). The HLEG's recommendations therefore focus on information about the environmental impact of economic activities, the transparency and classification of this information, the measurement of climate risks by supervisory authorities and private actors, and "financial education," understood as the development of individual investors' knowledge (HLEG/Dombrovskis 2018).

The timing of the interviews is important because the EU framework was already being implemented but was also becoming politically contested. In early 2025, before the second German interview round and the French shadow study, the European Commission launched the *Omnibus package*, presented as an effort to simplify regulation and improve European competitiveness. The package created the prospect that parts of the legislation intended to promote sustainable finance

would be delayed, weakened, or withdrawn. The interviews therefore capture a period in which sustainable finance was simultaneously being consolidated as an institutional agenda and reconsidered through political struggles over regulation and competitiveness.

Germany had introduced several initiatives to advance sustainable finance in response to the EU Action Plan. These included the partial alignment of the development bank KfW with sustainability objectives, the issuance of green federal bonds, and the establishment of a Sustainable Finance Advisory Board (Kuhn 2022). The coalition government that took office in 2021 initially promoted sustainable projects through the Climate and Transformation Fund, with the Green Party representing a political force relatively close to the sustainable finance agenda (Ötsch 2024). However, conflicts within the coalition – including disputes over climate financing – undermined this political project. The subsequent change in government in 2025 further altered the political context, as the priorities of the new Christian Democrat-Social Democrat coalition placed less emphasis on ecological transformation.

France provides a contrasting context. Under Emmanuel Macron, the country had introduced several comparatively early instruments for sustainable finance regulation. The 2015 Energy Transition Law for Green Growth (Loi de Transition Énergétique), for example, required institutional investors to disclose environmental risks under Article 173 (Damiano et al. 2026). France also developed green budgeting, through which public expenditures are assessed according to their environmental effects in order to evaluate the coherence of fiscal policy with climate objectives. In addition, the social leasing program for electric vehicles illustrated an attempt to combine ecological objectives with social access, although the program was temporarily suspended because of budgetary constraints. These measures point to a stronger role for public institutions and fiscal policy in the governance of sustainable finance.

The German and French contexts thus differ in their institutional configurations and political trajectories, but both illustrate the contested character of sustainable finance. In Germany, the central issue was the instability of political support and the conflict over public climate financing. In France, the central tension concerned the relationship between state planning, public investment, industrial interests, and the limits imposed by fiscal and European policy. These differences pro-

vide the political background for the analysis of how civil society and trade union actors interpreted sustainable finance and assessed its transformative potential.

4.3 German Civil Society and Trade Union Perspectives

The German interviews reveal a multifaceted and partly critical understanding of *climate finance* and *sustainable finance*. Respondents did not use these terms consistently; rather, their meanings varied according to the interviewees' institutional backgrounds and political perspectives. Most participants, although they were experts, were not closely familiar with the specific details of the Sustainable Finance Strategy. Instead, they situated sustainable finance within broader debates about climate protection, social justice, economic transformation, and the role of the state.

4.3.1 Understandings of Climate Finance and Sustainable Finance

Some interviewees used *climate finance* in a broad sense to refer to financial flows, instruments, and regulatory measures intended to mitigate climate change or support adaptation. This understanding includes both public and private finance. One Attac representative interpreted climate finance as part of a broader transformation toward a circular economy, in which climate change represents the most prominent but not the only relevant concern (D5).

The term *sustainable finance*, by contrast, was often viewed critically. A representative of BUND described the definitions used in the EU Taxonomy as "unspeakable," particularly because they classify natural gas and nuclear power as sustainable (D12). Several interviewees associated the concept with greenwashing. A representative of the Plural Economics Network argued that sustainable finance often focuses on financing new green technologies while neglecting the necessary phaseout of climate-damaging industries (D22).

The German interviewees drew a distinction between financing individual green investments and financing a broader socio-ecological transformation. In their view, the latter requires not only new technologies and additional capital flows but also changes in production, con-

sumption, regulation, ownership, and social relations. They perceive the market-centered approach underlying much of the EU Sustainable Finance Strategy as inadequate for these goals.

4.3.2 German Interviewees' Imaginaries of Sustainable Finance

The interviews reveal several interconnected imaginaries. These imaginaries were not uniformly shared, nor did they form a fully coherent alternative program. These perceptions often directly contrast with the market-driven mainstream approach to "sustainable finance."

1. The imaginary of *Socio-Ecological Transformation*: The most comprehensive imaginary frames climate protection as part of a broader restructuring of society. It links ecological transformation to social justice, democratic control, and changes in production and lifestyles. Several interviewees preferred the term transformation to climate finance because it better captures the breadth of the challenge. One respondent referred to the need for a "complete cultural shift" (D14), while others (additionally) called for a broad mix of instruments, including regulation, public investment, taxing polluters/the rich, and education (D5,6,14,22,23). This imaginary therefore extends beyond the reduction of carbon emissions. It includes the organization of economic activity, the distribution of resources, and the democratic control of transformation processes. At the same time, it should not be treated as a unified or internally consistent position. The interviewees differed, for example, in their views on economic growth, post-growth approaches, industrial policy, and the appropriate balance between public and private finance.
2. The imaginary of the *Shaping and Intervening State*: A second imaginary assigns the state an active, strategic, and interventionist role. According to this perspective, the state should do more than establish general market conditions or provide incentives. It should set binding rules, prohibit harmful activities, and direct economic development toward socially and ecologically desirable outcomes. As one interviewee put it, the market cannot be expected to do "the right thing" automatically; climate-damaging activities must instead be made unprofitable through regulation (D7). Public finance is understood not merely as a means of reducing investment

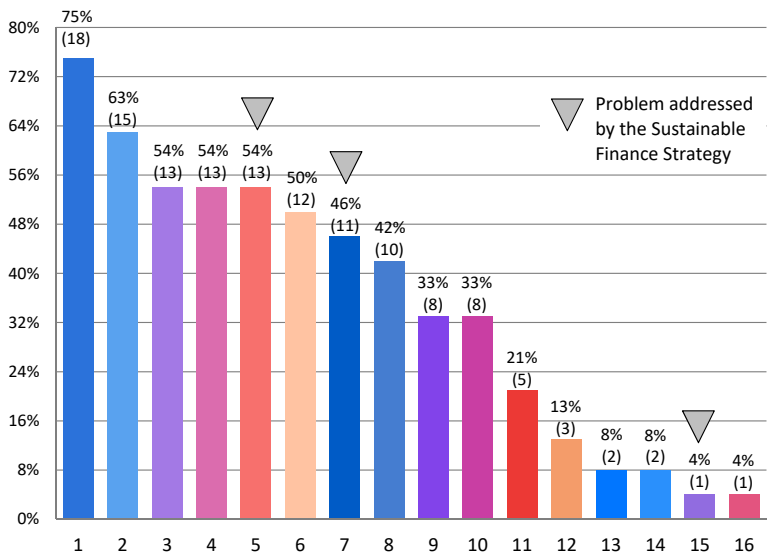
risks for private actors but as a central driver of transformation. Interviewees emphasized the potential of public banks, especially KfW and the savings banks, to direct capital toward infrastructure and other areas of long-term public importance (D6,7,14). Some respondents also identified possibilities for democratizing the monetary system and using monetary policy more actively in support of ecological transformation (D6,11,19). The German debt brake was repeatedly described as an institutional obstacle to this approach.

3. The imaginary of a *Just Transition*: The imaginary of a just transition treats social justice as a condition of ecological transformation rather than as a secondary corrective. The transition can succeed only if its costs and benefits are distributed fairly (D1,2,3,5, 6,7,9,14,16,23,24). Otherwise, workers and socially vulnerable groups may bear a disproportionate burden, generating resistance to climate policy (D8,17). This imaginary also has a democratic dimension. Interviewees referred to stronger participation rights for trade unions and to forms of citizen participation such as cooperatives and municipal ownership models (D1,2,3,5,6,9,16,23,24). These arrangements would allow citizens and workers not only to bear the consequences of transformation but also to participate in shaping and benefiting from it (D14,21).

4. The counter-imaginary of the *Failed Market-Centric Approach*: The positive imaginaries described above are contrasted with a negatively framed counter-imaginary of market-centered sustainable finance. Interviewees criticized the assumption that transparency alone can redirect capital toward sustainable activities. One respondent described this assumption as an “obfuscating narrative” because it diverts attention from the political decisions required to allocate resources (D7). The risk-based orientation of sustainable finance was also criticized for treating nature and climate primarily as additional variables to be priced into financial models. From this perspective, the problem is not simply insufficient information. It is the continued dominance of economic and political structures that permit capital to flow toward climate-damaging activities.

This distinction is visible in the qualitative chart presented below. The following chart illustrates the reasons interviewees cite as obstacles to ecological change. The figure provides a heuristic representation of the positions identified in the interviews. The horizontal axis lists the reasons interviewees gave for the lack of climate-protection expenditure and measures, while the height of each bar indicates both how frequently a problem was mentioned and how extensively it was discussed. The three arrows identify the problems addressed by the sustainable finance strategies of the EU and the German government. The figure is based on a qualitative interpretation of recurring arguments in

Figure 1: What is holding back change?



1. Market and Economic Structures
2. Political Ideology and Imaginaries
3. Will / Missing Power
4. Missing Regulation
5. Missing Information and Technical Solutions
6. Incorrect policies, laws, and power relations
7. False Consciousness and Ethics
8. Missing Tune / Overload
9. Organizational Deficiencies
10. Shortage of Labor
11. Emotions, especially fears
12. Law
13. Injustice
14. Risk Aversion
15. Lack of a methodology for measurement
16. Poor communication

the interview material. It should therefore be read as an analytical aid rather than as a precise empirical measurement.

The chart illustrates that interviewees attributed the problem of missing climate protection financing and measures primarily to unsustainable market and economic structures, as well as to unsustainable political ideologies and imaginaries, a lack of political will, power, and regulation. The three arrows above the bar indicate the mentioned problems, which are also addressed by the Sustainable Finance strategies of the EU and the German government. These points, namely missing information and technical solutions (bar 5), false consciousness and ethics (bar 7), and a lack of methodology for measurement (bar 15) – key components of the EU Sustainable Finance Strategy – are thus considered less significant by the interviewees compared to obstacles posed by market and economic structures, insufficient political will, limited authority, and inadequate regulations.

In summary, the German interviewees, especially those from civil society, employ a set of interconnected imaginaries aimed at a state-driven, socially just, and far-reaching transformation of the entire economy and society. This approach stands in clear contrast to a market-centered model – perceived as inadequate and misleading – that relies primarily on transparency and private financial actors.

4.3.3 Material and Institutional Powers

The German interviewees were generally pessimistic about the short-term prospects of their transformative projects. They believed that alternative actors lacked the material and institutional resources required to challenge the dominant model. Their concerns were therefore not limited to the persuasiveness of competing arguments. They focused on the unequal distribution of capital, subsidies, political access, lobbying capacity, and institutional authority.

From this perspective, the problem is not an absolute lack of financial resources. Interviewees argued that capital is available but allocated in ways that continue to favor high-return investments, many of which remain harmful to the climate (D10). According to an interviewee, the primary reason for the lack of progress in the transition is that private capital continues to flow toward investments offering the highest returns – many of which still harm the climate (D10). It is ar-

gued that a clear "business case" is necessary to shift investment, yet such a case does not exist for many essential transformation projects (D7). The strategy of leveraging private investment through public guarantees (de-risking) is viewed critically, as it often privatizes profits while socializing losses (D5). Interviewees emphasize that the funds for the transition are fundamentally available but are misallocated (D10). A significant material obstacle is the continued existence of climate-damaging subsidies (e.g., company car privileges, kerosene tax exemptions) (D12). Phasing these out would free up substantial material resources. Simultaneously, the German debt brake is criticized as an institutional barrier that materially restricts necessary public investment (D1,2,3,5,6,9,16,19,22,24). While the material potential of alternative financing methods – such as community energy cooperatives or the vast capital stock of public savings banks – is acknowledged, it is also noted that this potential remains far from fully exploited (D5,7,14,20).

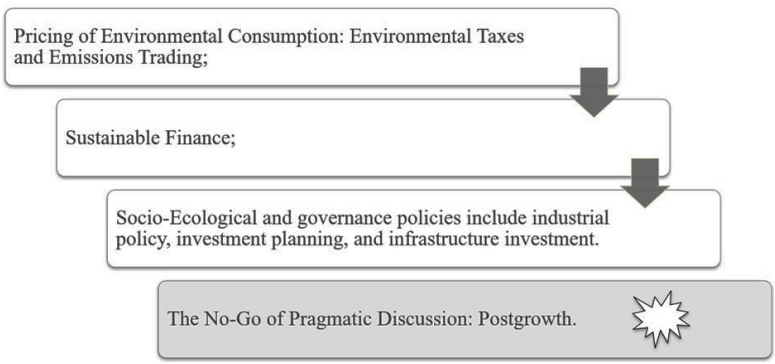
At the institutional level, transformative actors find themselves in a weak position relative to firmly established opposing structures. A key institutional obstacle identified within political organizations is the Federal Ministry of Finance under liberal leadership, which is perceived as a "hindrance" blocking progressive initiatives, such as what interviewees perceived as the Federal Chancellery's insufficient ambition. Some interviewees expressed disappointment that the Bundesbank had not assumed a more active role in supporting ecological transformation, particularly when compared with the Banque de France (D4). The fossil-fuel industry and financial lobbies were perceived as possessing substantial institutional power (D4,5,7,10,12,20). According to interviewees, these actors influence legislation through lobbying, party donations, and participation in expert councils. The *Atlas Network* and the *Initiative Neue Soziale Marktwirtschaft* were mentioned as actors that seek to delay the transition and disseminate disinformation (D13). By contrast, NGOs and trade unions were described as important watchdogs and potential allies, but as organizations with limited institutional power (D12).

Proponents of a socio-ecological transformation possess persuasive narratives and some capacity for mobilization, but they face significant material and institutional obstacles. Several interviewees nevertheless believed that socio-ecological policies would eventually prevail because growing environmental damage would increase the pres-

sure to act. This long-term expectation coexisted with considerable pessimism about the likelihood of short-term success.

The following illustration visualizes a phase model that emerged from several interviews with German experts.

Figure 2: Phase model of sustainability financing (German interview partners)



The interviewees described the sequence, which began with the pricing of environmental consumption (through environmental taxes and emissions trading), followed by a phase in which politics focused on sustainable finance. The interviewees expected that, due to a lack of success, a phase of socio-ecological policies would follow, characterized by industrial policy, infrastructure investments, and possibly investment planning. Post-growth strategies were necessary for some, but most distanced themselves from them.

4.4 French Civil Society and Trade Union Perspectives

The French interviews reveal a different relationship to the concepts of *climate finance* and *sustainable finance*. As in Germany, respondents did not share a single definition, and the Sustainable Finance Strategy was not always well known. However, French actors were generally more willing to use *sustainable finance* as an established policy frame-

work. They tended to connect it to concrete measures, state planning, industrial policy, and the mobilization of both public and private resources.

4.4.1 Understandings of Climate Finance and Sustainable Finance

Some French civil society and trade union actors deliberately avoided the term *climate finance* in their internal and external communications. Instead, they referred to sustainable finance or to specific objectives such as building renovation, decarbonized mobility, and climate protection (F8). The financing of these measures was regarded as a key lever for ecological transformation.

At the same time, respondents criticized a streamlined transition strategy that gives priority to decarbonization and competitiveness without addressing the broader structure of the economy. Financing the transition was generally understood to require a combination of public and private funds. Public resources should catalyze private investment, particularly where necessary investments – such as building renovation – are not immediately profitable for private investors (F2,7).

In France, *finance durable* therefore functions as a more pragmatic framework than the German critique of *sustainable finance*. It includes the integration of environmental considerations into existing financial-market practices, especially risk management and green financial products such as green bonds. The framework is also connected to the political project of presenting France and the Paris financial center as leaders in green finance, including through the Banque de France's role in the Network for Greening the Financial System (NGFS).

This pragmatic orientation does not imply uncritical support. At the same time, respondents identified important institutional weaknesses. Policies were often described as subject to "stop-and-go" dynamics, with programs announced and subsequently withdrawn or diluted. This unpredictability undermines confidence in long-term investment. Interviewees questioned the reliance on voluntary measures, incentives, and transparency. They argued that binding rules are necessary because transparency alone cannot guarantee that financial actors will redirect capital toward socially and ecologically desirable activities. Some criticized the failure to capitalize on opportunities for green monetary policy. In particular, they observed a shrinking political room

for maneuver in a context where, due to austerity measures and social closures (such as migration and a focus on security), as well as defensive struggles against these issues, environmental concerns receive little attention.

4.4.2 French Interviewees' Imaginaries of Sustainable Finance

The interviews reveal several interconnected imaginaries that differ from those identified in the German interviews.

1. The imaginary of *Planification Écologique* (Ecological Planning): This imaginary assigns the state an active, strategic, and long-term planning role. The state is expected not merely to establish framework conditions but to develop and implement a coherent transformation strategy. The creation of the Secrétariat général à la planification écologique is viewed as an institutional expression of this ambition, although interviewees questioned its influence on actual government policy (F1,7). Public and semipublic financial institutions, particularly the Caisse des Dépôts and BPI France, are central to this imaginary. They are described as the "armed wing" of the state because they can direct investment toward strategic sectors such as building renovation and the transformation of small and medium-sized enterprises (F1,8). Several French interviewees engaged intensively with the possibilities of a green monetary policy (F4,9). However, interviewees criticized the fragmentation of planning and the lack of a stable, binding strategy. Policies were often perceived as a series of announcements that were not followed by sufficient or durable measures, producing what one respondent called a "truncated transition strategy" (transition tronquée) (F1,7).
2. The imaginary of *Finance Durable* as a Pragmatic Framework: In contrast to the fundamental criticism of the term sustainable finance in Germany, French respondents used the concept of finance durable as an established and pragmatic framework for action. Finance durable was used as an umbrella term that includes climate issues within the environmental dimension of ESG. This imaginary seeks to integrate sustainability into existing financial-market structures through risk management, disclosure, and green finan-

cial products. The pragmatic character of this imaginary is also reflected in the ambition to position France as a leading center of green finance. This narrative is articulated through the Banque de France's leading role in the NGFS initiative. Yet its limits were clearly recognized. Interviewees criticized the predominance of voluntary measures and incentives and argued that binding regulatory requirements were needed to complement the "carrot" with a "stick." (F8).

3. The imaginary of *Industrial Competitiveness and Sovereignty*: A third imaginary links ecological transformation to reindustrialization, European competitiveness, and technological sovereignty. Support for the "industrie verte" (green industry), e.g., through investments in battery factories, aims not only at climate protection but also at positioning French industry in the global competition and securing jobs in traditional industrial regions (F1). This vision strongly emphasizes technological solutions such as electromobility and renewable energy, supplemented by nuclear power. This emphasis on technological modernization tends to marginalize questions of sufficiency and reduced consumption (F1). Rather than constituting a separate imaginary, frugality appears in the interviews primarily as a neglected or subordinated dimension of the dominant modernization narrative. The imaginary also has a strong European dimension. Several respondents supported joint European financing instruments, both to address the scale of the transformation and to offset the constraints imposed by high national debt and Germany's economic dominance (F1).

4. The imaginary of the *Just Transition as a Social Pact*: As in Germany, the idea of a just transition is central to the French interviews. However, it is more strongly embedded in the traditions of social dialogue and the prevention of social conflict. Trade unions such as the CFDT and Force Ouvrière emphasize retraining, social protection, and continuing dialogue with workers. The experience of the Yellow Vest movement functions as an important reference point for the need to secure social acceptance. The fair distribution of costs and risks is another central concern. Companies that benefit from the transformation should contribute to its financing rather than receiving public support while losses are socialized and profits privatized. In this respect, the French interviews also contain a cri-

tique of de-risking strategies that rely on public guarantees to mobilize private capital (F1,8).

Taken together, the French imaginaries combine confidence in state planning, a pragmatic engagement with financial markets, and a close connection between ecological transformation and industrial policy. They are therefore more compatible with the language of sustainable finance than the German imaginaries, but they remain critical of voluntary regulation, fragmented planning, and the insufficient scale of public intervention.

4.4.3 Material and Institutional Power

French respondents expressed mixed views about the prospects of their transformative project. On the one hand, they identified substantial material resources, including public banks, technological infrastructure, and public investment capacity. On the other hand, they pointed to high public debt, austerity measures, political instability, and the need to mobilize private capital as significant constraints.

The central issue was therefore not necessarily a lack of capital but its effective allocation. Public investment was considered indispensable for projects that are not immediately profitable for private investors, such as building renovation and agricultural restructuring (F1). An interviewee estimates that in many sectors, two-thirds of the financing would need to be public, which contradicts the current model that relies heavily on leveraging private capital (F8). The public banks Caisse des Dépôts and its subsidiary BPI France are seen as central material power resources for directing capital specifically into strategic areas, such as the transformation of small and medium-sized enterprises (F8).

The technological base, particularly the historically decarbonized electricity generation through nuclear energy, is viewed – in contrast to the position of German actors – as a material advantage (F1,4,8). The current strategy of "green reindustrialization" (e.g., battery factories) is viewed as an effort to maintain and expand this material base, although its primary motivation is more geopolitical and competition-driven than purely ecological (F8). High public debt is regarded as a significant material constraint (F1).

Interviews conducted with French experts and civil society actors reveal a strong and widespread consensus that financing the ecological transition cannot be achieved solely at the national level and requires a coordinated approach at the European level. The most frequently and clearly expressed demand is for a joint European investment fund. National budgets, particularly France's, are constrained by high debt and austerity measures, whereas the EU as a whole possesses considerable financial capacity (F2). Several interviewees explicitly call for a new, large-scale European investment plan focused on the ecological transition, to be financed by joint debt instruments such as Eurobonds (F1,2). This approach would prevent unilateral national actions from destabilizing financial markets (F2). The funds mobilized in this manner should be directed specifically toward large cross-border infrastructure projects, such as the expansion of the European rail network (F4). Another proposal is the creation of a European savings account ("livret d'épargne européen") in which citizens could invest, with the collected funds then being specifically used to finance the transition at the EU level (F4).

In addition to fiscal policy, monetary policy is considered a crucial yet underutilized tool (F1,4,9). French experts demonstrate a high level of technical expertise in this area and urge the ECB to proactively interpret its mandate in the interest of climate protection. A key proposal is for the ECB to use its instruments to offer commercial banks cheaper loans if they invest specifically in green projects (F1). This would create a direct incentive for private banks. Additionally, the idea of relaxing collateral requirements for green investments is being discussed (F4). Since direct government financing is prohibited, a workaround involving bonds for large investment programs (e.g., rail transport) is proposed, with the ECB subsequently purchasing these bonds specifically on the secondary market. This approach would significantly reduce financing costs without directly violating the treaties (F1). French stakeholders have strong confidence in the centralized state's fundamental capacity to act and in its institutions, but they perceive these as weakened by political instability and lobbying influence. The long tradition of state planning ("Planification") is regarded as an institutional strength unique to France compared to other countries (F1). The establishment of a General Secretariat for Ecological Planning (SGPE) exemplifies this institutional commitment, although its actual influence is criticized as limited (F1). The state's ability to implement

large-scale projects, such as the development of the nuclear energy program or the TGV network, serves as a historical model demonstrating the institutional feasibility of transformation (F8). The Banque de France is viewed as a proactive and influential institution that plays a significant role within the Eurosystem, for example, through the establishment of the NGFS (F8). Its greatest institutional weakness is seen as political instability and the lack of a long-term, cross-party consensus (F1). Policies are often announced and then withdrawn or diluted shortly thereafter ("stop-and-go"), as evidenced by the subsidy programs for building renovation (F1,8). This unpredictability undermines investor confidence. The strong centralization of power in the presidency ("Bonapartist model") is considered a double-edged sword (F1). On the one hand, it enables swift decision-making; on the other, it renders policy vulnerable to short-term pressures and the direct influence of business lobbies (e.g., MEDEF), which successfully prevent or weaken progressive regulations (F9). Parliament often plays only a subordinate role (F1).

The French interviewees perceive the prospects for their project's success as paradoxical. They identify potential material resources, such as public banks and technological infrastructure, alongside institutional strengths, including a tradition of planning and a strong central bank. However, success hinges critically on the ability to activate these resources through stable and coherent policies. The greatest threat to the project is not a lack of power but the institutional incapacity to utilize this power consistently and over the long term, due to political shortsightedness, incoherence, and obstruction by entrenched economic interests.

4.5 Civil Society and Labor Union Perspectives on the European Sustainable Finance Strategy

A comparison of civil society and trade union perspectives in Germany and France with the European Sustainable Finance Strategy reveals a substantial gap between the EU's market-oriented approach and the positions expressed by most interviewees. Although all groups recognize the need to redirect capital toward sustainable activities, the EU Action Plan relies primarily on market-based mechanisms, including disclosure, classification, and the provision of information to investors.

Nearly all civil society and trade union representatives interviewed considered these mechanisms insufficient to bring about the required transformation. Their demands extend beyond transparency and risk assessment to include stronger public governance, binding regulation, public investment, democratic participation, and distributive justice. The following overview compares key demands with the measures outlined in the EU Action Plan on Financing Sustainable Growth (2018). The comparison therefore highlights a conflict between two different understandings of sustainable finance: the EU's emphasis on making markets more transparent and directing private capital, and the interviewees' call for political intervention in the conditions under which capital is created, allocated, and controlled.

Comparison: EU Action Plan Financing Sustainable Growth (2018) vs. Demands of Interview Partners

Actor Group	Stance on the EU Action Plan (Taxonomy, Disclosure)	Demands
EU Action Plan	*(Baseline)*	*(Baseline)*
	Logic: Market-based, transparency creates efficiency.	**Measures:** Taxonomy, disclosure obligations (SFDR/CSRD), Green Bond Standards, benchmarks.
a) Civil Society Germany	**Fundamental Criticism:** • **Taxonomy:** Criticized as "abysmal" and "greenwashing," especially due to the inclusion of gas and nuclear power. • **Transparency:** Seen as naive and ineffective. The profit motive is considered to trump the availability of information. Quote: "where does transparency get us then? Then we know how dirty the companies are. And we also know how much money can be made with them" (D7).	**Demand for State Control and Systemic Change:** • **Command-and-control regulation instead of transparency:** Clear prohibitions, rules, and laws instead of mere information. • **Divestment:** Active, enforced withdrawal of capital from fossil fuel industries • **Abolition of climate-damaging subsidies:** Seen as a key lever to reallocate material resources. • **"Tax the Rich":** Demand for higher taxation of wealth, inheritances, and top incomes to finance the transformation and increase social equity.

Actor Group	Stance on the EU Action Plan (Taxonomy, Disclosure)	Demands
		• **Active role of public banks:** Especially savings banks (Sparkassen) should be mandated to finance the transformation.
b) Trade-Unions Germany	**Criticism of Social Blindness:** • **Taxonomy:** The social dimension ("S") of ESG is neglected or entirely missing. • **Disclosure:** Considered insufficient if there are no binding consequences for the social transformation.	**Demand for a Socially Shaped Transformation:** • **Just Transition as a core condition:** The transformation must be socially just to be successful. • **Conditionality:** Public funds and sustainable financing must be linked to social criteria (collective bargaining, co-determination, job guarantees). • **Active industrial policy:** The state must actively shape the structural change instead of leaving it to the market. • **Strengthening co-determination:** Employees must be involved in the creation of transformation plans.
c) Civil Society France	**Pragmatic but Demanding Criticism:** • **Taxonomy & Disclosure:** Seen as useful but insufficient tools. The criticism is less fundamental than in Germany, targeting the lack of ambition and inconsistencies. • **Focus on the ECB:** The role of monetary policy is seen as a central lever that is neglected by the EU Commission.	**Demand for State Planning and Monetary Policy Activation:** • **"Planification Écologique ":** The state should live up to its role as a strategic planner and actively steer the transformation. • **Green Monetary Policy:** The ECB should actively use its instruments (differentiated interest rates, collateral adjustments) to finance the transformation. • **Strengthening public banks:** The powerful public banks (CDC, BPI) should be consistently used for the transformation. • **Criticism of austerity:** The need for budget consolidation is seen as an obstacle to necessary public investment.

Actor Group	Stance on the EU Action Plan (Taxonomy, Disclosure)	Demands
d) Trade Unions / Experts France	**Criticism of Insufficient Anticipation:** • **EU Plan:** Perceived as too technocratic and detached from the real social consequences in companies. • **Problem:** The instruments are applied too late. Unions are often confronted only with the consequences (e.g., plant closures) instead of being able to proactively shape the change.	**Demand for Strengthened Social Dialogue and Security:** • ***Transition Juste* through social dialogue:** The transformation must be accompanied by an institutionalized dialogue at all levels. • **Anticipation instead of reaction:** Forward-looking measures such as retraining programs and regional development plans are demanded before social crises arise. • **Social conditionality:** As in Germany, there is a demand to link public aid to social guarantees to protect workers during the transition.

A comparison of civil society and trade union perspectives in Germany and France reveals a persistent impasse that can be conceptualized as a double inability to achieve hegemony. On the one hand, the EU's market-oriented approach to sustainable finance has not secured broad societal legitimacy. By emphasizing transparency, disclosure, classification, and risk management, it does not adequately address the structural conflicts and distributive questions raised by civil society and trade union actors, whose positions are generally oriented toward the common good, social justice, and democratic control.

On the other hand, the transformative alternatives articulated by interviewees – including demands for a just transition, stronger public investment, state-directed economic policy, and social conditionality – have not yet developed sufficient material, institutional, and organizational power to challenge the dominant model. Although these alternatives possess considerable discursive and mobilizing potential, their proponents remain structurally disadvantaged in relation to established financial interests and lack a sufficiently cohesive institutional logic to translate their demands into a hegemonic political project. This dual blockage is reinforced by the *strategic selectivity* of EU policy. European regulations such as the EU Taxonomy and the sustainable finance disclosure rules adopt the language and semiotic elements of sustain-

ability, thereby giving the issue political legitimacy. However, their institutional design remains largely compatible with existing market structures and does not fundamentally challenge established profit-making practices. Demands for binding regulation, enforced divestment from fossil-fuel activities, social conditions attached to public funding, stronger public banks, and an active green monetary policy are consequently marginalized or remain outside the core framework of the EU strategy. As a result, EU policy tends to reproduce existing power asymmetries. Financial institutions remain central actors and can incorporate new regulatory requirements into their established business models, whereas transformative actors struggle to secure the resources and institutional access necessary to implement their more far-reaching proposals. The result is not an absence of change but a form of managed continuity: sustainable finance generates the appearance of institutional progress while leaving the underlying allocation of economic power largely intact. Whether new alliances between environmental organizations and trade unions can develop the material, institutional, and cultural resources required to overcome this impasse remains an open question for future research.

5. Outlook: A Strategy for Sustainable Financing and the Eco-Social Actor as Desideratum for Action and Research

Escaping the current deadlock would require transformative actors to broaden their institutional and material power base, for example by forming new political alliances and strengthening public intervention. A renewed strategy would also be more likely to succeed if it incorporated a well-developed cultural dimension. To date, proponents of climate action have primarily debated policy within expert circles and relied on unconvincing "win-win" narratives that have subsequently been undermined by political and economic realities. This discursive vacuum has been exploited by the new right through its "culture war." Responding to this challenge requires more than deconstructing right-wing narratives; it also requires the development of compelling alternative visions that can generate broad social support. In line with the views expressed by most interviewees, sustainable financing should be organized around the material and social requirements of the transformation rather than around the logic of financial products. This

would require a broader understanding of finance that includes public finance, alternative forms of ownership and provision, and commons-based arrangements. Such a strategy must also recognize that structural change creates winners and losers and therefore requires political negotiation and democratic conflict resolution.

The crucial open question is whether new "eco-social actors" can emerge from existing alliances, such as those between trade unions and environmental organizations in Germany. To become politically effective, these actors would need to develop a shared institutional logic capable of linking ecological transformation with social justice and of securing broad societal legitimacy. Although the analysis points to the potential for such alliances, the theoretical framework does not yet explain the conditions under which new collective actors can emerge from a hegemonic stalemate and develop a new, potentially hegemonic synthesis. Identifying these conditions remains an important task for future research.

Appendix 1: List of interviewed experts

Germany

Interview No.	Organization/ context	Role/job description	Name/Expert
D1	IG Metall (union)	Head of the Policy Department	E1
D2	DGB (union)	Member of the Board	E2
D3	EVG (union)	Pro Rail Alliance	E3a
		Trade Union Secretary (Rail), Pro Rail Alliance	E3b
D4	urgewald	Campaigner, Divestment Expert	Katrin Ganswindt
D5	Attac	Member of the Financial Markets and Taxes Working Group, Member of the Coordinating Committee of Attac Germany	Alfred Eibl
		Member of the Financial Markets and Taxes Working Group	Hans Möller
D6	Project Leader of the Climate Protection Handbook Project	Project Leader of the Climate Protection Handbook Project, Federal Board Member of 'Mehr Demokratie e. V', Member of the	Karl-Martin Hentschel

Interview No.	Organization/ context	Role/job description	Name/Expert
		Tax Justice Network (Coordinating Circle), Member of ATTAC (Federal Working Group on Financial Markets)	
D7	Finanzwende Recherche	Expert	E7
D8	Erlassjahr/ EURODAD	Expert	E8
D9	IG BAU (union)	Federal Board	E9
D10	Fridays for Future	Organizer (Federal Level)	E10
D11	Economy of the Common Good	Director and CEO of 'Diakonie Herzogsägmühle', Representative of the Economy of the Common Good	Wilfried Knorr
D12	BUND	Expert, Head of Department	E12
D13	NABU	Sustainable Finance Expert	Max Kolb
D14	Fair Finance	Expert	E14
D15	Facing Finance	Project Coordinator of the Fair Finance Guide Germany	Kleopatra Partalidou
D16	ver.di (union)	Trade Union Secretary, Leadership Position	E16
D17	Oxfam	Expert	E17
D18	Forum Ökologisch-Soziale Marktwirtschaft e.V. (FÖS)	Expert	E18
D19	Pufendorfer Society	Economist and publicist, expert in Modern Monetary Theory	Dirk Ehnts
D20	Climate & Company	Senior Analyst	E20
D21	Research Center of the Protestant Study Community (FEST)	Head of the Environmental and Climate Protection Division of the Protestant Church in Germany (EKD), Research Center of the Protestant Study Community e.V. (FEST)	Oliver Foltin

Interview No.	Organization/ context	Role/job description	Name/Expert
D22	Post-Growth Economics/Plural Economics Network	Sustainability expert (ecological economist)	E22
D23	Climate Alliance network	Expert	Daniel Eggstein
D24	IG BCE (union)	Representative of the Foundation for Labor and Environment (Arbeit und Umwelt)	E24a
		Leadership Position	E24b

France

Interview No.	Organization/ context	Role/job description	Name/Expert
F1	Institut Veblen	Co-Directeur	Wojtek Kalinowski
F2	Fabrique Écologique	Président	Géraud Guibert
F3	Institut des Recherches Economiques et Sociales (IRES)	Researcher	Marcus Kahmann
F4	The Shift Project	Chef de projet / expert bénévole	Pierre Lachaize
F5	Force Ouvrière (FO)	Confederal Secretary FO	Béatrice Clicq
F6	Université de Versailles	Professeure des universités en sociologie	Camille Dupuy
F7	Confédération française démo-cratique du travail (CFDT)	Responsable du service économie et société à la CFDT	Aurélie Seige (P1)
		Secrétaire confédérale / Economiste en charge de la transition écologique et du développement économique	Juliette Lecourt (P3)
F8	Institut Avantgarde	Chef de projet	Romain Schweizer
		Chargée d'études	Juliette de Pierrebourg
F9	Reclaim Finance	Campaigner	Clarisse Murphy

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From the Financialization of Climate to the Climatization of Financial Circuits

Eve Chiapello

Abstract

The article argues that the transformative potential of sustainable finance in addressing the climate crisis has been overstated. Although it has expanded rapidly, it remains embedded in financialized capitalism institutions and cannot redirect capital away from environmentally harmful activities or provide sufficient funding for projects with limited short-term profitability. Yet despite these limitations, sustainable finance continues to mobilize significant efforts, particularly in Europe, and has generated important institutional developments, expertise, and professional networks. It has helped create a new social world that could, under different political and social conditions, become a force for deeper change. Shifting attention from financial markets to the broader set of monetary channels linking states, banks, firms, and households is also a necessary move. The financialization of climate – responding to the crisis by creating green asset classes through labelling and ESG screening – is indeed not only ineffective but also overstudied. By contrast, greater attention should be devoted to the climatization of financial circuits: integrating climate considerations into monetary flows, including credit allocation, taxation, subsidies, money creation, and the design of financial institutions. This new perspective situates sustainable finance as one component of a broader monetary system rather than a self-contained solution.

1. Introduction

Sustainable finance, as a subfield of the asset management industry, has emerged as a key instrument for addressing climate change and environmental degradation by redirecting capital toward environmentally and socially responsible activities. It is supported by a wide range of initiatives, including green bonds, ESG (Environmental, Social and Governance) investing, climate disclosure standards, and sustainability taxonomies. The objective set out in the 2015 Paris Climate Agreement – to make "financial flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" – appears to have been widely embraced. Indeed, one can observe a sort of Cambrian explosion of initiatives, including standards, metrics, regulatory projects, climate coalitions, and specialized intermediaries (consultants, evaluators, auditors, rating agencies, etc.) working to bring this ambition into being.

This development has been analysed as a process of the financialization of climate issues (Bracking 2019; Chiapello 2020b; Karwowski 2025), a process through which climate change has been framed as a financial problem, expressed in terms of investment gaps that could be bridged through the design of green financial products for asset managers. Through appropriate financial engineering, fund managers are expected to channel financial flows towards the ecological transition in a smooth and peaceful manner.[1] This framing implies that what is primarily lacking is a set of suitable financial instruments that can be managed by private finance in order to fund the transition. As I have argued elsewhere, this promise is fully compatible with the current stage of financialized capitalism. Solving the funding problem is presented as the main priority, and the power of finance – widely criticized in the aftermath of the 2007-08 Global Financial Crisis – is expected to be enlisted in the service of higher goals (Chiapello 2023). This hierarchy of priorities also sidelines more conflictual debates over deeper structural transformations of the economy, including reforms of the financial system itself.

I have long been skeptical about finance's capacity to generate real material change, and this skepticism remains. I continue to believe

[1] This approach is consistent with the new form of climate governance that was established in Paris in 2015, which refrains from setting binding rules (Aykut et al. 2017).

that sustainable finance faces profound structural and conceptual problems that cast serious doubt on its ability to drive a genuine ecological transition (Chiapello 2020a). However, this largely ineffective form of sustainable finance – which is nevertheless strongly promoted by the European Commission as a pillar of the Green Deal (Villiers 2025)[2] – has itself triggered a counter-movement. The recent political backlash, associated with the renewed importance of defence concerns has also targeted the instruments intended to strengthen sustainable finance. The 2026 Omnibus Directive has consequently weakened an agenda that was already struggling to gain traction. Proponents of sustainable finance have interpreted this backlash as evidence that they were moving in the right direction.[3]

A central puzzle remains: why does the narrative of sustainable finance retain such influence? Why do so many actors invest in this emerging social world, and what does it actually produce if its material effects remain limited? How can we account for the dispersed and ongoing efforts observable across many sectors – not only within finance itself – despite their apparent lack of effectiveness?

Although I remain doubtful that sustainable finance alone can be transformative, I now discern a broader trend: the gradual climatization of monetary flows. This shift constitutes the central argument developed in the concluding part of this paper.

The analysis proceeds as follows. Section 2 examines the fundamental ineffectiveness of sustainable finance. Section 3 identifies some of the reasons behind this outcome. Section 4 explores what sustainable finance nevertheless accomplishes despite its limitations. Section 5

[2] On can read for example on the EU web pages dedicated to sustainable finance: "Sustainable finance has a key role to play in delivering on the policy objectives under the European green deal as well as the EU's international commitments on climate and sustainability objectives. It does this by channelling private investment into the transition to a climate-neutral, climate-resilient, resource-efficient and fair economy, as a complement to public money. Sustainable finance will help ensure that investments support a resilient economy and a sustainable recovery from the impact of the COVID-19 pandemic." (https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en) (last visited 22-06-2026).

[3] See for example the Press release of Eurosif (European Sustainable Investment Forum) on July 1st, "Investor and business joint statement on Omnibus initiative" (https://www.eurosif.org/press-room/investor-and-business-joint-statement-on-omnibus-initiative/) (last visited 22-06-2026).

proposes a broader analytical framework centred on financial circuits. Section 6 concludes by distinguishing between the financialization of climate and the climatization of financial circuits.

2. The Ineffectiveness of Sustainable Finance

In my view, the main limitation of sustainable finance lies in its exclusive focus on supposedly sustainable securities traded on financial markets, while neglecting the central issue of an unsustainable economy. As such, sustainable finance threatens neither unsustainable finance nor the broader economic system on which it rests.

2.1 The Hidden Issue of Unsustainable Finance and an Unsustainable Economy

The framing of sustainable finance directs attention to green investments while overlooking the much larger problem of dirty investments. Carbon- and resource-intensive activities continue to dominate financial markets, while sustainable investments remain marginal. Since financial actors can only invest in existing productive structures, financial flows inevitably reflect the structural unsustainability of the economy. Sustainable finance cannot replace unsustainable activities as long as production remains dependent on fossil fuels and environmentally harmful methods.

Statistical evidence reinforces this asymmetry. While green finance flows are monitored annually by institutions such as the Climate Policy Initiative (CPI) and the UNFCCC, dirty investments remain largely absent from official statistics (Climate Transparency 2017). This produces a distorted picture by highlighting green investments without assessing whether capital is actually being redirected away from harmful sectors. It is akin to trying to lose weight by counting salads without counting ice creams.

As has been observed with energy transitions, where new sources are added to existing ones rather than replacing them (Fressoz 2024), sustainable finance develops alongside conventional finance rather than replacing it. There is no net reallocation of capital; green finance simply appears as a visible parallel circuit.

A second blind spot concerns economic growth. Ecological transition requires lower consumption, longer product lifespans, and more local production – objectives fundamentally at odds with growth-based financial returns. The dependence of finance on expanding production and consumption reveals a structural tension between ecological sustainability and capitalism's growth imperative.

Finally, sustainable finance focuses primarily on secondary financial markets. Yet real investment depends on primary market operations – new issuances of shares or debt – not on the trading of existing assets. Only primary markets finance companies directly; secondary market transactions, which account for the vast majority of financial operations, merely transfer ownership among investors. Green transactions on secondary markets therefore have little direct impact on the real economy.

It follows that sustainable finance should not be expected to transform investment flows sufficiently to make the economy sustainable. But might it at least contribute marginally? Even this prospect is doubtful. The existence of identified green assets does not, in itself, channel more capital into these investments than would otherwise be the case. Sustainable finance therefore fails to alter overall asset allocation.

2.2 The Inability of Sustainable Finance to Provide Additional Financing

This argument rests on a simple fact: investment decisions remain governed by the criterion of risk-adjusted return (Chiapello 2015), which is unaffected by an asset's declared "green" status.

Profitable and sustainable projects can already be financed through conventional channels and therefore do not require sustainable finance. What remains unfunded are investments that are socially or environmentally necessary but insufficiently profitable in the short or medium term. Because such projects fall outside the conventional risk-return framework, they require de-risking policies whose costs are ultimately borne by taxpayers rather than by private sustainable investors (Gabor 2021). The shortage is thus not one of capital as such, but of private capital willing to accept below-market returns for sustainable purposes. This outcome stems from the organization of the asset management industry.

First, this industry is governed by fiduciary duty, a particularly fundamental obligation in finance: managing assets on behalf of others must be carried out in the best interests of the principal. By default – that is, unless the principal has explicitly set a different objective for their agent – this means maximizing the financial performance of their assets. This obligation permeates the entire investment chain: it concerns the pension fund's responsibility towards its beneficiaries, that of the asset manager to whom the pension fund has entrusted a management mandate, and so on.

Second, asset managers compete on the basis of performance benchmarks. Funds are continuously compared and ranked, and investors shift capital to maximize returns. Competitive pressures therefore reinforce fiduciary obligations and orient the industry towards risk-adjusted performance. This priority can be justified when savings support pensions, healthcare, or education, particularly where social protection relies heavily on financial markets. Fiduciary duty thus constitutes a fundamental invariant of financial management: financial performance takes precedence over all other objectives, while extra-financial criteria remain subordinate.

Only a fraction of wealth – especially that held by the very wealthy – could theoretically escape these constraints. Yet the tiny share of private fortunes devoted to philanthropy (Breidenbach 2025; Charities Aid Foundation 2025) or low-yield long-term investments suggests that their goodwill cannot be relied upon to transform capital allocation on a significant scale (Chiapello 2023).

Sustainable finance is therefore unable to reshape financial allocations fundamentally. It focuses on directing funds towards sustainable activities rather than withdrawing them from unsustainable ones, while remaining bound by the criterion of risk-adjusted return. This ineffectiveness follows directly from its reliance on market mechanisms, which do not favour sustainable investments when returns are inadequate. The next section shows how the choice of market-based instruments is associated with design features that further limit the transformative capacity of sustainable finance.

3. Design Choices Based on Excessive Reliance on Market Mechanisms

The sustainable finance response to the funding needs of the ecological transition rests on the assumption that markets – provided they are adequately informed and supplied with appropriate products – can solve environmental problems. This assumption is questionable, yet it underpins much of the sustainable finance architecture. Green finance relies heavily on voluntary commitments and self-regulation.

3.1 Voluntarism, Self-Regulation, and Market Discipline

Financial actors commit themselves to directing capital towards sustainable activities. Intermediaries develop metrics and standards to help investors identify appropriate targets. Since sustainability is widely considered desirable, responsible savers are expected to invest in responsible funds, which in turn finance responsible projects. The aim is to build monetary circuits allowing savers to align investments with their values.

This system is conceived as largely self-regulated and non-binding. Most initiatives consist of voluntary commitments by asset managers and insurers enabling voluntary savers to put their money into sustainable funds. Standards intended to measure sustainability or govern green labels are generally designed and monitored by financial actors themselves or by bodies in which they are strongly represented. This follows the classic logic of self-regulation (Smoleńska/Levi-Faur 2025): industry expertise is assumed to ensure realistic and applicable standards (Chiapello/Medjad 2009).

Green bonds provide a clear illustration (Treglia 2026). Although issuers promise to use proceeds for green projects, this commitment is not contractual. As Ekeland and Lefournier (2021: 5) note, the green promise appears only as information in the bond documentation and grants no additional financial rights to investors. Contractually, green bonds are therefore indistinguishable from conventional bonds. The latest version of the Green Bond Principles (ICMA 2025) indeed seeks to standardize the market, but only through voluntary guidelines. They recommend practices such as segregating proceeds, reporting qualitative and quantitative indicators, and relying on third-party verification.

These recommendations correspond to what Zelizer (1994) calls *earmarking*: funds are placed in a dedicated compartment to ensure transparency. Yet the only sanction remains market-based: dissatisfied investors may simply sell their bonds.

Likewise, the EU sustainable finance agenda – the most advanced attempt to establish credible sustainable finance – is based on self-limitation and adopts a "nudging" approach that "stands in contrast to any approach 'mandating' sustainability – understood as the forcing of investors to invest in sustainable products" (Zetzsche/Anker-Sørensen 2022: 57). It also relies heavily on expert groups in which financial and industrial actors are strongly represented.

A last example is provided by the former Task Force on Climate-related Financial Disclosures (TCFD).[4] The TCFD, created by the Financial Stability Board after the Paris Agreement and chaired by Michael R. Bloomberg, was explicitly "industry-led." Its 2017 report proposed information disclosure recommendations rather than binding rules. Monitoring the adoption of disclosure practices then become its main activity. The close connection between the identities of those participating in the process of developing regulation, the preference for soft law and non-binding instruments and the content of the rules deserves attention in all these examples (Lehner 2026).

Recent EU regulation dedicated to building sustainable finance has mainly expanded disclosure requirements for financial and non-financial firms, an important achievement even if it preserves broad room for interpretation and relies extensively on the "comply or explain" principle. The underlying assumption is that informed actors will reward the most sustainable firms. Markets need only be supplied with better information and left free to operate. This reliance on voluntarism and the moral demand of markets reproduces the logic of corporate social responsibility, long criticized for its limited effectiveness and inability to challenge dominant business models.

In the EU, market-based instruments are also politically convenient. EU competition policy restricts state intervention by limiting sup-

[4] The TCFD being now disbanded, its mission has been transferred to ISSB (International Sustainability Standards Board), a body created in 2021 by IFRS Foundation that is charge of international financial reporting standards. As shown by research, those standards are based on an investors-centred logic (Bensadon/Praquin 2016).

port to cases of market failure and imposing strict state-aid rules. Political decisions favouring particular sectors are often viewed as incompatible with the principle of a level playing field. It is then easier to put emphasis on increasing information disclosure to fuel responsible investors' decision, rather than forcing the allocation on certain investments. Yet, over time, improved metrics and disclosure may provide public authorities with the knowledge and legitimacy required for more interventionist policies (Zetzsche/Anker-Sørensen 2022).

The next section explains why entrusting the ecological transition to financial markets and responsible savers is unlikely to succeed.

3.2 Misconceptions About What Sustainable Finance Can Achieve Through Markets

The impact of sustainable finance on the real economy – the part of the economy actually responsible for environmental degradation – is, at best, indirect. The argument is that investors will pressure firms to adopt more sustainable practices (Crifo et al. 2019). Advocates generally point to two channels through which this influence operates: price effects and direct political intervention.

According to the price argument, strong demand for sustainable assets lowers sustainable firms' cost of capital and thereby encourages greener behaviour. Yet the existence of this supposed greenium of green bonds – a reduction in financing costs – remains highly questionable (Grandjean/Lefournier 2021; Larcker/Watts 2020). This reflects the structure of green bonds themselves. They are mainly issued by the same entities that issue conventional bonds, who commit that part of the proceeds (the one associated with the green issuance) will be allocated to green projects. Investors therefore primarily assess the issuer's creditworthiness rather than the projects being financed, about which information is often scarce.

The second channel of influence is political, mainly through shareholders' voting rights. The growth of sustainable finance could, in principle, increase the influence of its advocates. Here again, the evidence is limited. Asset managers (who hold the voting rights) remain constrained by fiduciary duties and are evaluated primarily on the basis of financial performance. As a result, they generally vote in ways that they believe will maximize shareholder value. Moreover, shareholder engage-

ment faces a scale problem. Although some asset managers – mainly European ones – consistently support sustainability resolutions, outcomes are largely determined by much larger US asset managers, many of which have withdrawn from ESG and climate-related initiatives (ShareAction 2024).[5] This highlights the fragility of these commitments. Asset managers ultimately follow their economic incentives: when support for such initiatives no longer appears profitable, they withdraw.

Until now, sustainable finance has remained subject to the rules of the financial market game. The organization of finance around profit maximization and the reliance on market discipline make it impossible to redirect capital fundamentally, finance less profitable projects, or induce large-scale divestment from highly profitable but environmentally harmful firms. Yet despite these limitations, sustainable finance continues to mobilize considerable efforts, especially in Europe. What, then, does it actually accomplish? This is the question addressed in the next section.

4. What Sustainable Finance Actually Does

Sustainable finance does produce real effects – but not the ones that its advocates hope for, namely financing the transition and redirecting financial flows toward sustainable activities. Understanding what it actually does requires looking beyond its stated objectives.

First, sustainable finance responds to a genuine societal demand: from savers who would like to contribute to the transition through their investments, from financial-sector employees seeking greater meaning in their work and wishing to use their skills to help build a better world, and from public authorities that cannot rely more on public debt and would like to persuade financial actors to contribute directly to financing the transition. Most people consider sustainability to be an important and legitimate goal and are willing to contribute to it, provided that doing so does not require sacrificing returns. This is

[5] The four largest asset managers in the world (BlackRock, Fidelity Investments, State Street Global Advisors, and Vanguard) are all US companies. Their voting behavior has changed over the last 3 years dropping their support for environmental and social resolutions (ShareAction 2024).

precisely the promise that sustainable finance makes: that it is possible to achieve both sustainability and financial performance. As argued above, sustainable finance does not generate systemic change, but it nevertheless provides many people with a form of moral return. In this sense, sustainable finance allows savers to feel that they are doing the right thing and it gives some visibility to a sustainability demand.

Second, in order to fulfil this role and maintain credibility, sustainable finance earmarks certain financial flows on the basis of sustainability criteria. It is building an elaborate labeling machinery. Newly green-labelled investments are grouped together in financial vehicles separated from other financial flows. Specialized financial pockets are created. Within firms issuing green bonds, systems for tracking sustainable investments are put in place, while companies are increasingly encouraged to take climate-related risks into account. Sustainable finance thus contributes to the gradual institutionalization of new ways of seeing the world, even if these new lenses do not displace the traditional risk-adjusted return framework. New metrics infrastructures and reporting systems are being developed. The fact that these systems do not currently make much difference does not mean that they will not become important in the future. During the post-war planning era, major accounting and statistical systems were developed to manage the economy, and these same systems were later repurposed to serve neoliberal policies. One may therefore imagine that the current measurement effort – which often appears futile and is subject to numerous distortions and forms of manipulation – could eventually provide the foundations for other forms of evaluation and governance.

Finally, beyond earmarking financial flows, sustainable finance creates a distinct social world. It opens spaces for cooperation between financial actors and other stakeholders – NGOs, public authorities, and civil-society organizations – thereby enabling the emergence of a specialized form of finance with its own norms, practices, and actors, one that introduces considerations beyond pure return into decision-making. This creates channels through which sustainability concerns can enter financial reasoning. Even if task forces, high-level groups, and other sustainability platforms do not produce significant changes, they create new relationships and legitimize discussions about sustainability. The financial sector increasingly recognizes that climate change and biodiversity loss are real concerns and that it may itself be part of the solution. It remains unclear what the long-term effects of the cur-

rent ecological backlash will be, since it cannot entirely dismantle what has already been built and learned. New professions have emerged, such as carbon-footprint analysts, sustainability auditors, and climate-risk assessors. Some asset managers specialize exclusively in sustainability issues. New benchmarks and ratings have been created. Software companies offer add-ons for reporting systems, while the metrology industry sells new measurement tools.

This social world should not be dismissed lightly, as it generates significant economic activity. The market for ESG data and ratings is worth several billion euros and supports consultants, auditors, and extra-financial rating agencies. Management fees for sustainable funds are generally higher than those charged by conventional funds, making sustainable finance commercially attractive and enabling it to mobilize capital from younger generations of savers. Thousands of people devote their professional lives to these issues – former financiers, consultants, and researchers – gradually building expertise, norms, and practices. This emerging group of professionals, together with the knowledge and experience it accumulates, may one day prove useful. The obstacles they encounter, and the disappointments they experience when they realize that much of what they are doing amounts to little more than greenwashing – and that they are, as the saying goes, "useful idiots" in the pursuit of profit – may ultimately lay the groundwork for more far-reaching reforms.

Obviously, this social world is far from homogeneous. These sustainability professionals are diverse – just as has been observed in other spaces of responsible management (Bereni 2025) – and they occupy different positions within the financial system. In the asset-management industry, one must for example distinguish between pure-play actors – specialized, committed, and dependent on the credibility of sustainable finance – and large generalist actors that manage a few sustainable funds alongside predominantly conventional activities, and that are quick to withdraw when the winds change.

Pure-play actors are smaller and possess limited market power. Their more demanding approach – which may lead them to accept lower returns in pursuit of certain investments, or to specialize in private equity or project finance, where they can exert a more direct influence over the companies and projects they support – is closely linked to their relatively small size. They do not benefit from the broader situation described above, which confines them to a niche.

They may support broad – and therefore less demanding – definitions of sustainability in order to increase their size and investment opportunities, a move that has been noticed (Chiapello 2023). But they also have an opposite interest in seeing more demanding practices recognized and institutionalized. However committed they may be, they lack the resources necessary to make their voices heard.

Generalist actors, by contrast, are more powerful but have little interest in constraining their activities. They engage in sustainable finance primarily because it responds to a limited but real client demand and because it provides reputational benefits. Their core business model lies elsewhere. Large financial institutions allocate capital to the economy as it currently exists. The most important ones use predominantly passive investment strategies by tracking market indices rather than actively picking stocks; if the economy is not sustainable, they will continue financing it according to conventional criteria. In the short run, they mainly identify selected bundles of securities capable of satisfying the moral aspirations of certain savers, thereby limiting their efforts largely to earmarking. Yet, because of the sheer volume of assets they manage, they nevertheless contribute to sustaining the broader social world of sustainability.

The real challenge, therefore, is how to transform this emerging social world, together with its expertise and professionals, into a force capable of bringing about more profound change. At present, however, there is little sign of the broad societal and political shift that would make such a transformation possible and open new opportunities for this somewhat underutilized group of professionals.

Whilst sustainable finance – narrowly defined as a subfield of the asset management industry – may not live up to its promises, an examination of its limitations highlights the need to broaden our perspective and to consider not only those financial flows labelled as ‘sustainable’ and managed by fund managers – which they pool into funds that responsible investors may wish to purchase – but, more broadly, all the financial circuits.

5. *Enlarge the Scope: Think in Terms of Financial Circuits*

Sustainable finance operates within rules it did not create and therefore lacks the capacity to scale up on its own. A broader analytical framework is required – one that focuses on financial circuits rather than solely on investment chains. Financial circuits encompass all interconnected flows of money, both public and private, together with the institutional arrangements that structure them. To some extent, what sustainable finance professionals are learning and developing within the financial system that currently employs them could potentially contribute to a more far-reaching transformation. After all, issues of valuation, measurement, and arbitrage do not simply disappear when one moves to a different system. Any systemic change requires capabilities that these actors may already be developing.

This perspective is rooted in recent theoretical work advocating the development of a sociology of financial circuits (Chiapello/Violle 2025). In this book, together with my co-authors, I propose shifting attention away from the financial market system toward the full set of monetary channels connecting states, banks, firms, and households. Such a move allows us to understand sustainable finance as one element within a complex system rather than as a self-contained solution. This perspective emerged from several years spent studying the financialization of public policies, particularly in the social, environmental, and development sectors (Chiapello 2020b; Chiapello/Knoll 2020a; Chiapello et al. 2023). The exclusive focus on the ways public policies seek to mobilize the private sector has often come at the expense of understanding what is happening in other financial flows. Paradoxically, this may have led researchers to attribute excessive importance to these practices.[6]

The sociology of financial circuits we propose builds on infrastructure studies, particularly the tradition associated with the work of Susan Leigh Star (1999), adapting it to the study of the organization of monetary flows. We combine insights from infrastructure studies with Viviana Zelizer's (1994) sociology of money, whose concept of "earmark-

[6] A typical example of this distorted academic focus, out of proportion to the actual significance of practice, is provided by the vast amount of research on Social Impact Bonds, to which I have myself contributed (Chiapello/Knoll, 2020a, 2020b) despite their limited real significance in terms of financial volume (Chiapello 2023).

ing" – as discussed above – helps us understand what sustainable finance actually entails.

5.1 Think Infrastructure

A financial circuit can be defined as an infrastructure that enables money to circulate between actors while simultaneously shaping their resources and capacities for action. Among its functions, this infrastructure earmarks money. It consists not only of physical devices but also of legal rules, accounting standards, procedures, calculation tools, and other socio-technical arrangements. Like physical or informational infrastructures (Bowker/Star 2000), financial infrastructures evolve slowly and through localized interventions rather than through sweeping reforms. An infrastructural approach recognizes that financial chains and sectoral structures do not change easily; reorganizing them is a long-term undertaking involving deep institutional transformation.

Infrastructure also implies that action is always situated. As with a road network, interventions are localized – a toll here, a closure there, a lane expansion elsewhere – while the network itself remains global. A general reorientation of finance therefore requires thousands of actors operating in a distributed manner, many of whom occupy low positions in existing hierarchies and work behind the scenes. This perspective helps make sense of the proliferation of standards, certifications, ratings, and coalitions, which can be understood as distributed attempts to redirect financial practices. Consequently, it is neither possible nor desirable simply to dismiss what has already been built. More importantly, no major transformation will occur without, to borrow a metaphor, the work of thousands of small pollinating bees.

5.2 Reforming the Circuits of Sustainable Finance

Existing sustainable finance circuits have largely been created by replicating conventional investment circuits and layering sustainability criteria on top of them. One can nevertheless imagine less superficial reforms – currently largely absent from policy discussions – that could substantially increase their effectiveness. What the sector needs is not simply better information; it needs greater capacity to act (Braun/Koddenbrock 2022). A few examples illustrate possible directions.

First, it might be worth reserving the sale of sustainable finance products to specialized and independent organizations, prohibiting actors from operating simultaneously in conventional and sustainable finance, much as Roosevelt's Glass-Steagall Act separated investment banking from deposit-taking and lending. Earmarking may not go far enough. Such a measure would significantly strengthen the market power of sustainable finance pure players. What would happen if asset managers were no longer allowed to operate in both spheres? The savings of individuals seeking exclusively sustainable investments would be channelled more decisively toward specialized institutions, increasing their market share and allowing them to avoid arbitraging between their conventional activities and their sustainability-oriented business.

Second, financial institutions could be required to allocate a proportion of their portfolios – say, 10 percent – to investments that are not profitable in the short term as a condition for being authorized to collect savings. Compulsory investment mechanisms have historical precedents, notably in the form of mandatory government loans.

Third, less liquid forms of investment could be encouraged. This would involve promoting long-term investments that cannot easily be resold and diversifying the legal structures used to organize investment vehicles. In private equity, the dominant model is the closed-end fund: capital is raised for a fixed period, invested, and returned at maturity. Liquidity is thus organized by design. Requiring longer holding periods would favour genuinely long-term investment, whereas the dominant legal structures currently in place tend to work against it.

Fourth, direct investments in essential social infrastructure could be promoted. Pension funds, for example, could finance the construction of care homes for the elderly. Support in old age could be provided not only through financial transfers but also through access to services. One could imagine pension funds offering such services either in lieu of or in addition to traditional pension payments. For this to become possible, however, the regulatory framework governing pension funds would need to be redesigned.

5.3 Thinking Beyond Sustainable Finance: Toward Broader Financial Circuits

Expanding the scope to encompass all financial circuits means examining longer chains, both upstream and downstream from sustainable finance itself.

Looking upstream, one must consider the role of monetary policy and money creation in financing the economy; the role of public development banks, which are unique financial intermediaries supported by specific public resources (subsidies, access to public investment funds, tax advantages, guarantee schemes); and the role of blended finance in lowering expected returns or reducing risk. If we trace these chains further back, we must ask where the resources of development banks and blended finance originate. At some point, financial circuits must be connected to tax systems. Ultimately, all circuits are interconnected: there is no purely private circuit independent of public ones.

Looking downstream, one must examine how sustainable firms become investable in the first place, through industrial policies, regulatory standards, subsidies, and guaranteed demand. The transition in the automobile sector, for example, is occurring not because of sustainable finance but because emissions standards are tightening and internal combustion engines are being phased out. Informing markets is not the same as transforming what they produce.

The fundamental macroeconomic lesson bears repeating: all circuits are interconnected. Consequently, there are numerous points of intervention along these interconnected channels through which financial flows can be redirected in more sustainable ways, as called for by the Paris Agreement of 2015. Redirecting financial flows toward sustainable investment therefore requires interventions at multiple levels simultaneously, and these interventions are no less indirect than those pursued within the narrower field of sustainable finance. The diversity of existing initiatives and professional communities could prove valuable if mobilized and embedded within a broader strategy of transforming financial circuits.

Sustainable finance is only one possible link within a complex system of monetary flows. Framing the issue exclusively in terms of asset managers and investment chains both exaggerates the role of financial actors and obscures the contributions of public institutions, tax sys-

tems, regulatory bodies, and the broader institutional architecture within which investment decisions are made.

6. Conclusion: From the Financialization of Climate to the Climatization of Financial Circuits

The analysis developed in this article points to a fundamental distinction between two contrasting logics. These are not only the different logics of action adopted by practitioners on the ground; they also correspond to what researchers may choose to examine – or overlook.

The *financialization of climate* consists in responding to the climate crisis by creating green asset classes through labelling and ESG screening, thereby reinforcing the legitimacy of existing financial markets and positioning asset managers as central actors in the solution. It translates climate concerns into financial language – into categories of risk, expected returns, and investment opportunities – without transforming the underlying logic of finance. As I have sought to show, its main limitations are structural: the rules of the game remain fundamentally unchanged, competition among financial actors in pursuit of returns continues unabated, and profit maximization remains the organizing principle of the system.

By contrast, the *climatization of financial circuits* involves integrating climate considerations into multiple monetary flows simultaneously: credit allocation, taxation, subsidies, money creation, and even the design of financial institutions themselves. Rather than merely financializing climate, this approach seeks to reshape the interconnected circuits through which money circulates within the economy. It calls for intervention at the level of infrastructure – through changes in legal rules, accounting standards, regulatory frameworks, and institutional arrangements – rather than simply adding green labels to existing financial flows.

Only by addressing these deeper interdependencies can financial systems be redirected toward ecological transition. Doing so requires acknowledging the limits of voluntarism and self-regulation, recognizing the indispensable role of public actors throughout the financial circuit, and accepting that meaningful structural change will require mandatory mechanisms rather than incentives alone. The gradual climatization of monetary flows is already underway, albeit unevenly

and incompletely. Accelerating and consolidating this process – rather than confining ambition to the margins of existing financial markets – constitutes the central challenge ahead.

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