



# What next for transition finance? Roles, responsibilities and getting practical



# Roles, responsibilities and getting practical

Over the past 12 months, the term ‘transition finance’ has paradoxically become both better understood and increasingly muddled. Debating complex topics is healthy – but given the urgency of the transition, the focus of this debate does need to narrow down to answer two key questions. First, how to secure the capital to finance the transition to a net zero carbon, nature-positive and resilient global economy. Second, which firms and geographies are best placed to develop the technology, infrastructure and natural capital needed to achieve or enable this and therefore to be the recipients of this transition finance.

Much of the transition finance debate is being conducted through the lens of whether incumbent corporates can pivot their business models to be Paris Agreement alignment<sup>1</sup> – and the role of financial services in supporting that journey. This misses several important challenges. First, a one-size-fits-all approach to Paris alignment will not be accepted by emerging markets and developing economies (EMDEs) and may be very difficult to implement for any organisation with assets or financing assets in high-emitting EMDEs. It also misses the challenge that new transition-enabling businesses are facing: in the UK and Europe there is a “missing middle” tranche of capital to put into these businesses to grow them beyond the venture capital phase. As a result, these organisations may either fail or migrate to other markets where this capital is easier to find because the underlying economic and policy conditions make these investments possible.



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There are also sectoral differences: the challenges for producers of fossil fuel are very different from those of fossil fuel users. For example, the transition away from fossil fuels will depend on their falling demand and the move of the entire energy system to alternatives<sup>2</sup>.

In fossil fuel using sectors, such as steel-making, cement and chemicals, the ability to transition will rely on a supportive policy environment, access to cheap and plentiful green electrons and a robust strategy driving investment in R&D, new plants and skills. Increasingly, new start-up disrupter businesses – incentivised by access to governmental funding and supported by venture capital, including in some cases incumbent supply chain investment – are leading the charge<sup>3</sup>. It is not enough though. The latest data suggests that only about 10% of the deployment of low-emissions technologies globally by 2050 required for net zero has been achieved.<sup>4</sup>

The Transition Finance Market Review (TFMR) is developing recommendations on transition finance, including consideration of: Leveraging the Green Finance Institute's work on how public and private finance can be deployed in transition contexts to create investable opportunities; and setting out what contributes to making finance capable of being classified as high integrity transition.

This is important work. It is being done against a constantly evolving backdrop of voluntary sustainability standards and regulatory expectations around transition plans and taxonomy-based reporting. As this settles down, they should support

firms to develop credible transition plans that get into the detail of how business models will need to change to meet meaningful and substantiated targets.

For both incumbents and disrupter firms driving the transition, access to catalytic capital to support innovation; develop and grow new businesses/ business lines; and bring new green infrastructure solutions and products to market will be key. In the UK, the launch of a National Wealth Fund (NWF), which will provide £7.3bn in flexible catalytic capital to attract private investment into green steel, green hydrogen, carbon capture utilisation and storage (CCUS), port decarbonisation and battery gigafactories, is an important innovation in the transition finance space. The NWF intends a targeted approach to risk-sharing with the private sector. Alongside insurance product innovation to address, for example, technology performance-related risk, it could be a powerful model for other countries to consider, complementing incentives such as the US Inflation Reduction Act as a means to attract private co-investment to support the transition.

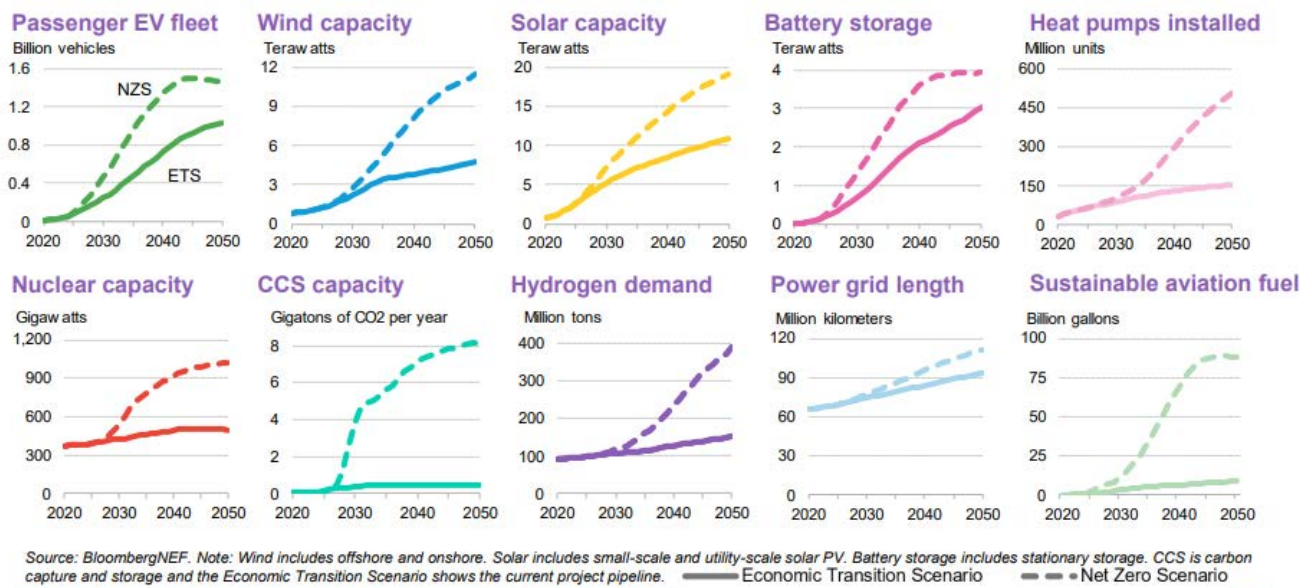
This note sets out a view on the outlook for high-integrity transition finance at the product and company levels, drawing and then building upon insights shared at a closed-door discussion held during London Climate Action Week (LCAW) with leading finance practitioners and experts.

# Supporting project-based transition opportunity

Increasingly discussion on transition finance turns to the topic of finance for clean and green tech solutions (also confusingly known as 'green finance'), which are central to decarbonising the global economy. As banks become more adept in integrating climate change into their risk management approaches, so attention is turning to the opportunity side of the equation.

Progress is being made. According to Bloomberg New Energy Finance (BNEF), in 2023, US\$1.8 trillion was invested in the energy transition but ambition still needs to radically increase. Out to 2030, the US\$5.4 trillion required globally needs to focus on scaling well-understood solutions such as electric vehicle (EV) deployment alongside more batteries and wind and solar capacity (see Figure 1)<sup>5</sup>.

Figure 1.

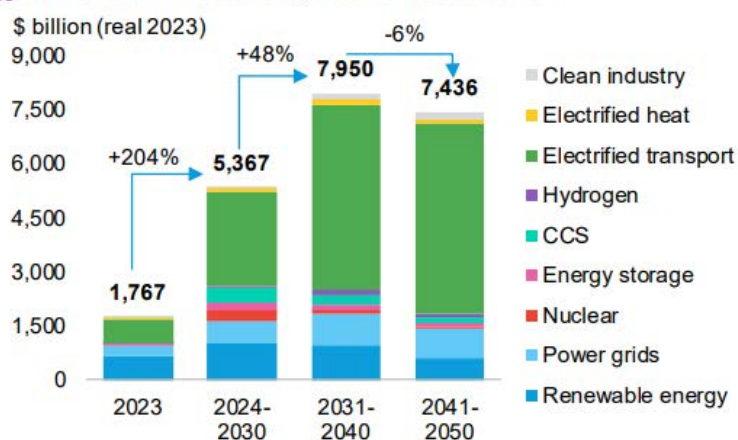




From 2030, novel technologies including Sustainable Aviation Fuel (SAF), Carbon dioxide removals (CDRs) and hydrogen are needed. Thus, of the US\$5.4 trillion needed per annum to deliver progress on the energy transition to 2030, the majority – 70%-75% – will go to technologies such as renewables for which business models are understood, technology is proven and projects are considered bankable. The remaining 25-30% pertains to harder-to-abate sectors such as aviation, shipping, agriculture and industry – both in supporting the largely new entrant technology providers through their commercial development process, and in new and incumbent firms in deploying first and nth of a kind technologies.

The latter won't be achieved purely through a disclosures regime – although this can help. Instead, the focus must be on enabling deal flow created through good policy design and catalytic public finance that can address the 'missing middle' tranche of capital issue and unlock private investment. Finding ways to bridge this gap offers an obvious opportunity for markets, including but not limited to the UK, which have a strong cleantech start-up ecosystem (See Figure 2).

### Annualized energy transition investment, Net Zero Scenario



Source: BloombergNEF. Note: 2023 shows actuals. Excludes investment in fossil-fuel processes and power and conventional energy, and spending on ICE vehicles, which are not captured in 2023 investment figures reported in BNEF's Energy Transition Investment Trends report ([web](#) | [terminal](#)). CCS is carbon capture and storage.





### Institutions are key to creating effective risk-sharing frameworks to support transition.

To accelerate the pace of the transition and the amount of capital deployed to support it, new ways of working are needed. The public sector needs to work far more closely with the private sector to address the 'missing middle' capital tranche issue. A trifecta of appropriately mandated and staffed public finance institutions, a robust revenue model and a wider enabling policy environment are key public sector levers<sup>6</sup>. On the flipside, private sector levers include building out of market experience in creating and sequencing effective solution stacks for transition financing, capacity building amongst early-stage solutions providers and private capital so each understands better the other's worldview, capabilities and expectations, and fora or institutions (like Green Finance Institute) that can inform market understanding, input into relevant policy and pilot new approaches.

One notable deal that points to the way forward is the private placement of H2 Green Steel in Europe this year, which has raised about €1.5bn in equity from an investor

group led by Altor, GIC, Hy24 and Just Climate. The round will finance the world's first large-scale green steel plant and Europe's first giga-scale electrolyser. H2 Green Steel has raised €3.5bn in senior debt and up to €600m junior debt facility with the crucial support of public finance including the following:

- A €250m grant agreement under the EU Innovation Fund, which supports innovative projects that aim to speed up the decarbonisation of European industry and accelerate the green transition.
- A green credit guarantee from Riksgälden (Swedish National Debt Office) that has covered significant amounts of the private finance provided to H2 Green Steel.
- ECA covered financing through Euler Hermes, which helped to further de-risk the project for private lenders.
- Support from the European Investment Bank (EIB).

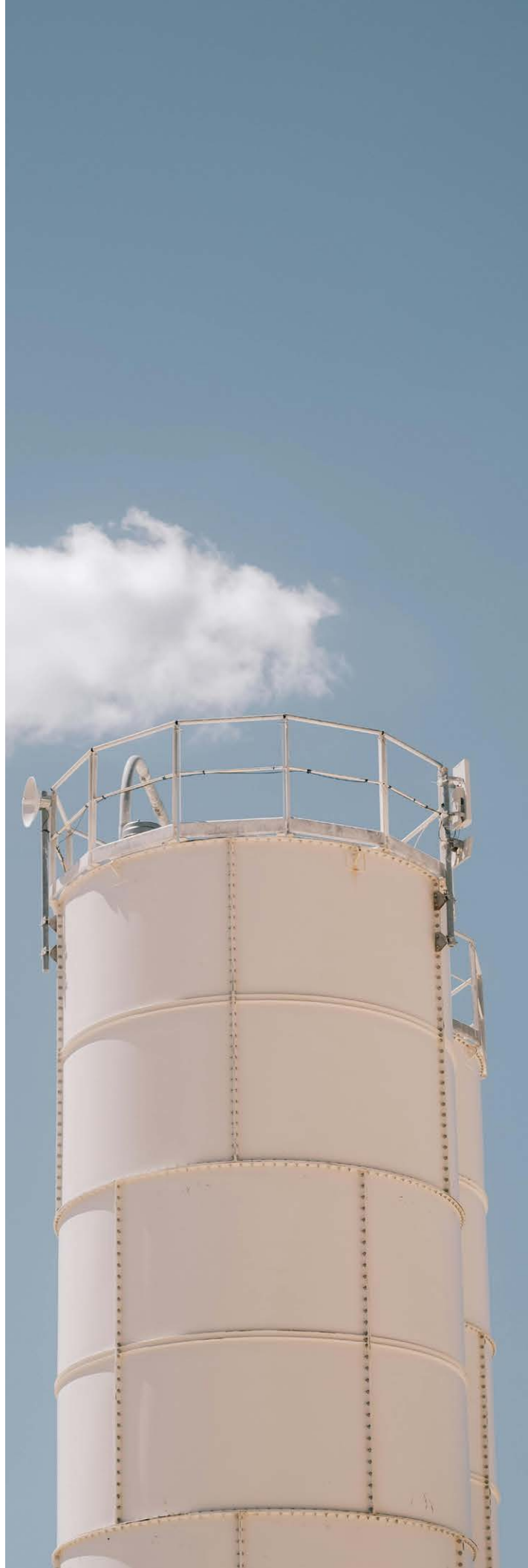
Taking a classic project finance approach, modified to the needs of the project (financial structuring, debt sizing, structuring around conditions precedents proving technical ramp up etc), proved successful, with a total of €4.2bn in debt finance being secured.

This example shows how public finance can be used to mobilise larger quantities of private finance in support of innovative new green technologies that help to decarbonise hard-to-abate industries.

In another example, in March 2024, Sunfire announced it had secured more than €500m to accelerate the growth and industrialisation of its green hydrogen technologies.

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The transaction included €215m raised in Series E equity financing from new and existing investors. The company also secured a term loan of up to €100m provided by the EIB, of which €70m has been signed with the help of InvestEU finance, to support Sunfire's development of solid oxide electrolyzers. This is in addition to €200m of undrawn grant funding to support Sunfire's growth. The financing makes Sunfire one of the best capitalised electrolyser manufacturers in the industry and will support Sunfire in developing electrolyzers to produce green hydrogen more efficiently and cost-effectively for industry processes, replacing the use of fossil fuels in high energy consuming sectors like chemicals and steel.







More dedicated catalytic public finance capability and capacity of the type provided in the H2 Green Steel and Sunfire examples are needed. Examples of this type of institution and risk appetite include the UK's newly announced NWF<sup>7</sup>. The NWF will address the current funding gap for green investment projects that are not being funded by private investors. The fund will likely be most additive by investing in nascent technologies or projects at the initial stages of market development, to address risk and reduce private sector barriers to investment. Focused on supporting the UK's transition to a low-carbon economy by mobilising private investment, the NWF needs to be understood as a sovereign-backed green catalytic fund rather than a sovereign wealth fund, which are typically larger in scale and invest for purely financial objectives. The NWF must therefore be designed to address various sectoral risks presented (technology maturity, regulatory certainty etc) through well-structured risk-sharing solutions. These need to be co-developed with policymakers and the market – taking a flexible approach to provide first-loss debt, equity or guarantees as appropriate to the sector/ technology being considered.

The NWF itself was based on leading international comparator funds such as the Canada Growth Fund and Australia's Clean Energy Finance Corporation – a recognition of the growing understanding among public policymakers of the need to create these types of institutions to work flexibly with the private sector on what is a dynamic and ongoing financing opportunity and challenge.

This needs to be done alongside the process of developing an enabling policy environment that can include demand-side financial incentives and mandates as well as supply-side measures to accelerate planning and permitting timescales.





### The potential transformative role of insurance

In addition to catalytic public capital, insurance is increasingly being seen as a means to transfer risk from the capital markets to the insurance markets. Providers such as New Energy Risk (NER) and Howdens are already developing a range of solutions to complement public sector de-risking solutions and we need more entrants into this market. For example, technology performance insurance can be deployed to address performance risk in the operation of a technology by guaranteeing a level of production sufficient to meet debt servicing or by supporting the warranty obligation of the insurance provider. This type of

specialist insurance can be used to facilitate financing. It unlocks EPCs (engineering, procurement and construction turnkey contracts) from technology providers that, in turn, can unlock access to debt financing. This moves insurance away from being an annual procurement exercise to a long-term partnership to support developers bringing first-of-a-kind projects to market.

More interaction between debt capital providers, specialist insurers and developers is needed to unlock the full potential of insurance solutions – which indicates a further skills and knowledge gap that will need to be filled.



# Effective policy design, including but not only offtake, is also key

Whether transition finance is secured at the project or the corporate level, across the board, planning and permitting, grid connections and access to catalytic capital and competitively priced green energy as well as offtake agreements will be key<sup>8</sup>.

Offtake agreements are a key condition for investment across the clean infrastructure space. Current policy support for green investment tends to be relatively short-dated with limitations in regulatory frameworks to drive demand, particularly for novel technologies. This is compounded by a lack of established and creditworthy markets for low-carbon products resulting in an absence of long-term bankable offtake contracts needed to secure project financing. Here, mechanisms such as the revenue certainty mechanism being developed for UK SAF – or the contract for differences (CfD) being developed for CDR and hydrogen are key enablers.

These need to be complemented with measures to address value chain readiness, pre-empting timing delays by ensuring consenting, enabling infrastructure and dependencies between production and offtake assets are aligned. Robust domestic supply chains in an increasingly tight global market and a sufficiently skilled workforce and established enabling infrastructure (e.g. Transport and Storage Infrastructure) are also key and all need to be coordinated.

All of this means that catalytic institutions, insurance products and capital, while important, are not a substitute for but rather a critical complement to enabling policy design and delivery. This is the type of granular bottom-up work the Green Finance Institute does with the market to understand what is stopping capital being provided to green and transition technology solutions and devising market and government-led solutions to overcome them – and which needs to be replicated across sectors and geographies.



# High-integrity corporate transition finance

As set out in Green Finance Institute's 2023 LCAW ['What next for Transition Finance?'](#) article, great care needs to be taken when providing what the Glasgow Financial Alliance for Net Zero (GFANZ) calls category 3 finance to 'assets/ companies committed to transitioning in line with a 1.5°C pathway'<sup>9</sup>. These firms potentially have a key role to play in the future net zero economy and include industrial firms producing steel, cement and chemicals, for example. For these firms, financiers may ultimately find routes to support any capital expenditure to facilitate transition through providing business-as-usual corporate debt and equity financing and classify it as transition finance. This would respond to the preference of borrowers to use general-purpose finance and not be constrained by the administrative burden of use of proceeds structures. However, it currently raises greenwashing risks on both sides that need to be robustly addressed to ensure that such transition finance is indeed financing the transition before either side will be comfortable with this approach.

Mainstreaming transition planning has the potential to be very helpful in addressing this challenge. Entity level metrics that borrowers, lenders, and standard setters are comfortable with will also be needed. Until that happens, the logic of current ways of working means that borrowers will often elect to use general-purpose facilities for transition-focused investment instead of labelled transition or green finance - and there will be no reliable way for financial institutions or governments to assess accurately how much of that general purpose finance is invested in transition activities.





In the face of great uncertainty over how the transition will unfold globally, a principles-led approach to disclosures of the sort set out by the Transition Plan Taskforce (TPT) seems preferable to a more prescriptive approach in assessing the performance of companies on their transition journeys at an entity level. However, the devil is in the detail.

The UK has yet to see many high-quality TPT-aligned transition plans published. This should not be surprising given the disclosures framework was only published in October 2023 and sector guidance in April 2024 and remains voluntary at present. Challenges experienced include the significant strategic changes inherent for companies and the systems-level adjustments required. For example, companies may have limited clarity on what percentage of revenues come from which activities (particularly where these are co-located) and what volume of capital has been allocated towards the delivery of the components of the transition plan because this is not something they have previously considered. This points to the growing pains of using TPT-aligned transition plans as a ‘kite mark’ for credible entity-level transition finance – similar issues have arisen with entity-level reporting in respect of taxonomy alignment. There are also legal risks associated with the use of transition plans, which rely on forward-looking assumptions that are reliant on several external factors. Regulators can alleviate these by allowing for a certain degree of flexibility and “safe harbour” provisions.

If TPT-aligned transition plans are in time to play this role, they will need to incorporate both timebound strategic and operational business changes which need to be executed to deliver the plan, alongside integrated and detailed climate-related financial disclosures, relating to R&D and other capital expenditures (incurred or planned) for green or transition activities. In addition, the amount of revenue aligned to these activities will need to be

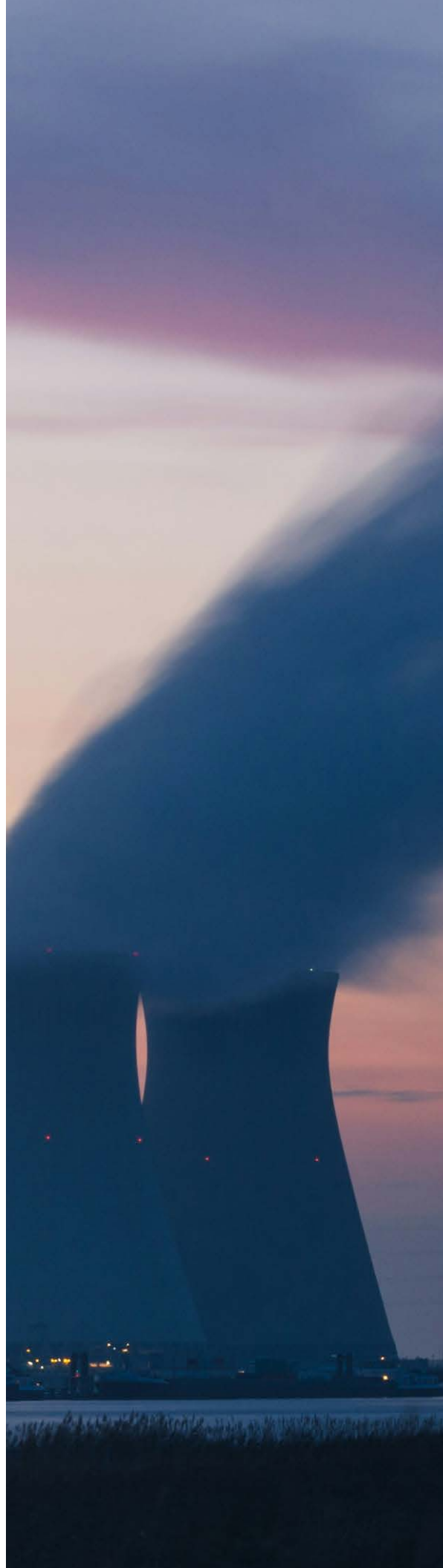


tracked over time, as determined by accounting Key Performance Indicators (KPIs) appropriate to the industry being assessed.<sup>10</sup> These KPIs should be unpinned where possible by taxonomies or other appropriate metrics.

These transition plans can then be scrutinised by investors and financiers, who can use them to inform their stewardship activities and company valuations. Transition plans will continue to evolve as company strategies develop and economic conditions change, which underscores the need for flexibility and regular updates. As we move towards this end state, plans will also inevitably vary in quality so, while they are a useful resource for demonstrating corporate capability and execution, it will be important not to overly rely on them in the short-term and it is reasonable to assume that they will need to be considered alongside other elements, such as historical emission reductions and CapEx spent or stipulated in business plans.

Sticks and carrots will need to be used to encourage uptake. Learning lessons from the sustainability-linked loans market, banks supporting these companies should seek to base terms of debt financing on clear, material and measurable performance objectives over time. This will contribute to accountability on the part of clients to achieve their goals while also supporting incentives for clients to raise capital for the transition.

To be able to assess the credibility of these transition plans, both banks and asset managers/ owners will require an increase in users' understanding of the nuanced transition pathways; this is driving calls for country-level transition plans, which can look very different across jurisdictions. In the absence of these being in place, or being at odds with a firm's view on whether and how the scientific imperative to halve emissions by 2030 is delivered in practice, a taxonomy can be a helpful proxy tool (since taxonomies seek to set out a set of Paris Agreement-aligned activities as each jurisdiction defines that) in conjunction with a credible sectoral pathway assessment e.g. as described by the IEA to assess ambition and alignment of specific economic activities with a 1.5°C future.





### The fly in the ointment?

Transitions are disruptive and uncertain but the global endpoint target of Paris Agreement alignment should be clear, given – as noted above – the plethora of taxonomies in place around the world. Collectively financial institutions reflect the economies that they finance and the uncertain trajectory of the transition of those economies. It should not be a surprise that financial services firms and corporates alike cite concerns about how disclosures focused on financed emissions or emissions reductions targets open them up to litigation and reputational risk if, despite best efforts within their sphere of influence, targets are not met. This also over-emphasises one metric: there is a need to move to a more nuanced approach of looking beyond financed emissions to focus on how capital can be allocated to the necessary transition technologies to drive emission reductions.

Here roles and responsibilities are key. To support the growth of high-integrity transition finance, regulators will need to consider mitigants for the concerns raised. These include firms clarifying which elements of their plans are within their own power

to achieve, versus those which rely on government or other stakeholder (e.g. supply chain) action, and for those firms to provide greater transparency regarding what they are doing to positively promote policy or economic change in support of net zero aligned outcomes. Asset owners – as investors with a longer-term focus<sup>11</sup> – should be particularly vocal in calling for this. Careful attention needs to be paid to managing any unintended consequences or conflicts of interest, that may arise<sup>13</sup>. Mechanisms for rating transition plans – with transparent scoring methodologies and broadly comparable ratings – and for robust assurance of plans will need to be developed, to support the integrity of transition finance products that will form part of the market alongside general corporate funding.

Finally, it is worth flagging at this juncture that even 1.5°C is an adaptation scenario and that not just mitigation but adaptation efforts need to be factored into transition plans. Some experts, including BNEF, have suggested that 1.75°C is a more realistic goal – which brings with it further physical risks that need to be mitigated.





# Next steps

Speed is of the essence. This note seeks to provide some insights into the roles that different public and private financial services and corporate actors can play to increase the supply of finance that will materially accelerate the transition.

With global temperatures already at 1.26°C above preindustrial levels, radical change is now needed to roughly halve emissions based on 2010 levels in the next five to six years and move to net zero by 2050, if the Paris Agreement goal to limit global temperatures is to be met. Wide transition definitions are dangerous and confuse this

important discussion. However, there are also dangers associated with the search for a perfect definition. To genuinely finance the transition, the focus should be on creating the policy frameworks which will enable the development of industrial activities and solutions necessary for the transition and in turn attract the debt and equity needed to deliver both asset specific first of a kind project and infrastructure finance, support companies with raising corporate finance to deliver on credible transition plans, and provide patient growth capital for next generation clean tech providers.

# Endnotes

- 1 By which we mean aligned to keeping warming to well below 2°C with efforts to pursue no more than 1.5°C
- 2 See for example analysis by RMI at <https://rmi.org/insight/how-past-energy-transitions-foretell-a-quicker-shift-away-from-fossil-fuels-today/>
- 3 For example, in 2021 IAG invested venture capital in LanzaJet (SAF producer) and in 2022 in ZeroAvia (Hydrogen powered aircraft) as a strategic investment into supply chain decarbonisation. In a subsequent VC round in 2023, Airbus invested in ZeroAvia.
- 4 McKinsey, <https://www.mckinsey.com/industries/electric-power-and-natural-gas/our-insights/the-energy-transition-where-are-we-really>
- 5 Bloomberg NEF, From Dispelling Myths to Taking Meaningful Action, June 2024
- 6 This must address first of a kind technology plus construction and commissioning risks alongside the price and volume of risks that come with selling novel green products.
- 7 <https://www.gov.uk/government/news/boost-for-new-national-wealth-fund-to-unlock-private-investment#:~:text=The%20National%20Wealth%20Fund%20will%20reshape%20the%20way%20we%20approach,new%20jobs%20across%20the%20UK.>
- 8 These were issues, perhaps uniquely, not faced in the H2 Green Steel example which benefitted from access to clean and cheap green power. The deal also benefitted from an experienced leadership team that secured offtake agreements with a client network with their own net zero goals predicated on access to green steel supplies and sufficiently confident of being able to pass costs onto their own consumers due to the EU's carbon border adjustment mechanism (CBAM) being in place.
- 9 <https://www.gfanzero.com/our-work/financial-institution-net-zero-transition-plans/>
- 10 For investment banks for example, advisory services and debt provision to credibly transitioning companies will be more useful KPIs than financed emissions overall.
- 11 As compared to asset managers that are incentivised to outperform benchmarks and peers in the short term to retain mandates.

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