Goldman Sachs Exchanges

How AI, tariffs, and the energy transition are reshaping infrastructure investing

Tavis Cannell, Global Head of Infrastructure, Goldman Sachs Alternatives, Asset & Wealth Management

Allison Nathan, Senior Strategist, Goldman Sachs Research

Date of recording: May 7, 2025

Allison Nathan: AI, the energy transition, and geopolitical tensions are reshaping the global economy and markets. They're also transforming the landscape of infrastructure investing. I'm Allison Nathan and this is Goldman Sachs Exchanges.

For today's episode, I'm joined by Tavis Cannell, the global head of Infrastructure within Goldman Sachs Alternatives, which is part of our Asset and Wealth Management business. We'll be exploring the megatrends driving opportunities and the outlook for the sector. Tavis, welcome to Exchanges.

Tavis Cannell: Thanks, Allison. Look forward to our discussion today.

Allison Nathan: So Tavis, we're obviously in a very volatile market environment, and investors are starting to look closely at their asset allocations. So let me start by asking you what role can infrastructure play in portfolios?

Tavis Cannell: Look, it's a great question, and in all of our client conversations today obviously everyone's reading the newspaper and trying to digest some of the changes that are happening. I think what's interesting about infrastructure is that, in particular when you look at institutional investors, they really progressively increased their allocations to the asset class over the last ten-plus years.

And so today, to give context, most large institutional investors have around 6-7% of their total assets invested into infrastructure. And they've done that for a couple of reasons. I think, firstly, the asset class is really a diversifier. So the correlation has low correlation with the public equities, with public fixed income, but also with other private asset classes.

I think secondly, it's been very resilient, in particular in periods of economic uncertainty, high inflation. So one stat that we talk about with lots of our clients is you look market-wide. And since the beginning of 2022, infra has returned 9% compounded returns across the whole asset class. And that compares with, like, buyout private equity at 5%, real estate minus two. So, you know, you look across different asset classes in the period over the last three years where we've had high inflation, we've had obviously war and geopolitical tensions, and it's been very resilient during that period of time.

And then really the third thing is that it's offered pretty attractive absolute returns. And when you think about the evolution of infrastructure, it's like other asset classes, like real estate or in private equity, you can invest in different parts on the risk-return spectrum, but there's many strategies within the asset class that are targeting mid-teens-plus returns, which if you compound that over five years or ten years, that's really attractive for investors to have access to.

Allison Nathan: So many follow-ups to that, but before we get into some of the details on that, let's just first define what we're talking about in terms of infrastructure.

Tavis Cannell: Sure.

Allison Nathan: I'm thinking roads and bridges, but obviously the space has evolved since then. So what do we mean by infrastructure today? And how has that evolved over the last decade or so?

Tavis Cannell: Yeah, so it's not your mom or dad's infrastructure anymore. I think the asset class has really expanded over the last ten-plus years, and that really reflects a couple of things. First and foremost, it reflects how the needs of society have evolved and changed over the last 10-15 years.

So the two biggest segments in infrastructure today are energy transition and digital infrastructure. And if you were to go back 15 years, those weren't really talked about much. Infrastructure 15 years ago was really focused on transport. That was probably, call it, two thirds of the infrastructure market 15 years ago. If you look at investment volumes in infra over the last couple years, transport's been sub 20%. So you've seen a real evolution and expansion of what infrastructure means.

When we engage with clients, we talk about four big segments of infrastructure investing. So as I said, energy transition, digital infrastructure, which is data centers, fiber, towers, and then we talk about transport and logistics. And not just traditional transport assets but also the broader logistics and supply chain ecosystem, which obviously in today's world there's lots of changes happening there. And then lastly, circular economy. And that's really how we think about water, waste water, and also circular business models, which I can talk a little bit more about later in the segment.

Allison Nathan: Yeah, let's dive into some of those. When we think about some of the categories you just mentioned, data centers, it's a very buzzy word given how much demand for AI is skyrocketing and that has increased demand for energy and data centers. Talk to us about how investors are putting money to work in that space.

Tavis Cannell: Sure. I think data centers and the overall ecosystem has gone through a number of different eras, I guess to use a Taylor Swift analogy. And the space we're in now is that there's still ongoing investment in build-out of the cloud. And that's been ongoing for five, six, seven years, but it's by no means done.

And then what has gotten a lot of focus and attention is obviously AI, and specifically building out the AI training models. And the requirements are different between what is needed for a data center servicing the cloud and really inference versus model training. And that's both in terms of the importance of proximity to population centers. So in other words, where you're actually locating your data center. And then also just the scale. And obviously both the power intensity and compute output of GPUs continues on like a Moore's Law expansion. But what that means is, again, as you said, the power consumption needed for these data centers is enormous.

So I'd say a couple things are really on the minds of investors in thinking about investing into the space. One is that there's been a huge amount of development, but once a data center is developed and has a long-term lease to one of the hyperscale large technology companies, like, who buys that? And there's been a lot of development going on, but I'd say the capital markets for a take-out or a sale of that stabilized data center asset is still not fully developed. So that's one thing that's on a lot of investors' minds.

I'd say most institutional investors have been investing more to the cloud, and I think the question on AI-trained data centers is what's the residual value? Like, how long are they going to last? If you have a data center that's in some remote location because it's proximate to power, what happens in five years or in ten years when that lease is -- or maybe 15 years -- when the lease comes due? So I'd say that's been a big topic for investors in equity.

I'd say what's been quite interesting -- this is more of a phenomenon in credit -- is that there's a lot of financing structures that are being put into place really from a credit standpoint to finance this enormous AI build-out.

And then the last point I'd say is that the power side of the equation is one of the really interesting things in infrastructure. You have these four segments, but there's so many linkages between them, is that investing opportunity in power is super exciting. And so a lot of people, both here in the US and in Europe and other regions, because we've been in a flat power demand environment for 20 years, and now -- not just -- but including because of data centers, we're in a secular growth where power demand is growing 3-4% a year. And so huge investment requirements into that as well.

Allison Nathan: So I want to dig into some of those points a bit more, but before I do, just for those of us who are not as familiar with infrastructure investing, talk to us a little bit about how the returns are actually made. Do you have to sell an asset, as you just mentioned?

Tavis Cannell: The more value-add or higher return part of infrastructure investing, it's really let's call it private equity in infrastructure. And most managers, most general partners will tackle that through what we call close-ended funds. And what that means is that they will acquire a company, and they want to acquire a company when, in our business, a big part of value creation is buying things well. Like, hopefully buying things at an attractive value. They want to drive value creation, so drive the growth of that company during their ownership period. And then typically, after five, six, seven years, they will, as you say, they will sell. And that will generate a capital gain in addition to any income that they've made along the way.

In infrastructure, there's also a number of what we would call evergreen vehicles, perpetual vehicles. Some are orientated more towards institutional investors, so big pension funds and sovereign wealth funds and so forth. Others -- and this has been a more recent phenomenon -- are more targeted towards private wealth, like, individual investors. And those tend to have slightly lower return targets but still are very compelling because they offer, again, that compounding capital appreciation over time.

Allison Nathan: Interesting. Let's dive into another key category that you originally laid out, which is energy transition. Obviously, we have the Inflation Reduction Act. That substantially boosted investment in clean energy, but is that under threat at all given the current administration and some of its initiatives?

Tavis Cannell: The IRA and where that goes has been a very topical thing within infrastructure and has been really on the minds of all market participants, I'd say along with tariffs which maybe has taken more air time over the last month or two. I think a few things to mention.

Firstly, most clean energy technologies are actually cost competitive without subsidies. So when you look at what's called levelized cost of energy, which is really a proxy for the all-in cost of power generation, if you look at solar generation power paired with battery storage, that is cost competitive without any incremental incentives from the government.

The second thing I should say is that the incentives for, for example, solar have been in place long before the IRA was brought in. What the IRA did was enhance some of those tax credits and other frameworks.

I think when we look at the IRA, there are areas that we think will almost certainly be changed or partially repealed. Some of those have been telegraphed pretty clearly from the administration, even predating the election. Areas like offshore wind, incentives around EV charging, Department of Energy loans. Those are three examples that we expect will be tweaked.

I'd say that the case for a full repeal of the IRA we think is unlikely. Although sitting here on May 7th, it's dangerous making political predictions, but we think that is unlikely. From an investor standpoint, I think for the market more broadly, what's important is clarity. These are investments that are typically 30-year-plus lives for an underlying investment, and the investment horizon of most market participants is seven years, ten years, etc. So you need the certainty in order to make these long-term, very significant capital investments. And so I think what we'll see -- I hope what we see -- is over the next month, two months, we start seeing more clarity come out of the administration and coming out of Congress so that people can have renewed confidence to invest.

Allison Nathan: So with all of that in mind, what are the most promising opportunities in the energy transition space today from your perspective?

Tavis Cannell: Well, notwithstanding a bunch of the noise, we actually think on a fundamental basis both utility scale -- so utility scale just means very large projects in solar generation and also what we call distributed generation, which means smaller-scale projects that often are directly linked, there's a direct link between generation and usage. Those segments we think are very interesting, both here in the United States and also internationally.

You know, in distributed generation, what's relevant is that the single-biggest constraint, including on data centers and on energy transition generally, is the grid. And it's what's called interconnections. So it's basically the ability to connect your project to the broader grid. And with a distributed generation solution, you basically bypass transmission and distribution, and you have, again, that direct linkage. You can deliver these projects much faster, and it also obviates the need for as much investment in interconnection for those particular projects. And that can offer a real cost advantage to end consumers, whether they're corporates or industrial companies or indeed residential users. So that's a space that we think is quite interesting.

The other area that's also quite interesting is around energy efficiency. And when you think about corporates, technology has moved on very significantly over the last 20-30 years. That doesn't mean that every single corporate user of power has kept up with that. And in many cases, they need a solutions provider to come in and help them do that. So that's also an area that we're spending time on.

Allison Nathan: When you look at the opportunities in the US versus elsewhere, is there a big difference? What are the trends that you're seeing outside of the US?

Tavis Cannell: Most markets, if you take public equities, public fixed income, private equity, real estate, the US market will be typically two to five times larger than the European market. In infrastructure, the two markets are actually almost exactly the same size, which is quite unusual. And so Europe is actually a very relevant investing market for infrastructure, and it's a place where we significantly invest.

I'd say what we've seen in terms of sentiment since the back part of last year has really been a bit of a shift or bit of a tilt towards Europe over the last four months, five months, where I think a lot of the narrative in the back part of last year was around really exciting growth in the United States, deregulation in the United States, etcetera, and concern over the outlook in Europe. I guess a few things have shifted. We thought that pessimism was overdone. Maybe some of the optimism now is overdone. But, you know, we think Europe structurally is a very attractive market for infrastructure. You've seen Germany come out with a 500 billion euro plan around investment into infrastructure. There's also been really a renewed focus over the last six months in particular in Europe around having permitting reform, so making it easier to build. And also recognition that investment in infrastructure is something that can really accelerate growth.

All that having been said, governments and most corporates have strained finances, so they need to partner with private capital to be able to deliver that investment. So again, I think really interesting dynamics and opportunities within the European market.

We tend not to invest in our strategy outside of developed markets, but there are obviously huge investment needs in emerging markets as well. That's a somewhat different risk profile, and you have to take into account things like political risk and foreign currencies and so forth. But obviously there's huge needs really all around the world. A lot of activity in India, as one example. A lot of people focused on that market. And then also the Middle East, which has really traditionally been a source of capital, but it's increasingly a destination for capital and for investment as well.

Allison Nathan: Before we get too far away from Europe, they also, if I'm not mistaken, have really taken the lead at the forefront of circular economy, one of those other categories that you mentioned. So you're seeing a lot of traction there.

Tavis Cannell: Yeah. So I think Europe and particularly Northern Europe has had a and continues to have a strong focus on sustainability. And the political discussion here in the United States has become a little bit more fraught around that topic over the last period of time. But I think what that's meant is that, when we look at many of our infrastructure businesses in Europe, if we're a leader in that space, that's a real value creation driver. We can earn a better return as a result of that.

As I mentioned earlier, circular economy really tends to deal with circular business models, with waste, with water systems, etc. And one of the things we see both in Europe and here in the United States is that most of the infrastructure in that space was built 30, 40, 50 years ago.

And so again, you know, needs a lot of investment.

And then we see interesting areas for circular business models. One example is in modular buildings, and this is something where, as populations move, as demographics change, and as needs adjust, there's often changes in what governments need in terms of health care, education, building large infrastructure projects. So that's an area in which we've invested where you have modular buildings that are provided, they have 30-year lives. They have long-term contracts typically with governments, so it's a really interesting investment proposition. But it's also a circular model, where again you have this very long-lived asset, it's got great energy efficiency dynamics, and it's flexible so really provides a flexible solution for some of these essential needs of governments and populations.

Allison Nathan: Interesting. So Tavis, you've talked a bit about how uncertainty around the geopolitical landscape, around tariff policy is complicating infrastructure investing to some extent, but can you give us a little bit more color around that? And also about how the financial market volatility associated with all this is creating some challenges but also opportunities?

Tavis Cannell: I'd say that within infrastructure on tariffs the single-biggest impact has been in thinking through supply chain and supply chain risks. And especially if you're undertaking significant capital expenditure, then to the extent your supply chain has linkages to foreign countries where these tariffs have been imposed, that can present a real issue.

Now, what have we been doing? What have most other market participants been doing is that this was telegraphed that there were going to be some of these things likely coming down the pike, and so you could preorder equipment and you could try and get -- if you think about your 2025 build plans, let's preorder, let's get all that equipment here into the US before any of that happens. So I think in the very short term, most prudent managers have mitigated much of that kind of short-term risk.

I think the question is, longer term, what's the landing zone? And therefore, do I need to reorient my supply chain in that regard? And look, we all have a bit of muscle memory from COVID in dealing with the whiplash in supply chains and pricing and inflation and so forth. So I'd say at least there's more muscle memory around dealing with that issue.

I'd say the second area that has been really topical -- and this is more for directly regulated infrastructure assets -- has been the political environment and the predictability of domestic regulation. And we've seen a number of examples in Europe where there's been quite adverse -- unexpected, adverse regulatory outcomes, given the overall political environment. And so depending on where you're investing in infrastructure, if you're investing in a directly regulated asset that touches consumers and thus voters then, in a more febrile economic environment where there are cost-of-living pressures, where there is inflation and so forth, that can impact what regulatory outcomes in terms of pricing and so forth you achieve as an infrastructure investor.

But broadly speaking, these type of environments tend to be really interesting environments for us to invest because we'd say there's a lot of dislocation and there's a lot of noise. And that usually means that things are not priced to perfection. You can acquire assets at a more interesting basis. And it also means that many of the ways in which we go about acquiring companies is through public to private, so we will de-list a company from the stock exchange. And so you have a period where stock prices can be moving up and down, and infrastructure businesses, which are very long term in nature, those aren't always super well understood by public markets. So this is an environment where I think it you've seen and you're likely to see more activity in public to privates.

I think it's also an environment where corporates, as I mentioned earlier, corporates and governments reassess, like, what do we need to own? And that means there are more corporate carve-outs or spinouts of infrastructure assets where we and our peers can come in and offer expertise and capital to really invest behind those infrastructure assets.

So I'd say for an investing environment, you know, it's confusing, there's a lot of noise, but I think it's also a pretty interesting environment in which to be investing.

Allison Nathan: So what I'm hearing from you, Tavis, is it's a pretty good time to be investing in infrastructure.

Tavis Cannell: I think it is. And, you know, some of that is, you know – cyclical - where we are in the market right now. But I think, you know, the most exciting thing about infrastructure is that it's a way to really invest behind these big megatrends. And you think about, you know, decarbonization. You think about digitalization. You think about the deglobalization or the changes in geopolitics, and that really aligns perfectly with the asset class. So it's a really exciting time, whether around energy, digital, transport, to really have access to these big thematics.

Allison Nathan: Thanks for joining us, Tavis.

Tavis Cannell: Thank you. I really enjoyed it.

Allison Nathan: This episode of Goldman Sachs Exchanges was recorded on Wednesday, May 7th. I'm Allison Nathan. Thanks for listening.

The opinions and views expressed in this program may not necessarily reflect the institutional views of Goldman Sachs or its affiliates. This program should not be copied, distributed, published, or reproduced in whole or in part or disclosed by any recipient to any other person without the

express written consent of Goldman Sachs. Each name of a third-party organization mentioned in this program is the property of the company to which it relates, is used here strictly for informational and identification purposes only, and is not used to imply any ownership or license rights between any such company and Goldman Sachs. The content of this program does not constitute a recommendation from any Goldman Sachs entity to the recipient, and is provided for informational purposes only. Goldman Sachs is not providing any financial, economic, legal, investment, accounting, or tax advice through this program or to its recipient. Certain information contained in this program constitutes "forward-looking" statements, and there is no guarantee that these results will be achieved. Goldman Sachs has no obligation to provide updates or changes to the information in this program. Past performance does not guarantee future results, which may vary. Neither Goldman Sachs nor any of its affiliates makes any representation or warranty, express or implied, as to the accuracy or completeness of the statements or any information contained in this program and any liability therefore; including in respect of direct, indirect, or consequential loss or damage is expressly disclaimed. Disclosures applicable to research with respect to issuers, if any, mentioned herein are available through your Goldman Sachs representative or at www.GS.com/research/hedge.html.

This transcript should not be copied, distributed, published, or reproduced, in whole or in part, or disclosed by any recipient to any other person. The information contained in this transcript does not constitute a recommendation from any Goldman Sachs entity to the recipient. Neither Goldman Sachs nor any of its affiliates makes any representation or warranty, express or implied, as to the accuracy or completeness of the statements or any information contained in this transcript and any liability therefor (including in respect of direct, indirect, or consequential loss or damage) are expressly disclaimed. The views expressed in this transcript are not necessarily those of Goldman Sachs, and Goldman Sachs is not providing any financial, economic, legal, accounting, or tax advice or recommendations in this transcript. In addition, the receipt of this transcript by any recipient is not to be taken as constituting the giving of investment advice by Goldman Sachs to that recipient, nor to constitute such person a client of any Goldman Sachs entity. This transcript is provided in conjunction with the associated video/audio content for convenience. The content of this transcript may differ from the associated video/audio, please consult the original content as the definitive source. Goldman Sachs is not responsible for any errors in the transcript.