

# Financing a Just Transition

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## Abstract

Climate goals can only be realized with a major shift in financing toward low-carbon, climate-resilient assets, notably infrastructure. Progress has been made, but the world is not currently on a viable let alone a just transition pathway. The rules and norms governing the financial system itself are an important factor shaping financial flows. Positively, recent developments highlight a growing receptivity on the part of financial market actors and those governing the financial system to take account of climate and broader sustainable development considerations. Building on such receptivity to reinforce the underlying broader purpose the financial system is a precondition for a just transition.

## Keywords

finance, climate change, financing sustainable development, climate finance

## Irreducible Facts

Exactly 2 years on from agreeing to the Paris Accord on climate, over a 1,000 people gathered in Paris on December 12, 2017, as President Macron welcomed heads of state and other dignitaries to debate, commit, and catalyze financing to address climate challenges and goals. It was a celebratory moment, of the fact of the Accord itself, of its ratification in record time by 170 countries, and of the mainstreaming into policy debate and market practice of climate related considerations. Even the disappointment over the announced withdrawal of the United States from the Accord was more than offset by the feisty contributions made by American mayors, governors, business people, and philanthropists.

The positive hype of the Bollywood-like spectacle was in part justifiable. There are now over 1,200 pieces of climate legislation across more than 60 countries, a clear policy signal of the direction of travel (Guterres, 2018). On that day, 13% of the global GDP was already covered by explicit carbon prices, a percentage that has since increased with China's announcement on the 29th of December of the launch of its national carbon market (Guterres, 2018). Furthermore, according to the International Renewable Energy Agency, the renewable energy sector employed an estimated 10.3 million people worldwide, with over 500,000 new jobs created in 2017 alone, mainly in Asia (International Renewable Energy Agency, 2018).

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Such understandable hype could not, however, disguise two simple facts. First, is that the carbon concentration numbers are looking dire. After a 3-year “plateau,” estimates suggest that they have risen by 2% in 2017, according to the Global Carbon Project (Hausfather, 2017). Climate-related negative impacts are also on the rise.

- More than 25 million people around the globe have been displaced from their homes by natural disasters every year since 2008—equivalent to one person every second (United Nations High Commissioner for Refugees, 2015).
- 2016 was the costliest year for natural catastrophe losses in the past 4 years, totaling US\$175 billion. While statistics from 2017 are not yet fully compiled, we all know it has been a year of devastating and costly natural disasters (Munich, 2017). Direct economic losses as a result of Hurricane Harvey alone are likely to be as much as US\$85 billion, making Harvey the second-most expensive hurricane on record after Katrina (Ellenrieder, 2017).
- For global adaptation costs, United Nations Environment Programme (UNEP) estimates that the costs of adaptation could be as high as US\$300 billion per year by 2030, and US\$500 billion per year by 2050 (UNEP, 2016).

Second, the financials, despite some notable silver linings, remain equally dire.

- Green bonds issued exceed several hundred billion dollars, registering extraordinary gains over a 5-year period. Yet this new asset class makes up less than 1% of the global US\$100 trillion bond market (Green Finance Study Group, 2016).
- Green infrastructure investment is on the rise, with the lead coming from renewables as costs fall in many countries to parity with coal generated electricity. Yet these investments are a fraction of total infrastructure investment, which is itself less than 1% of the overall portfolios of institutional investors (Green Finance Study Group, 2016).
- Commitments to divest carbon intensive assets increased in 2016 to over US\$5.2 trillion (Carrington, 2016). Yet investment in upstream and downstream fossil fuel exploitation reached US\$825 billion in 2016, a multiple of global investment in renewables (Buchner et al., 2017).

The irreducible fact is that although we are heading in the right direction, the pace and volume of changes remain underwhelming to say the least, and by most measures dangerously irresponsible at a global scale.

Our collective challenge, then, is how to change this picture to one where financing is consistent with both the science and our policy appreciation of the needs to rapidly transition our US\$80 trillion global economy to a low-carbon, climate-resilient pathway (Wikipedia, 2018). As the Paris Agreement highlights in Article 2.1(c), there is a need to make “finance flows consistent with a pathway toward low greenhouse gas emissions and climate-resilient development” (United Nations Framework Convention on Climate Change, 2015).

## **Finance’s Failed Purpose**

The ultimate purpose of the global financial system is to ensure the cost-efficient and effective channeling of global savings to finance tomorrow’s inclusive, sustainable economy. Of course, there are many less high-brow, secondary, shorter term rationales for a financial system, notably to facilitate payments, to provide pathways for citizens to save, and to enable market actors to profitably intermediate the owners and users of capital. That said, to assert a higher purpose is simply to state the obvious. Failing to realize this purpose would eventually undermine the livelihoods and

savings of private citizens, returns to capital, the fiscal basis for government, the profitability of lenders, insurers, and investors, and so along the way the viability of the financial system itself.

Today, the financial system is noticeable failing in realizing its core purpose. In a nutshell, tens of trillions of dollars of peoples' savings are earning low, zero, or negative returns (Platt, 2017) while productivity-enhancing and wealth-creating investments needed to enable what the G20 would term "balanced, sustainable growth," or sustainable development, remain unfinanced. Moreover, the financial system has become prey to profit-making through short-term trading that is not grounded in the underlying performance of the real economy of goods and services (Turbeville, 2016). Indeed, such trading, that has since the 1970s powered a rapid growth of the financial sector as a proportion of global GDP, continues to undermine the real economy (United Nations Environment Programme Inquiry, 2015).

As an illustrative testimony to this, the average returns to financial intermediation have not fallen over the last decades, despite both a massive growth in the volume of trades and the large-scale deployment of cost-reducing financial technologies (Philippon, 2015). The IMF has pointed in a landmark paper to a negative relationship between the size of financial sectors relative to the GDP of their hosting countries, and the productivity growth of the associated economies (Sahay et al., 2015). Most visible of this negative relationship is the financial crisis of 2008. By some estimates, the crisis has cost the United States alone US\$20 trillion and still counting, or more than 100% of its annual GDP (Better Market, 2015). Many pension funds almost a decade later remain significantly underfunded, threatening policy holders' security in retirement and financial stability.

## Resetting Finance

Climate has been named By Lord Stern as the "history's greatest market failure" (Benjamin, 2007). As an externality, it remains undervalued in financial and broader economic decision making. Despite Paris, or perhaps as a backlash from some of those economically threatened by the historic climate deal, there are many who consider their duty and interest to ensure it remains so.

Market and product innovations does help in bringing climate into the financing equation. Carbon-linked bonds and investment indexes, for example, make a difference, as do climate solutions-focused investable funds, and market-based research on the risks of climate-related stranded assets. Citizen awareness can also bring about impact, as they are the ultimate owners of capital, intended beneficiaries of institutional investors, and owners of climate-affected insurance policies. "Climate Action 100+," for example, is an initiative by a group of institutional investors representing tens of millions of pension policy holders to pressure the world's most carbon intensive, listed companies along a decarbonization pathway (Climate Action 100+, 2018).

However, despite ongoing, positive technological developments, shorter term sources of profit and broader political economy considerations result in limits to what the market alone can deliver in aligning finance to climate goals. As remarked by Mark Carney, Governor of the Bank of England and Chair of the Financial Stability Board: to address climate goals requires that we "build a new system—one that delivers sustainable investment flows" (Carney, 2016). System change is easily said and harder to achieve, notably where it concerns a complex, dynamic, and adaptable system such as finance. Blueprints and preconceived outcomes are not simply hard to envisage but quickly become dogma and part of the problem. Yet cautious experimentation can lead to incrementalism and become an alternative to serious action.

## When to Intervene in the Finance–Climate Nexus

The challenge, then, is to design and execute an ambitious change process, building in the expectation of and means to deal with failure, unintended consequences, that in turn requires rapid feedback and dynamic learning (Zadek & Robins, 2018).

Some changes needed to align finance with climate goals can and have to be made in the real economy, such as environmental regulation, carbon pricing, and policies, regulations, and subsidies that encourage clean technology. There are at least four sound reasons, however, for direct intervention in the financial system itself:

1. *Valuing externalities*: Action may be justified where financial markets systematically misprice the impact of externalities on financial returns, and thereby create negative spillover impacts on third parties or society in general. In the case of climate, it could well be concluded that carbon will remain underpriced compared with what is needed to bend the curve in a timely and sufficient manner.

A variant of this is the accepted need in some circumstances to subsidize private actors to allocate capital in ways that secure public goods that private actors are not expected to pay for on their own volition. Such public goods might include carbon reduction and investing for long-term resilience and adaptation.

2. *Financial innovation*: Action may be justified to stimulate “missing markets,” generating positive spillovers, for example, through common standards that improve liquidity in embryonic areas. The G20 under Argentina’s Presidency is considering how best to develop new asset classes that would catalyze scaled investment low carbon, climate resilient infrastructure.
3. *Managing systemic risks*: Action may be justified where the stability of parts of the financial system may be affected by environmental impacts, or by associated policy, technological, and social responses. Building on the leadership of the Bank of England and the People’s Bank of China, the Central Banks and Supervisors Network for Greening the Financial System has been established to explore how financial regulators should respond to climate and other environmental challenges going forward (Banque de France, 2017).
4. *Ensuring policy coherence*: Action may be justified to ensure that the rules governing the financial system are consistent with wider government policies. For example, the Bank of England’s prudential review of the impact of climate change on the U.K.’s insurance sector was, for example, in direct response to the U.K.’s Climate Change Act. Additionally, the governments of Sweden and the Netherlands have required their central banks, and their banking and pension fund regulators, to consider the implication for their work of policies about climate.

These four reasons are in the main “first best” solutions to providing public good provision (Edwards & Zadek, 2003). The first three, in particular, which focus on ensuring markets effectively handle risk pricing, innovation, and financial stability, are centrally the role of financial policy makers and regulators, as well as standard-setters. From this perspective, these reasons for intervening need not concern any direct, policy or principled interest in advancing a low carbon, climate resilient economy.

The fourth reason, in particular, concerns the broader policy landscape. Conventional wisdom rightly seeks to ensure the independence of regulators from shorter term, political interests that could do longer term damage to the financial system and in turn underlying prospects and performance. Regulatory coherence with longer term policy objectives is, however, important and often critically so (G30 Working Group, 2015).

Taken together, these four reasons all have as their instrumental or ultimate aim as being to improve the working of the financial system, which can be best understood along three axes:

- *Effectiveness*: degree to which markets price sustainability factors into asset values.
- *Efficiency*: costs of running a system that delivers financial flows against requirements.
- *Resilience*: Susceptibility of the system to disruptions related to unsustainable development.

There are, however, also times where “second best” reasons for intervening are also justified. In some countries, notably many developing countries, environmental regulatory enforcement remains weak, resulting in pollution and broader environmental degradation. While improving enforcement is almost always the best solution, local political economic context might not make it practically available in the short to medium term. In such circumstances, second-best solutions enacted through the financial system interventions may be preferable. Enhanced environmental lender liability is a case in point, which effectively engages banks under threat of legal action to act as environmental steward where conventional enforcement is ineffective (Porto, Diniz, Lopes, & Sampaio, 2016).

Alongside the core first- and second-best reasons for intervening in the financial system in advancing a low-carbon, climate-resilient economy is the need to consider potential negative impacts and unintended impacts of action on the financial system or real economy outcomes. Such negative outcomes can arise for a number of reasons, each leading to the implementation of a flawed measure, either because of system complexities, conflicting objectives, or political interference. One case of conflicting objectives concerns moves to integrate climate risks into sovereign credit ratings. Positively, such integration would ensure that bond default risks were sensitive to climate-related factors, and that countries were incentivized to mitigate such risks through adaptation measures. Problematic, however, is that the countries that will be most immediately affected by such developments would be the world’s poorest and most vulnerable, including the 55 members of the V20, the club of the world’s most climate vulnerable countries.

## How to Intervene in the Finance–Climate Nexus

Interventions directly into and through the financial system can therefore be justified under specific circumstances. There are many types of interventions to consider, and we are in the early days in understanding what works best, or even what are the best criteria to use in making such an assessment (Maimbo & Zadek, 2017).

Some interventions are private-sector led but involving collective advocacy as well as individual trading activities. Other forms of private, collective action lead to policy and regulatory interventions. Great store was placed on the fact that the Financial Stability Board’s Task Force on Climate-Related Financial Disclosures (TCFD) is private sector led, exemplified by Michael Bloomberg’s chairmanship of the Task Force (TCFD, 2018). This was done partly with the intention for the market to voluntarily adopt the recommended reporting standards. That said, the TCFD’s findings have been picked up by regulators and standard setters, such as the European Commission through its High-Level Expert Group on Sustainable Finance (HLEG, 2018), and a number of stock exchanges as de facto standard setters by virtue of their listing requirements. In fact, the de facto setting of standard has been done directly and through the Sustainable Stock Exchange Initiative, a UN-hosted coalition of about 60 stock exchanges committed to advancing sustainable development in listing rules and other arrangements (Sustainable Stock Exchanges, 2018).

Conversely, policy makers and regulators continue to take leadership in a growing number of cases. The French Energy Transition Law, adopted in August 2015, is a case in point, enacted on the eve of COP21 in Paris. The law requires all major listed companies and financial institutions to report publicly on climate-related risks. More ambitiously, on August 30, 2016, days before the G20 Leaders Summit in Hangzhou, China’s State Council adopted a set of 35 policy recommendations on how to green China’s financial system made by an unprecedented grouping of seven ministries led by the country’s principle financial regulator and monetary authority, the People’s Bank of China (People Bank of China, 2016).

More broadly, nonmarket interventions can also take place in one or more of the following forms: (a) policies and “soft” policy signaling; (b) financial regulations; (c) financial standards,

such as for green bonds and disclosure; (d) judicial interventions such as shifts in fiduciary and liability laws or interpretations thereof; (e) public financing, including subsidies and joint financing arrangements; and (f) public procurement that impacts the climate-financing nexus.

In practice, even the more robust approaches taken by public bodies in advancing nonmarket interventions have been based on extensive engagement with the private sector. China's ambitious plan to "green the financial system" emerged on the back of 3 years of consultations, research, and experimentation, and a standing coalition of market and nonmarket actors including international experts, the China Green Finance Committee. Climate-related prudential reviews undertaken by financial regulators have in all cases involved extensive dialogue with the private sector, as has the European Commission's push for a more embedded approach to sustainable finance across the continent's capital markets.

## **Conclusion: From Climate Finance to Financing Sustainable Development**

The term *climate finance* has historically referred in the main to that finance *purposefully directed* to address climate as well as other goals. As a result, it was largely understood in the context of the international climate negotiations, and to be defined and measured as part of efforts to determine and drive respective national responsibilities and accountabilities.

Over time, as domestic resource mobilization and the role of private financing has become more visible, the idea of climate finance has evolved to embrace the bigger picture. Today, it more generally includes financing that intentionally or unintentionally has a positive climate impact. In that sense, climate finance has become more diverse and amounts to a far greater number in aggregate (as well as being far more difficult to add up).

Climate is of course core to the overall eco-system within which we exist, and so is not easily understood to be part of something else. Yet most recently, climate-related financing has become increasingly understood to be part of a bigger or at least different picture, namely, the need to finance the 2030 Agenda, which is centrally, the Sustainable Development Goals. Not only is addressing climate challenges just one part of these goals, but climate has to be addressed in order to achieve many if not all of them.

Aligning finance to climate goals, then, cannot be seen separately from aligning finance, and indeed the financial system as a whole, with sustainable development. In one sense, such a lens change makes life more complex. On the other hand, the reasons for addressing climate are many, and often the main drivers reflect other sustainable development goals more than climate itself.

Aligning finance with climate goals can therefore proceed along diverse pathways with different, intersecting goals as well as approaches in mind. Amid such diversity, however, what does remain constant is the scale of the challenge, and the short time we have to meet it head on. This observation in turn translates into one simple conclusion, albeit with rather complex implications. It is that the financing challenge has to be understood from the outset as being systemic, not merely about how to mobilize more funds. That is, it is to understand the problem and the task ahead as being to advance deeply rooted changes in how finance works and its relationship both to the real economy and our broader policy ambitions. This in turn requires us to understand finance as a system, just as we would with energy, health, or agriculture. And this in turn requires us to focus on the system's underlying purpose and to use that purpose as the anchor for understanding practice, designing change, and measuring progress.

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