How private credit can drive the net zero transition

LGIM

Executive summary

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- Over the coming decades, the transition to net zero is likely to require tens of trillions of dollars of investment.
- This investment is set to span a wide spectrum of sectors, geographies and risk profiles.
- The nature of the assets means that, for the foreseeable future, the majority of investment opportunities will be found in private markets.
- Private credit has been funding transition-related assets in Europe, North America and Australasia for many years. We expect the investment universe to expand to include more emerging sectors as they mature.

- Transition credit represents a potential opportunity for investors to:

1. **Invest at scale**
2. **Seek potentially attractive risk-adjusted returns** by taking a strategic view of a broad opportunity set
3. **Aim to diversify risk drivers** with assets not readily available in public markets
4. **Support construction of the infrastructure of the future** while potentially mitigating downside risk through structural protections.

The sheer magnitude of capital requirements for the net zero transition represents a historic opportunity for private credit investors. The range of investable assets is likely to continue growing rapidly in the coming years, and private credit is in our view well positioned to fill funding gaps left by banks in the space between the well-served investment grade market and early-stage growth.

To seek to generate attractive risk-adjusted returns, we advocate considering a broad range of opportunities, diversifying risk drivers and remaining focused on asset-level analysis.

2024 | How private credit could drive the net zero transition

2024 | How private credit could drive the net zero transition

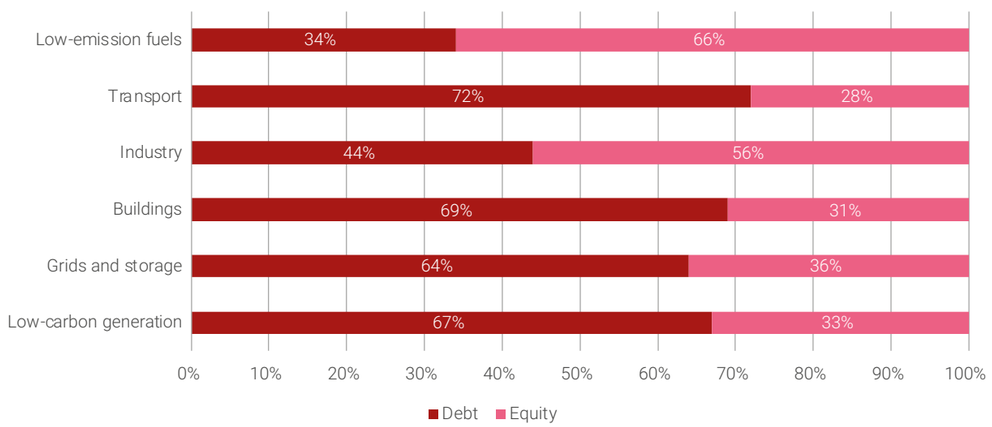
Debt capital's key role in decarbonisation

So far, the net zero transition has been primarily driven by investment in renewable energy. Capital from the private sector has been instrumental, with debt and equity both playing active roles depending on the stage of a given project's development.

At present, wind and solar are by far the most mature sectors. Over the last two decades, they have attracted significant debt finance thanks to improvements in technology and revenue stabilisation mechanisms like subsidies and Power Purchase Agreements (PPA). These have significantly reduced revenue volatility, which has in turn allowed debt to be used more widely. Debt has also been heavily used to fund public transport decarbonisation.

Debt can take different forms. It could be raised either on the corporate balance sheet, or at the project level with no recourse to the parent company. Exposures are available in a range of formats: corporate, infrastructure, real estate and alternative/structured.

Decarbonisation capital stacks by sector



Source: The Cost of Capital in Clean Energy Transitions, IEA, 2021

Examples of decarbonisation assets funded by private credit

Borrower	Project financing – CED Nevada and Virginia	Project financing - East Anglia rolling stock	Corporate financing - Landsvirkjun
Goal	Financing of three solar projects in Virginia and Nevada totalling 432MW, enough to power more than 70,000 homes. The projects benefit from long-term PPAs with investment grade utility companies.	Financing 58 state-of-the-art electric trains for the East Anglia rail network in the UK	These private placement notes were issued in 'green bond' format. Landsvirkjun is Iceland's largest power producer, with all energy generated from 100% renewable sources.
Value	**$230m**	**£600m**	**$150m**
Loan length	25 years	28.5 years	9 years

Source: LGIM Real Assets, IJGlobal as at 15 March 2024

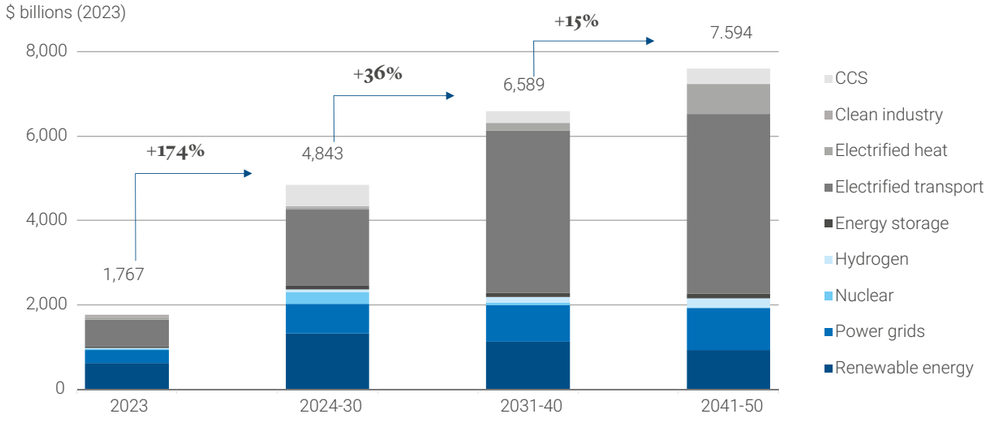
Case study shown for illustrative purposes only. The above information does not constitute a recommendation to buy or sell any security.

Could capital requirements mean opportunities for debt investors?

In 2023, global investments in the energy transition reached $1.8 trillion.[1] This represented a 17% increase on 2022 – despite the macroeconomic, geopolitical and supply chain challenges that characterised last year. However, this is nowhere near enough.

Bloomberg New Energy Finance (BNEF) estimates that annual global investment needs to reach $4.8 trillion by 2030 and $6.6 trillion by 2040 to put the global economy on track to reach net zero by 2050. The majority of capital requirements are likely to come from the generation and distribution of clean electricity, and the electrification of heat and transport. Broader-based net zero activities will also require investment, for example the retrofitting of both commercial and residential real estate.

Investment needed in the coming decades



Source: The Cost of Capital in Clean Energy Transitions, IEA, 2021

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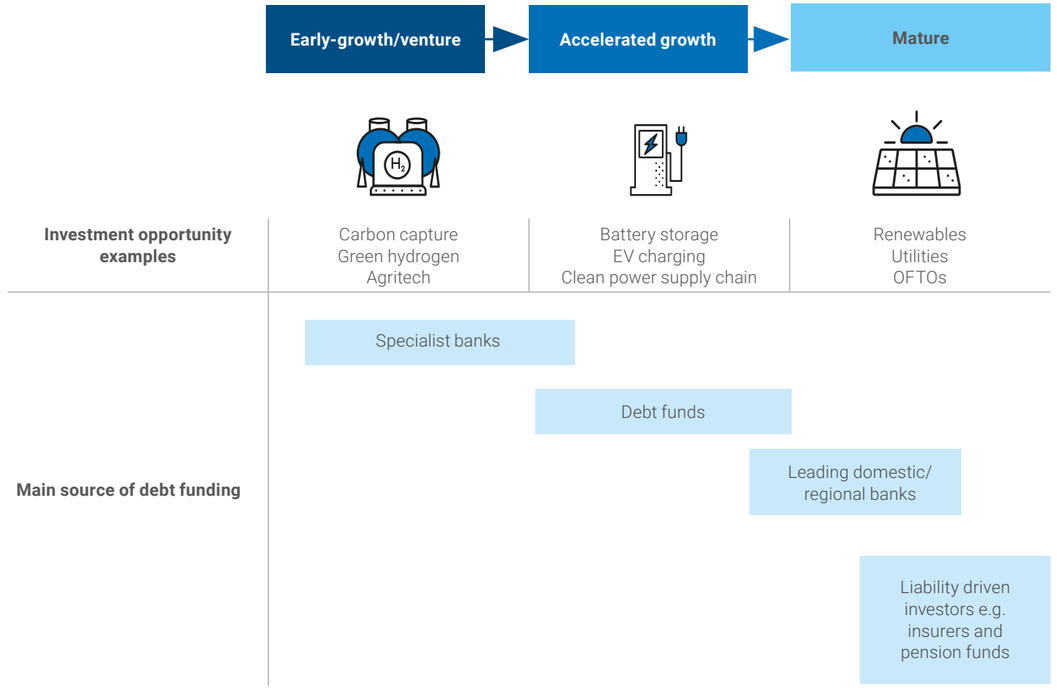
1. Source: Energy Transition Investment Trends, BNEF, January 2024



In our view, the sheer amount of capital required represents a historic opportunity for private credit investors. Advances in technology and increasing policy support mean we expect to see a lot of new sectors becoming investable. These tend to be sectors that may be quite niche now, with credit risk too high for the type of opportunities we are talking about. However, as the technology matures and the market grows, credit quality improves in turn.

We think it should ultimately be beneficial to have increasingly diversified capital markets supporting the net zero transition. This should mean banks and debt funds can play to their respective strengths, resulting in borrowers gaining greater and more flexible access to capital markets.

Historically, banks have been the main source of debt capital in infrastructure and energy – although alternative lenders have been growing in prominence. Between 2011 and 2023, the share of non-bank lenders in infrastructure debt rose from 4% to 31%.[2] We think all categories of debt providers will likely remain relevant for the net zero transition by offering different products and playing to their strengths as capital providers. We have illustrated this above.

2. Source: IJGlobal, 2023

Mapping the investment opportunity set

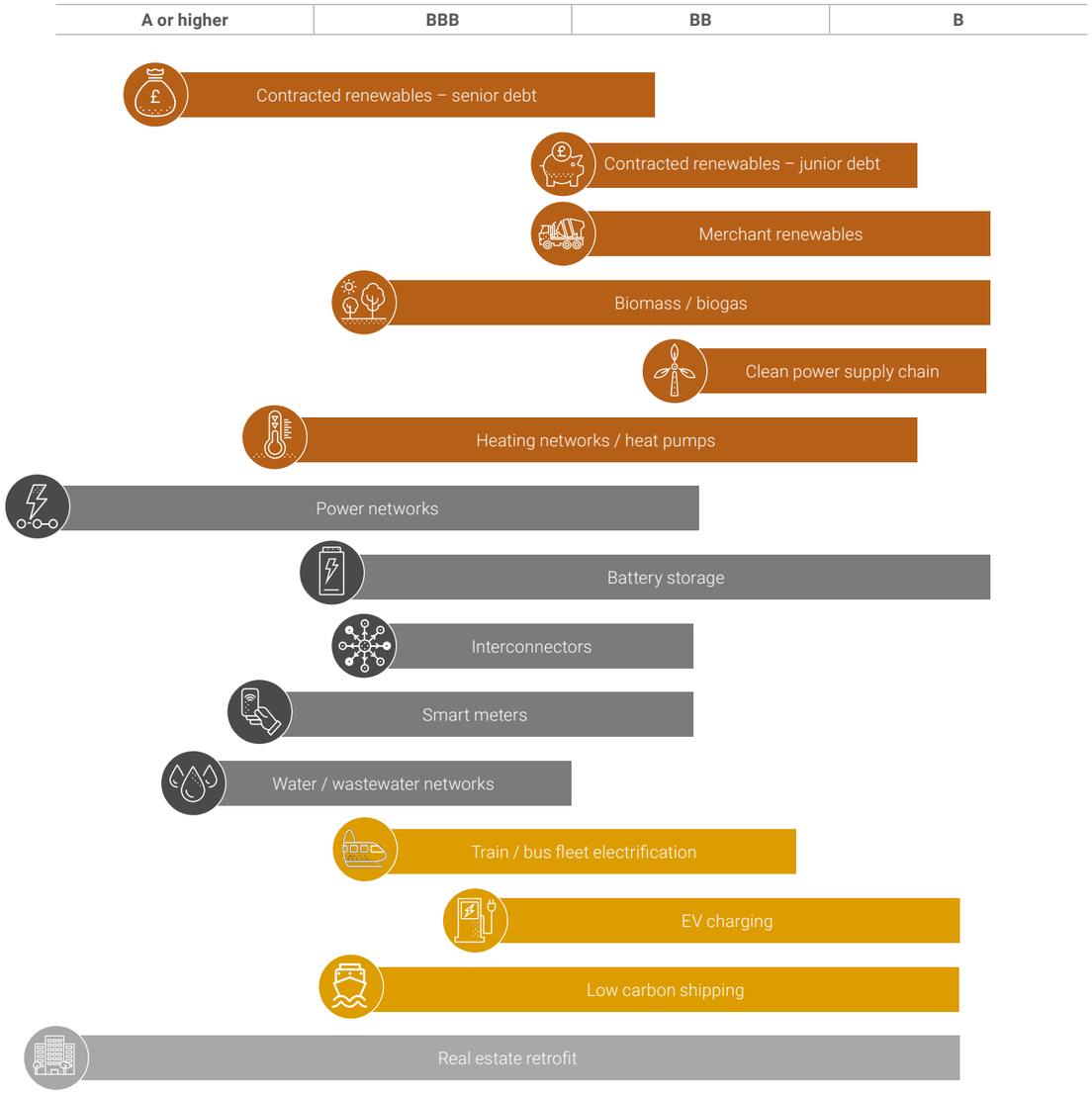
We have outlined opposite a selection of opportunities in which private credit capital is being actively deployed.

They include a combination of decarbonisation solutions and key foundational infrastructure (we call the latter 'network resilience'). We also show indicative credit quality range based on transactions in recent months. The assets will generally be based on proven technology, with credit risk varying depending on size and maturity, cashflow stability, financing structure etc.

We think the opportunity set will expand over time as these markets mature and their risk profiles become more appropriate for institutional capital. At present, these emerging sectors are currently more reliant on private equity/venture capital and growth credit.

Lower credit risk
Mature technology sector
Sponsor with good track record
Contractual cashflow
Government or insurer guarantee

Higher credit risk
Immature technology/sector
Smaller/less established issuer
Higher revenue volatility
Subordinated debt



Key:

Decarbonisation	Network resilience	Transport	Real estate

Source: LGIM Real Assets as at March 2024. This is not an exhaustive list and the investment universe will evolve over time as new opportunities emerge. **Assumptions, opinions and estimates are provided for illustrative purposes only. There is no guarantee that any forecasts made will come to pass.**

Constructing a portfolio

There are several core principles when constructing a transition credit portfolio:

1. Recognising the investment landscape is broad, and seeking diversification opportunities to mitigate portfolio risk factors while remaining focused and thematic in investment decision making

2. Embracing macro-level megatrends and the tailwinds they can provide – without forgetting the importance of granular asset-level analysis

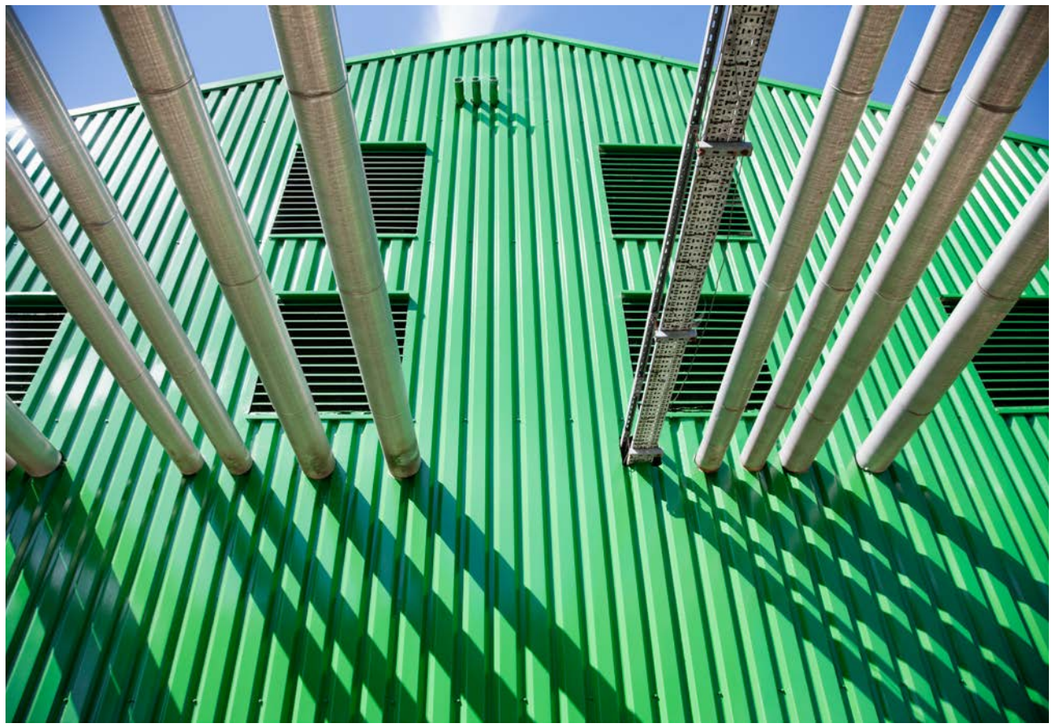
3. Avoiding style drift and playing to your own strengths as an investor (e.g. credit analysis vs assessment of venture-stage business plans).

Given the scale of the transition opportunity, portfolios can potentially target a wide range of risk profiles. As previously suggested, we believe there are potentially attractive credit opportunities in the space between the well-served investment grade market and early-stage growth credit.

Within this target risk profile, in our view it is possible to maintain a focus on credits with defensive characteristics (e.g. barriers to entry, durable competitive advantages, essentiality of assets/services, supportive policy and protective financing structures) while aiming to both achieve materially higher returns and capture superior risk-adjusted returns. Targeting this area will also allow investors to work collaboratively with banks in delivering effective funding structures.

In our view, it may be possible to target higher returns through a combination of increased business risk (size, market position, revenue certainty and so on) and financial risk (leverage levels / subordination).

Overall, we believe, private credit managers with strong governance and credit underwriting skills are well positioned to manage the above risks – in particular if they make full use of the broad-based private credit investment universe when constructing their portfolios.



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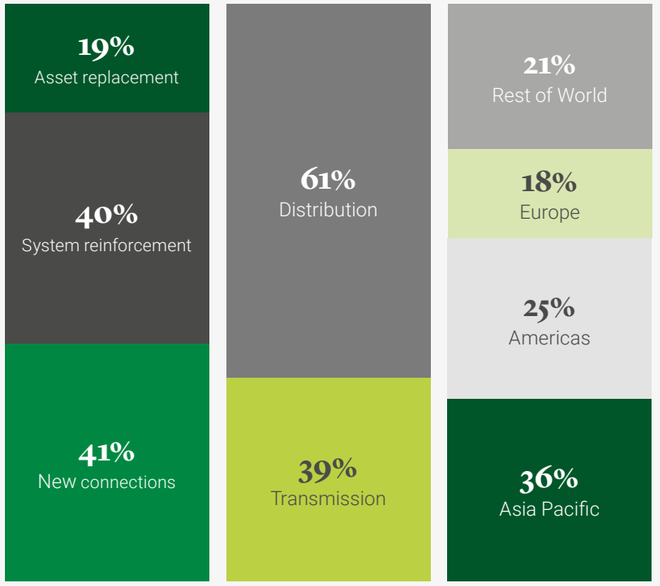
Spotlight: Electricity grid upgrade

The electricity grid is the backbone of the net zero transition, but grid investment has been slow. This has resulted in bottlenecks that slow the deployment of renewables and electrification. BNEF estimates that annual spend needs to rise from $231bn in 2023 to $983bn by 2050 for a net zero trajectory that supports more power generation capacity, serves new demand from growing electrification, and replaces existing infrastructure.[2]

We expect power line provision to expand significantly. BNEF estimates 80 million kilometres in grid growth between 2022-2050, more than enough to replace the entire global grid today. In our view, this will lead to a significant increase in demand for aluminium, copper and steel.

We expect a large proportion of the spending to be financed by debt. Utilities enjoy a relatively low cost of debt due to their investment grade ratings, which is based on their essential natures, stable revenue streams, and implicit government protection. They are frequent issuers in the private credit market and their debt is typically long-dated and can be indexed to inflation – which in our view means they could be useful for investors looking for long-term income

Breakdown of global grid investment required to meet net zero by 2050



Source: BNEF, January 2024

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2. Source: Energy Transition Investment Trends, BNEF, January 2024

Contact us

For further information about LGIM, please visit lgim.com or contact your usual LGIM representative

Key risks

The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested.

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