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Sustainable finance policies and the climate: do not confuse the objective and the tool

by

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The *Agenda 2030* Policy Briefs series mobilizes economists and practitioners to identify an economic and financial reform agenda to achieve the 2030 Agenda at the territorial, national and supranational levels. Contact: thomas.lagoardesegot@kedgebs.com.

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1- Finance to stop climate change... not so simple

a. The Paris Agreement and finance

The Paris Climate Agreement[2] introduced a third global objective in addition to the imperatives of mitigation (keeping warming well below +2°C, targeting +1.5°C) and adaptation (ensuring the adjustment and resilience of societies to climate change): in Article 2.1(c), the Agreement stipulates that financial flows must be made compatible with the achievement of the first two objectives.

Thus, as analyzed in an article to be published in the journal *Nature Climate Change* [3], the Paris Agreement gives a much more important role to finance than previous texts under the UNFCCC[4] . Indeed, finance, which until now was only included as one of the means of implementation, essentially limited to North-South public flows and additional greenhouse gas (GHG) emission reductions, is now a central tool to decarbonize the economy globally... and quickly. This implies relying as much as necessary on private finance and capital markets, which constitute the bulk of the financial resources available on the planet. And the challenge is huge: not exceeding +1.5°C means not emitting more $_{CO2}$ $_{by}$ 2050 than we are capable of absorbing (= zero net emissions)[5].

b. Finance as a tool

But for finance to play such a driving role in decarbonizing the economy, it must actually be capable of doing so. Since the 1970s, capital markets have gradually been seen as an entity whose primary function is to assess the risk, and thus the value, of assets. This price signal, which is supposed to reflect all available information on the current and future state of the economy[6], is thus the main, if not the only, guideline to be followed by the players in these markets, freed, as it were, from a specific socio-economic object or objective to finance. And this is precisely what the Paris Agreement states in black and white: we have a large-scale socio-economic objective to achieve, and by targeting it, finance must play its part in what is no more and no less than the realization of an industrial, technical and societal revolution. And this is more akin to a voluntary and planned approach against all odds than to a spontaneous and random march at the whim of the currents, however inspired they may be.

[2] Paris Agreement (2015), https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_french_.pdf

[3] Cf. Zamarioli, Pauw, König, and Chenet (2021) "Climate consistent flows and the transformation of global finance," Nature Climate Change, forthcoming.

[4] UNFCCC: United Nations Framework Convention on Climate Change

[5] See the IPCC Special Report on the +1.5°C target published in 2018, http://ipcc.ch/sr15/. NB: 2050 is the net-zero horizon for $_{CO2}$. 2060-2070 is the net-zero target for other GHGs.

[6] This is the principle of informational efficiency of markets - Efficient Market Hypothesis (EMH) - formalized by Fama (1970).

Thus, "calling on finance" to decarbonize the economy, and more broadly to fight against the destruction of nature[7], may seem contradictory, given the current state of the financial system and the dominant understanding of its *raison d'être*[8].

In the *mainstream* economic thinking, climate change has been described as "the greatest market failure the world has ever seen" (Stern, 2008). Thus, to correct this failure (and "internalize the externality" of GHG emissions), the widespread application of a price to greenhouse gas emissions was initially seen as the ultimate economic solution. Then, as private financial institutions became concerned about the climate and expectations grew as to their place in this struggle, the main obstacle to the formation of "efficient" prices, representative of the level of risk from present and future climate change, became the lack of information about these risks for each financial institution. The financial world then realized, thanks to Mark Carney (2015), [9]the danger of expecting banks and investors to correctly anticipate the long-term risk linked to climate change when these actors have structurally and institutionally incompatible time horizons, which are far too short. Priority was then given to *disclosure*, i.e. to the transparency by economic actors of their exposure to climate-related risks, so that financial decisions would be informed - making market prices "efficient" again - and naturally and optimally guide the decarbonization of the economy.

c. Towards a sustainable finance?

It was then that, in the wake of the Paris Agreement, the political will to generalize these approaches to mobilizing the financial markets was manifested in what will henceforth be called "sustainable finance" policies[10]. Public authorities and economic actors are realizing that the financial sector can no longer be content to play a secondary role in the climate challenge and, more broadly, in the objectives of sustainable development. Until recently, the financial sector's primary concern in this area was to change the light bulbs in its offices. This is why various regulatory and normative initiatives are emerging to mobilize the financial system and put it in battle for this new role.

2- What are the theoretical foundations behind these "sustainable finance" policies?

[7] See the many initiatives in the financial sector to extend approaches that until recently were limited to climate to nature in the broadest sense (see Kedward et al. 2020).
[8] See the parallel that could be drawn with the definition of the "raison d'être" of companies by the PACTE Law (2019) https://www.economie.gouv.fr/loi-pacte-redefinir-raison-etre-entreprises
[9] Cf. Mark Carney (then Governor of the Bank of England and Chairman of the Financial Stability Board [FSB]), Sept. 29, 2015, https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability
[10] See a review of definitions in A. Rambaud and H. Chenet (2021) "How to re-conceptualise and re-integrate climate finance into society through ecological accounting", Bankers Markets and Investors, forthcoming. Draft paper: https://papers.ssrn.com/abstract=3725538.
It should be noted that in parallel to the steps taken by the public authorities, a large number of financial institutions have gradually mobilized voluntarily in this same direction.

By embarking on such reform or adjustment of the financial system, governments are explicitly or implicitly acknowledging the weaknesses of the current system in financing the decarbonization of the economy and sustainable development objectives.

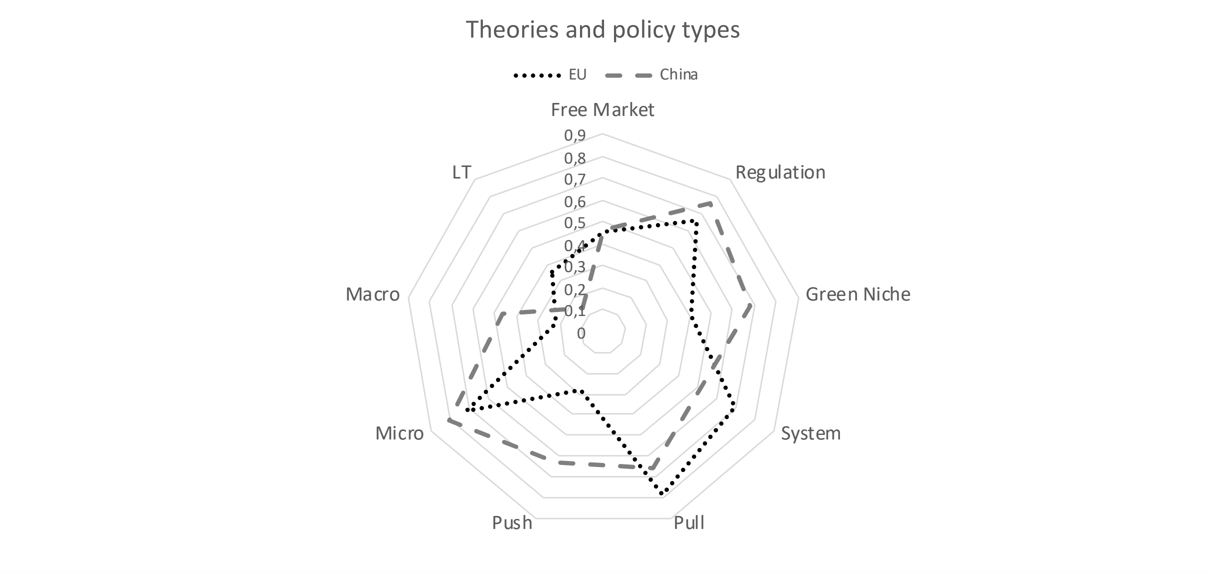
Depending on how finance works and should work, and how it interacts with the real economy and more broadly with society (consumption, innovation, etc.), there are two main options: correcting the financial system at the margin or reforming it in depth. The first can be summed up as measures to establish informational efficiency in the markets with respect to the "new" risks constituted by climate change and the degradation of ecosystems - as well as by the consequences of the measures put in place to fight against them -, while the second aims at structurally redesigning the financial markets so that their explicit purpose is to finance the economy of tomorrow in accordance with the objectives determined by governments, in coherence with the imperatives set out by science.

In the box opposite, we propose an analysis of the theoretical underpinnings mobilized within the framework of the elaboration of these "sustainable finance" policies, by studying the two main initiatives established in recent years, on the one hand the *European action plan for* *sustainable finance*[11], and on the other hand the Guidelines for the *establishment of a green financial system*[12] established by the Chinese government.

Comparison of the theoretical underpinnings mobilized by European and Chinese "sustainable finance" policies

Here we analyze the two main "sustainable finance" policy frameworks, established by the European Commission - the[13]*European Sustainable Finance Action Plan* - on the one hand, and by the Chinese government - the *Guidelines for Establishing a Green Financial System*[14] - on the other. It appears that different approaches, narratives and theories are being used, with some duality. In particular, following a typological framework that we recently proposed[15], the following oppositions can be distinguished within 5 theoretical dimensions of analysis: free-market theory / regulation theory, capital attraction logics (through the "carrot") / push (through the "stick"), approaches through the growth of "green niches" / greening of the system as a whole, targeting at the entity level (micro-[prudential in particular]) / sector level (macro-[prudential]), and an emphasis, or not, on long-term time horizons.

Figure 1. *Comparison of key "sustainable finance" policy frameworks in the EU and China, according to the typology proposed by Chenet and Zamarioli (2021).*



The comparative framework represented in Figure 1 shows the underlying concepts and elements mobilized by the two European and Chinese sustainable finance plans. We can see that the European plan is more polarized and seems to make more pronounced choices within the different dimensions (e.g. it relies heavily on capital attraction

[11] "European Union Sustainable Finance Action Plan (EU SFAP), https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

[12] "Guidelines for Establishing the Green Financial System", http://www.pbc.gov.cn/english/130721/3131759/index.html

[13] "European Union Sustainable Finance Action Plan (EU SFAP), https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

[14] "Guidelines for Establishing the Green Financial System", http://www.pbc.gov.cn/english/130721/3131759/index.html

[15] As proposed by Chenet, H. and L. Zamarioli (2021) "The theoretical underpinnings of 'sustainable finance' in the challenge of climate goals", https://pocfin.kedge.edu/content/download/135604/1837502

logics (pull) rather than on constraining push logics (push)), whereas the Chinese plan seems to rely more ambivalently on opposite sides. More broadly, we can see in the words used that the Chinese policy essentially aims to green all of its financial products and mechanisms without questioning its fundamental functioning, whereas the European action plan, in addition to proposing a greening of its mechanisms, puts the finger on several structural cogs in its functioning.

Although exploratory, this analytical framework, which only interprets the wording of the various provisions included in the plans and in no way its actual implementation elements or the priorities given to each mechanism, raises questions about the apparent contradiction (resp. coherence) of the Chinese (resp. European) model in the types of logic it uses. Is China's sustainable finance policy incoherent and confused, or does it illustrate a desire to blend the best of each approach? Conversely, is Europe aiming for greater clarity and efficiency by prioritizing one type of action in each category or is it depriving itself of potentially effective levers of action?

Beyond the apparent contradictions within each of the dimensions listed in Table 1, it is also interesting to see the contradictions that emerge between each of them. In particular, it is surprising to see that the use of market mechanisms (i.e., prices) does not seem to go hand in hand with the use of capital attraction mechanisms, which also operate through prices. Conversely, one might expect a policy that relies heavily on the regulation of financial markets to be complemented by mechanisms for guiding and pushing capital, through binding measures, but according to this analysis this is not the case. The same is true for the intuitive coupling between an approach based on the growth of green niches and a micro vision attached to companies/establishments, and vice versa between an approach to greening the system that one would imagine to be in line with a macro vision, yet displaying opposite signals here.

It is difficult to conclude on this basis alone. What seems obvious is that the conceptual toolbox mobilized in these frameworks is very variable, and sometimes opposing elements coexist. For example, when the European plan emphasizes the role of benchmarks and stock market indices that need to be *greened*, while questioning the short-termist bias of financial markets in their foundation. Moreover, in terms of impact and end, beyond the means, it is not possible at this stage to identify a significant positive effect of these measures, as the economy has not significantly deviated from its trajectory to reach a path compatible with the objectives, remaining, according to all scientific analyses, anchored in a warming trajectory that is unacceptable in relation to the Paris Agreement.

Table 1 Typological framework proposed by Chenet and Zamarioli (2021) to classify "sustainable finance" policy provisions along 5 dimensions

Free-market	Attraction / carrot	Green niches	Micro	Long-term*
Regulation	Push / stick	System	Macro	(Short term)

An analysis of these different approaches and levers of action mobilized by the European and Chinese plans shows a great diversity within the panoply of measures planned, which may lead one to believe that the European action plan relies on both market mechanisms and legislative provisions with in-depth reform potential. However, a closer look at the actual implementation of the tools mentioned, and thus at those that are actually prioritized[16], reveals that the concrete

[16] The homepage of the European sustainable finance plan is very explicit on this point: among all the initial measures of the action plan, only the taxonomy, the standard for green bonds, the disclosure of "climate"

implementation is based on a much more unified conceptual foundation, with a strong emphasis on market mechanisms. In particular, as far as the European plan for sustainable finance is concerned, most of the provisions currently discussed and transposed/transposable into law are voluntary, and aim to improve the functioning of the markets, rather than to directly steer them in a particular direction. The key elements of the European action plan14 (such as the taxonomy on sustainable activities, standards and labels for green financial products, climate-related disclosure by firms, benchmarks linked to climate and ESG objectives[17]) are provisions aimed at correcting existing mechanisms for integrating the climate dimension, but in no way aim at reforming these mechanisms in depth, as other provisions of the plan, largely left aside at this stage, may suggest (on the role of investors, prudential requirements, transparency of investment decisions, alternative accounting treatments with respect to the long term, corporate strategies and objectives with respect to sustainability, long-term interests of companies, short-term pressure of capital markets on companies).

In particular, we can note that the temporal issue is essentially set aside, whereas, as Mr. Carney and almost everyone else in his wake has reminded us, the time lag between climate issues and finance is potentially fatal. Admittedly, a specific action of the European plan is dedicated to it among the 10 major actions, but in an isolated and almost ancillary manner instead of being transversal, and without attaching a legislative or normative dimension to it or any prospect of adjustment beyond the production in 2019 of an exploratory report by each of the supervisory authorities[18]. In a rather laconic way, the European Commission only retains from these reports the recommendation to reinforce... the transparency of ESG factors to facilitate the commitment of institutional investors. The circle is complete.

We therefore see in the European action plan for sustainable finance, which is intended to be an example of innovation and ambition, a clear contrast between, on the one hand, the range of possibilities for profound reform that it opens up at its inception, giving hope for a possible reshaping of the financial sector in the service of the necessary transformation of the economy towards a sustainable model, and, three years later, the focus on superficial provisions that have no other objective than to fluidify the current mechanics of the financial markets, without giving them any purpose.

3- Do not lose sight of the essential: decarbonization of the real economy

The economy must go through a fundamental break, a drastic regime change, in order to reach global carbon neutrality in 2050. Why should finance, which is supposed to finance the future economy, be able to fuel this break without itself changing paradigm, when it is still structurally based on the same software, which has contributed to the impasse we are in today? "*The financial markets were not designed to manage the planet*[19]", and if we want them to play a significant role in the implementation of a low-carbon future, it seems essential, as initially

information of companies and financial services, and the climate and ESG benchmarks are mentioned. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

[17] ESG factors: Environment, Social, Governance

[18] See Key action #10: https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en

[19] See Nicolas Bouleau, https://www.publicbooks.org/financial-markets-were-not-designed-to-manage-the-planet/

proposed in the European Action Plan for Sustainable Finance, to thoroughly review their functioning. There is no doubt that the race for short-term financial returns, with no concern for the origin of these returns or their collateral consequences, has had a strong responsibility for the destruction of nature and the destabilization of the climate, while warning signs have been multiplying for decades[20]. Alternatively, a finance that would only remain a transmission belt without a primary goal would require, in order to fully play its role, ambitious, complete and unambiguous economic and industrial policies, so that the financial markets would not have, for example, the possibility to finance new fossil fuel installations, which they still do today and will "naturally" do as long as they have money to gain in the short term. In other words, the financial sector cannot be expected to spontaneously turn its back on the development of any new climate-damaging project as long as it is still formally allowed in the real economy. Either this type of project must be banned on the industrial side, or it must be banned on the financing/investment side. In the absence of international coordination, the two axes can be complementary, depending on the jurisdictional link between the regulator and the regulated. For example, while it is impossible for a given jurisdiction to prevent the construction of a new coal-fired power plant in another country, it can prevent the financial institutions under its authority from getting involved.

The publication by the International Energy Agency (IEA) on May 18, 2021[21] of its first energy scenario compatible with a "Net-Zero Emissions by 2050" objective will not fail to illustrate the previous point in concrete terms. This scenario is based on two key elements for finance: investing massively in renewable energies and energy efficiency, and no longer financing any new fossil fuel projects. Given the influence of the IEA on political and financial decision-makers, this last point should prove to be important in the context of the European Commission's finalization of its green taxonomy after months of vacillation as to whether or not to exclude fossil gas.

4- Conclusion

To conclude, let's remember that in the face of climate change, finance has a role to play, which is enshrined in the Paris Agreement, but it should only be a means, a tool to be used for the decarbonization of the economy, and not an end in itself, like an economic sector in its own right in search of a new growth driver.

The lessons of science, as gathered in the IPCC reports, must remain the reference and guide decisions; they are not negotiable. On the other hand, finance, as a tool, can be purposely shaped. It must be used to best serve the objectives of the Paris Agreement, and regulation by signatory jurisdictions should not tolerate financing or investments that directly oppose the achievement of these objectives.

[20] Let us recall the Meadows Report for the Club of Rome in 1972, the creation of the United Nations Environment Programme (UNEP) in 1972, and that of the IPCC in 1988.

[21] See International Energy Agency, "Net Zero by 2050 - A Roadmap for the Global Energy Sector -Flagship report, May 2021", https://www.iea.org/reports/net-zero-by-2050

Beyond the "sustainable finance" policies we have discussed here, the financial system as a whole is facing these same issues, including at the level of central banks. For example, the NGFS[22] recently opened the door to adapting the operational framework of monetary policies to contribute to the fight against climate[23] change, and the European Central Bank (ECB) is evolving month after month in the interpretation of its mandate, which is proving to be compatible with action explicitly supporting European climate objectives, and opens the possibility of revising its market neutrality doctrine[24].

The goal of decarbonizing the economy raises a large number of challenges for the financial system. Among these, let's highlight several blind spots in current discussions that we need to address quickly so as not to waste further years in inaction or perhaps worse in counterproductive actions:

- While many industrial and financial companies are committing to net-zero targets for 2050, it is imperative that these commitments be accompanied by real GHG emission reductions, following incremental decarbonization trajectories consistent with the long-term target. Committing to a target three decades from now without any milestones is ultimately meaningless, especially for financial institutions whose "long" time horizon is no more than three to five years[25].
- As shown by the IPCC in 20184 , there are multiple theoretically possible decarbonization trajectories that are compatible with the net-zero carbon goal in 2050 and the +1.5°C target. However, socio-economically speaking, the types of future they represent are very different, between scenarios relying massively on carbon capture technologies in the very distant future, compensating for the little effort on emission reduction in the short term, and others, on the contrary, based on a drastic reduction as of today, making it possible to get rid of the most risky technological solutions, but betting on massive gains in terms of energy efficiency without further delay. These different trajectories are not necessarily compatible with each other, and it is essential that, at the very least, a range of coherent trajectories emerge at the level of large regional blocks, in order to help players determine in which "investment universe" they can expect to evolve. Obviously, the future is not written and it is essential that such strategic planning be based on flexible and agile approaches to adapt to the inevitable surprises and forks in the road that the future will bring.
- The financial needs to fight climate change, and even more so to adapt to it, are concentrated in the countries of the South, while the financial resources are concentrated in the capital markets mainly in the countries of the North. Current narratives on "sustainable finance" notably ignore this fact. In particular, the European action plan,

[22] NGFS: "network of central banks and financial supervisors for greening the financial system", a network of about 100 central banks and financial supervisors, formed in 2017.
[23] "Adapting central bank operations to a hotter world. Reviewing some options" (March 2021) https://www.ngfs.net/sites/default/files/medias/documents/ngfs_monetary_policy_operations_final.pdf
[24] See e.g. "The ECB at the time of the decisions", Veblen Institute, https://www.veblen-institute.org/La-BCE-a-l-heure-des-decisions-951.html
[25] See e.g. the 2019 ESMA and EBA reports on short-termism: https://www.esma.europa.eu/sites/default/files/library/esma30-22-762_report_on_undue_short-term_pressure_on_corporations_from_the_financial_sector.pdf, https://www.eba.europa.eu/sites/default/documents/files/document_library/Final%20EBA%20report%20on%20undue%20short-term%20pressures%20from%20the%20financial%20sector%20v2_0.pdf

focusing on developed financial markets, makes no mention of financing and investment objectives in the most exposed or needy countries, perhaps because these countries do not have such financial markets. His Chinese counterpart, on the other hand, approaches the issue from an international perspective, under the banner of South-South cooperation and the *Belt and Road*[26] Initiative, or by mentioning dedicated green bonds[27]. Climate and finance have in common that they are global systems; nothing can be solved without understanding the phenomena and the needs on a global scale.

- In connection with the above, it is important to emphasize that "sustainable finance" as it is being developed today is limited almost exclusively to climate change mitigation objectives and largely neglects the issues related to adaptation. However, the Paris Agreement, to which all these initiatives relate, clearly states the need to address these two aspects together. It is therefore necessary for the financial system to mobilize as soon as possible on adaptation issues in the same way as it has recently done on mitigation.
- Despite the advances made in recent years in terms of ethics and responsibility, finance still tends to approach climate change solely from the perspective of the financial risk that accompanies it. This raises two major problems. On the one hand, due to the theoretical or practical inability to really calculate a large part of these financial risks[28], financial institutions and regulators will be faced with erroneous or insignificant indicators, which will guide them towards decisions that may be contrary to the desired goal. On the other hand, it is the focus on financial risk, even if intuitively correctly understood, that could divert them from the real issues of financing, typically by making access to capital even more difficult for the countries most exposed to climate risks (e.g. via the downgrading of sovereign debt), and which, as we have seen above, are most in need of adaptation financing.
- Finally, the interest finally shown in the climate by finance, which has been welcome for the 30 years that the subject has been on the table, must not be the tree that hides the forest. Indeed, climate change is only one of the many manifestations of the deterioration of nature that is becoming more visible every day. The collapse of biodiversity, the depletion of natural resources, the pollution of water, air and soil, etc. are obviously of the utmost concern to the financial sector, since it is now accepted that the entire economy is itself exposed. Thus, there has been a recent tendency to extend to nature, and to biodiversity in particular, the approaches developed in recent years to connect finance to climate issues. As we have seen with climate change, the problem is complex and the pitfalls numerous. This complexity is even greater and more multidimensional when it comes to nature in general, beyond the climate. The road ahead is therefore perilous for sustainable finance, whose mandate is broadening[29], and it is essential not to fall into the same dead ends[30].

[26] "Belt and Road Initiative (BRI)", also known as "New Silk Road" in French

[27] See Ameli et al, "Higher cost of finance exacerbates a climate investment trap in developing economies", Nature Communications, forthcoming

[28] Cf. Chenet, H., J. Ryan-Collins, F. van Lerven (2021) "Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy", Ecological Economics, 183, https://doi.org/10.1016/j.ecolecon.2021.106957

[29] After having tackled climate change mitigation, the European taxonomy must address 5 other environmental objectives in the same way: adaptation to climate change, water, circular economy, pollution, biodiversity)

[30] See Kedward et al (2020) "Managing nature-related financial risks: a precautionary policy approach for central banks and financial supervisors", UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2020-09). https://www.ucl.ac.uk/bartlett/public-purpose/wp2020-09

Finance is certainly a powerful tool when it comes to diverting the global economy from its carbon trajectory, but it is important to be aware of its intrinsic limits and not to expect too much from it to solve our problems, unless we have the means to reshape it in depth.