IFM Investors

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Growth Credit:

How credit investing can promote climate technologies to scale

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Over the past decade, the adoption of climate technologies has consistently outpaced forecasts. For example, cumulative installed capacity for solar panels in 2020 exceeded global forecasts in 2006 by 25 times.[1] This acceleration demonstrates a firmly positive trajectory, but is the adoption rate fast enough?

In order to meet the 1.5°C target outlined in the international treaty on climate change known as the Paris Agreement, renewables will need to sustain their currently high growth rates, with a five-fold increase in installed capacity in North America and a three-fold increase in Europe by 2030.[1]

This challenge is compounded by what Mark Carney has dubbed the "Tragedy of the Horizon" - a reference to the financial sector's ongoing struggle to reconcile financial short-termism with critical longer-term climate goals. While some climate technologies are well-understood (e.g. solar and wind), many occupy a more nascent end of the spectrum and will be responsible for nearly half of the cumulative emission reduction that is needed between now and 2050.[2]

This spectrum of opportunities is bolstered by climate-focused public sector initiatives. Government infrastructure investment programs such as the US Inflation Reduction Act, the EU's RePowerEU and the UK's Build Back Better amount to hundreds of billions of dollars in support for decarbonisation efforts, including climate adaptation. This is coupled with record-breaking allocation of capital towards climate-focused funds. According to Preqin, over $32 billion has been raised by climate funds in 2023, 55% higher than the year prior and 11 times higher than 2016 fundraising levels.[3]

While public and private investment to fund the energy transition is growing, the scale of required economic transformation for the net-zero transition remains significant. Between 2021 and 2050, cumulative capital spend on physical assets to accommodate the net-zero transition is estimated to be as much as $275 trillion.[4] Certain proven climate technologies lack access to appropriate funding sources that will enable their ability to scale.

Furthermore, financing growth through equity is not always the most appropriate solution. When certain conditions exist for a business to scale-up such as a demonstrated track record, clear market fit, and reliable revenue contracts in place, debt financing can be a non-dilutive solution and attractive alternative to growth capital via equity.


Naturgy, Spain

Currencies in this article are in USD, unless otherwise stated.
[1] Compared to 2021 levels. Preview: What would it take to scale critical climate technologies? | McKinsey
[2] Net Zero by 2050 – Analysis - IEA
[3] Voluntary carbon credits set for COP28 review amid rising investor interest in emission-reduction strategies (preqin.com)
[4] The net-zero transition: Its cost and benefits | Sustainability | McKinsey & Company

Climate technology straddles tech and real assets

Historically, climate technology has largely sourced its funding from private equity and venture capital investors. But headwinds in the macroeconomic environment have resulted in a slowing of private equity investment over the last 12 months – a trend to which climate technology has not been immune.

A combination of geopolitical turbulence, inflationary concerns, persistently high interest rates, and technology disruption has led to a severe slowdown in private equity transactions during 2023. With tighter financial conditions causing trepidation among investors, the number of private equity exits fell to its lowest level in five years in March 2023.[5]

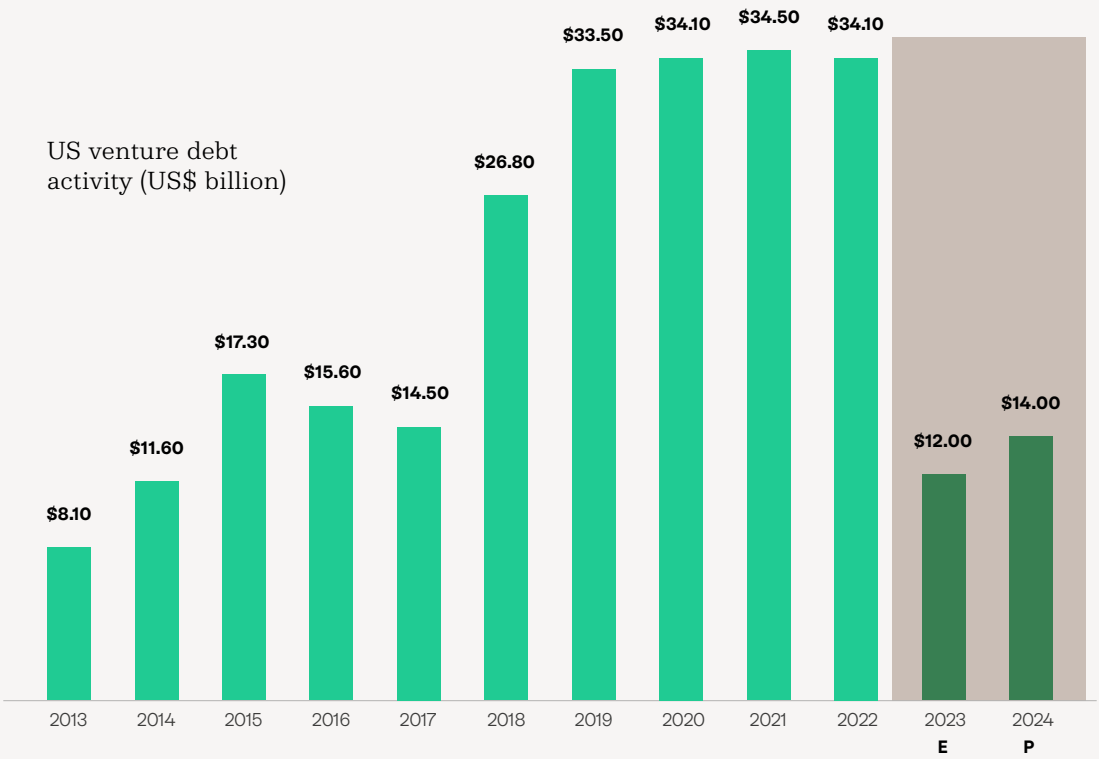
In venture debt, the outlook has also been murky, particularly since the collapse of Silicon Valley Bank. In the US, venture debt activity for 2023 closed at $12bn (just over a third of 2022 levels).[6]

In the climate technology sphere, venture capital and private equity funding plunged to its lowest level in Q2 2023 since early 2021.[7]

This slowdown in private equity and venture capital has helped create an attractive market opportunity for scale-up debt capital to increase investment in climate technology.

FIGURE 1

A PARTIAL BOUNCE BACK IN VENTURE DEBT ACTIVITY APPEARS TO BE UNDERWAY



Note: E indicates estimated value, and P indicates predicted value
Source: Deloitte

[5] Private equity exit deals reverse course, slump to five-year low in FY23 (vccircle.com)
[6] Technology venture debt | Deloitte Insights
[7] BloombergNEF

Three other factors contribute to this supportive environment:

1. Climate technology investors made significant allocations in the years leading up to 2023, meaning they now find themselves without dry powder in a difficult fundraising environment with significant outstanding exposures. In other words, they have "picked their horses," and the ability to invest further is limited, which reduces competition in the market.[8]

2. Given the prominence of digitisation over the past decade, venture capital firms' experience is rooted in industries where company valuations are largely based on software. Therefore, they are often less well placed to invest in capital-intensive, infrastructure-like businesses whose valuations are more heavily based on real assets.

3. The benefits of myriad support provided to climate technology opportunities through the Inflation Reduction Act in the United States are yet to fully manifest. We believe this government spending will continue to improve opportunities in climate technology for the years to come.

These factors create an opportunity for debt investors to finance climate technologies, which is enhanced by experience in real asset underwriting. Many climate technology businesses are capex-intensive and require a deep understanding of infrastructure and its adjacent sectors, with a view on how the next generation of infrastructure will interact with the existing built environment. This gap is not currently well-addressed in the market, representing an opportunity for investors with infrastructure expertise.

The growth credit funding solution

As the economy emerges from an extended period of suppressed interest rates, certain climate technology companies find themselves at a precarious nexus. Having proven their technologies' use case, they benefit from the extensive research and development that has been fuelled by the attractive investment environment of the last several years.

> **Growth credit funding represents an opportunity to build financing relationships over the long term, alongside management teams and sponsors.**

Simultaneously, however, they lack reliable, longer-term funding in an environment where traditional sources of growth capital remain uncertain.

This paradigm has crystallised the opportunity of funding the next phase of growth via debt capital, rather than equity. For investors, this is an opportunity we refer to as "growth credit".

Unlike venture (or opportunistic) debt, the growth credit solution does not apply selectively to short-term horizons. Growth credit funding, rather, represents an opportunity to build financing relationships over the long term, alongside management teams and sponsors seeking to scale their proven technologies and processes in a less dilutive fashion than equity. Growth credit, therefore, may be considered a strong supplement for companies looking to diversify funding sources and scale in a non-dilutive fashion before accessing broadly syndicated capital markets.

For institutional investors already exposed to several vintages of growth equity across fund managers, growth credit can serve as a diversifying strategy that is more senior to equity in the capital structure with security over valuable assets and intellectual property. With respect to returns, while growth equity potential is determined by its ability to exit at a higher valuation (which is generally correlated to public market conditions), growth credit represents an opportunity to deliver compelling risk-adjusted returns in the mid- to high-teens through senior secured debt investments that provide fixed return with significant downside protection for investors.

[8] Macro market freeze chills climate tech: Venture funding down 40% in H1 2023 (ctvc.co)

Spotlight On BESS

One of the climate technology solutions that is considered critical to the energy transition is Battery Energy Storage Systems, also known as "BESS." These are battery storage power stations that store renewable electricity when there is excess supply, to be used during periods of peak demand when intermittent resources such as wind and solar are not available. Battery storage represents an interesting example of the climate technology continuum, where there are both developed and nascent opportunities for investment. Battery storage for under eight hours of deployment has commercialised swiftly and now benefits from traditional sources of project financing. Longer-duration applications for storage over eight hours, on the other hand, is a more nascent technology that requires bespoke funding solutions in order to scale effectively.

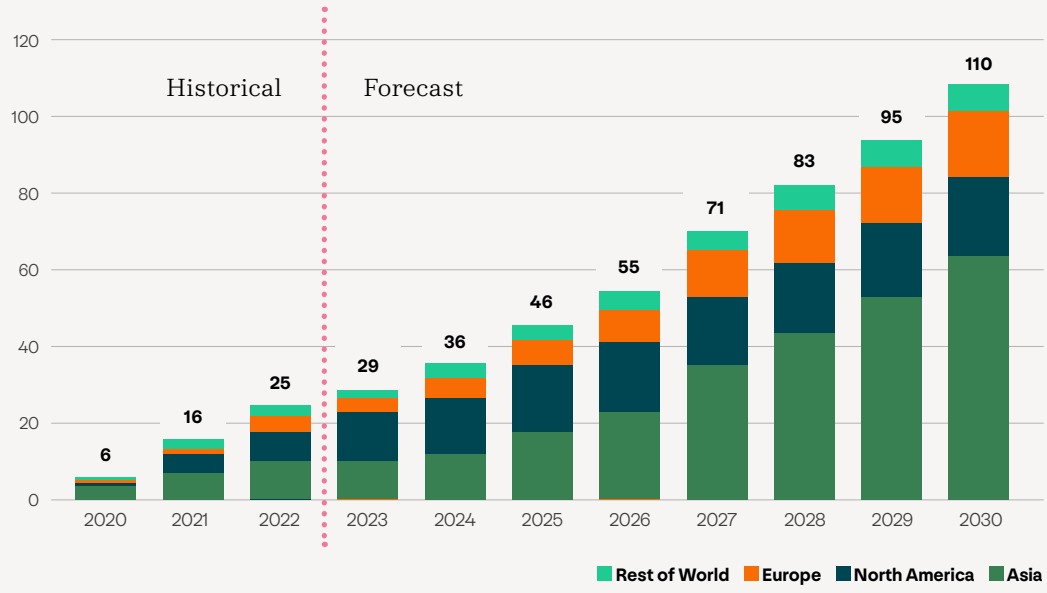
Both established and nascent forms of BESS address key challenges in the energy transition: intermittency. For periods of low irradiation and wind, battery storage solutions facilitate efficient storage and grid supply, stabilising the distribution network and reducing consumer costs.[9] These represent key milestones to secure not only the green energy transition, but also the ability to strengthen national energy security initiatives.

Appetite for the technology is therefore increasing rapidly. BESS achieved over $5bn in investment during 2022 alone, representing a threefold increase from 2021, and the market is expected to reach up to $150bn in investment globally by 2030. Meanwhile, costs related to BESS are falling as the technology matures. According to the International Renewable Energy Agency (IRENA), battery storage costs have fallen rapidly due to economies of scale and technology improvements. As an example of the cost decline, in Germany small-scale household Li-ion battery costs have fallen 60% since 2014. Looking ahead, total installed costs for BESS are expected to fall between 50% and 60% by 2030, driven by optimisation of manufacturing facilities and improved use of materials.[10]

FIGURE 2

MARKET BESS ANNUAL INSTALLATIONS

Gigawatts (GW)



Sources: Rystad Energy's Battery Solution, June 2023

[9] The rise in popularity of battery energy storage systems (BESS) (marshcommercial.co.uk)
[10] Battery storage and renewables: costs and markets to 2030 (irena.org)

Furthermore, co-locating BESS with solar or wind assets drives cost savings with respect to grid connection, overhead, and network charges.[11] Solar, specifically, demonstrated the largest absolute generation growth of all renewable technologies in 2022 and maintains a leading position as the power generation technology with the most investment.[12,13] But in order for the grid to benefit from energy produced from solar assets when the sun is not shining, the energy needs to be stored in batteries for later use. Due to its real asset nature and the demonstrated use case of the technology, co-located solar and BESS technology represent ripe opportunity for infrastructure investors seeking to invest along the continuum of nascent to established climate technology solutions.

IFM has already begun investing in the more commercialised application of BESS through its infrastructure equity and debt platforms and would consider some of the burgeoning BESS companies and technologies as part of the "growth credit" universe. We are enthusiastic about battery storage opportunities on the horizon and what they mean for the decarbonisation agenda.[14] Utility-scale BESS will be paramount to accommodating a wide range of services in the next generation infrastructure ecosystem, offering tremendous deployment and cost-reduction potential over the coming years.

Ausgrid battery, Australia

Pairing the right capital with the right opportunities

While changes to our climate may pose significant risks to investment portfolios, they also represent a vast opportunity set. The world faces a seemingly insurmountable investment gap to reach net zero by 2050, but we are in a position to reduce global human-made emissions by 90% just by scaling the climate technologies that exist today.[15]

In summary, there exists a broad array of climate technology solutions that are inherently interconnected (and for which the stages of development are currently uneven). While some are already commercially competitive, others require additional innovation and scale-up. By pairing the right capital with the right opportunities, we believe investors with expertise in real assets and infrastructure are well-poised to accelerate decarbonisation along the continuum of climate technology solutions.

[11] Why is battery colocation not scaling in Europe? | Timera Energy (timera-energy.com)
[12] IEA - Solar PV
[13] IEA - World Energy Investment 2022: Overview and key findings
[14] BESS Capacity Tracker - March 2022 - Rho Motion; New battery storage capacity to surpass 400 GWh per year by 2030 (rystadenergy.com)
[15] What would it take to scale critical climate technologies? | McKinsey

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