CLIMATE RISK PRICING

How social risk is financially material for hyperscalers

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SUMMARY

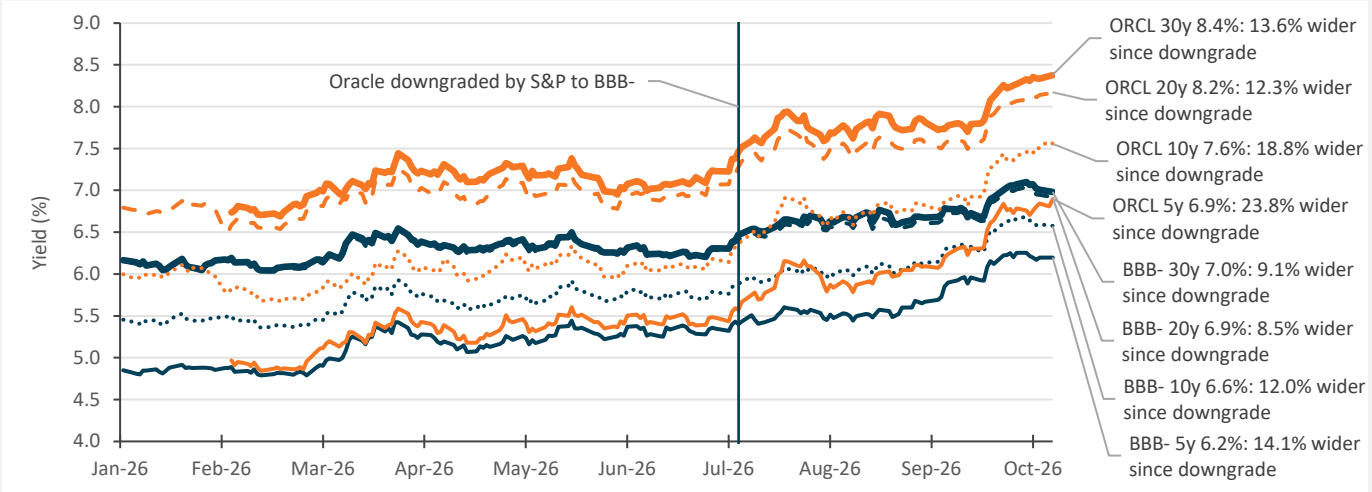
- **Social opposition, fuelled by environmental concerns, can derail data centre projects.**
- **Off-balance sheet lease arrangements could mean the financial consequences are underestimated.**
- **Oracle's Project Jupiter illustrates the impact of these risks, with broader implications for Oracle bondholders.**
- **Markets are signalling stress, with Oracle yields higher than the BB composite across maturities, and 5yr CDS quoted nearly 50bps wider than bond spreads.**

Hyperscalers have issued vast quantities of debt in recent years to fund the construction of the data centres powering the AI boom. Our earlier work has highlighted how essential this sector will be for energy policy going forward.[1] Here, we examine the financial materiality of social opposition to data centres from the perspective of bondholders.

This paper provides an overview of some of the key environmental risks facing data centres and highlights how these concerns can create community opposition. Hyperscalers are racing against each other to advance their AI offerings and win market share, objectives that can only be achieved with sufficient data centre capacity. This means delays or disruptions to the buildout are financially material. Despite this, social and environmental risks may not be fully reflected in current credit assessments, partly because complex and opaque financing structures limit visibility over exposure, counterparties and delivery risk.

The ongoing case of Oracle and Project Jupiter, a data centre campus, exemplifies this risk. Oracle recently issued a force majeure notice to the site developer amidst state and public opposition to the project. Oracle's bond performance (shown in Figure 1) indicates why these risks are not confined to the project's creditors, but can be material for bondholders as well.

Figure 1. Oracle bond yields compared with BBB- composite yields (BVABDC Index). Source: Bloomberg Finance L.P., accessed 14 Oct 2026.



[1] "Data centre debt: bondholder leverage to shape AI energy strategy", AFII, 29 Jul 2026.

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Key risks facing data centres

As the data centre market has expanded, so have risks to its growth emerged. One risk category is environmental, encompassing concerns around energy demand, GHG emissions, and water usage. These in turn are fuelling social opposition to data centre projects.

Environmental

While not exhaustive, we have outlined below three of the key environmental risks facing data centres.

- **Energy demand**: The IEA estimates that a typical AI-focused data centre consumes as much electricity as 100,000 households, with the largest projects under construction potentially consuming 20 times as much.[2] This energy demand is outpacing the capacity of electricity grids, meaning c.20% of planned data centre projects could be delayed. The energy demands of data centres are also inciting community pushback, with fears that grid upgrade costs are being passed on to consumers in the form of higher electricity bills. Although data centres may only be partially responsible for rising energy prices,[3] public perception of these projects is unfavourable.[4]

- **GHG emissions:** According to IEA figures, data centres will account for 1% of global CO_2 emissions by 2030 in the base case, or 1.4% in a faster-growth scenario.[5] However, the sector is one of the few where emissions are set to grow, alongside road transport and aviation.[6] Concerns over the air pollution caused by data centres,[7] particularly those powered by on-site fossil fuel generation, have added to negative public perception.

- **Water usage:** As well as electricity consumption, data centres have been criticised for their significant water usage.[8] Estimates of water consumption vary significantly, depending on the size of the project and cooling system used. Regardless, data centre water usage continues to grow in already water-stressed areas, further fuelling social backlash.[9]

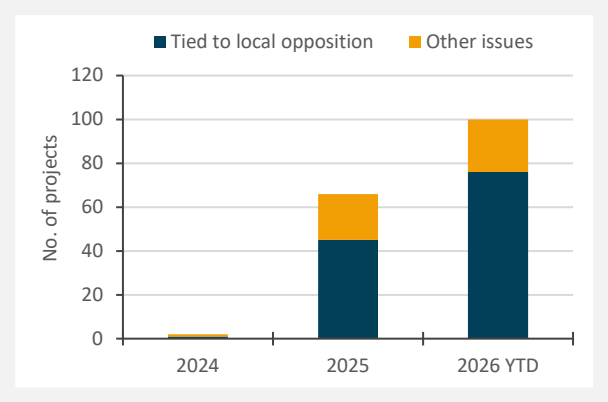
Social

The environmental concerns noted above are all contributing to the social opposition against data centres. Failure to address these concerns can in turn lead to projects becoming disrupted. As noted in our previous research, projects that do not earn a 'Social Licence to Operate' (SLO) can become delayed, or even abandoned entirely, with significant financial consequences.[10]

[2] "Executive summary - Energy and AI", IEA, accessed 14 Oct 2026.
[3] "What's Really Driving Up US Electricity Prices? We Unpack the Numbers.", World Resources Institute, 15 Dec 2025.
[4] "Americans' views of data centers have turned more negative", Pew Research Center, 22 Sep 2026.
[5] "AI and climate change - Energy and AI", IEA, accessed 16 Oct 2026.
[6] "AI: Five charts that put data-centre energy use – and emissions – into context", Carbon Brief, 15 Sep 2025.
[7] "Air pollution from data centres poses growing public health threat", Air Quality News, accessed 16 Oct 2026.
[8] "Not enough water for UK's datacentre plans, trade body says", The Guardian, 21 Jul 2026.
[9] "AI's Water Strain Includes Surging Demand From Electricity Use", Bloomberg, 12 Oct 2026.
[10] "Rio Tinto: a just transition case study", AFII, 8 Jun 2026.

Data centre opposition has taken the form of public protests, political campaigns, and broader community pushback against the environmental impacts. Overall perceptions of data centres are also turning increasingly negative, according to public polling.[11] This social opposition has material impacts, as shown in Figure 2, which highlights how sharply data centre delays and cancellations in the USA have risen due to community opposition.

Figure 2. Number of early-stage data centre projects facing significant delay or cancellation in the USA. Source: S&P Global Energy, 15 Sep 2026.



While environmental and social factors are often analysed separately in other sectors, these risks are inherently linked for data centres, as the social pushback — often responsible for project delays — is a consequence of environmental concerns. For bond investors, this overarching social opposition creates an execution risk with financially material consequences.[12,13]

The financial materiality of data centre delays

The scale of current AI infrastructure capex is without recent precedent. Hyperscalers are committing capital at a pace that is fundamentally reshaping fixed income markets, with an estimated USD1tn of capex expected this year alone.[14]

Data centre development is being driven by competition between hyperscalers to build out the physical infrastructure necessary to advance AI technology. The sector is consumed by a 'winner takes all' dynamic, within which only a few very successful companies are expected to succeed financially (these include the hyperscalers, the 'Magnificent 7' etc.).[15]

Therefore, risks affecting the timeline of the data centre buildout are highly material, as they can cause a hyperscaler to fall behind its peers. As outlined, environmental concerns and social opposition can be major drivers of project delays and need to be factored into investment decisions.

Indeed, this is already beginning to happen, with community pushback now being priced into lending decisions.[16]

Why these risks might be underestimated currently

However, the financing structures used by hyperscalers for data centre development mean that the financial materiality of these risks may be underestimated.

As well as issuing bonds across multiple currencies, hyperscalers are utilising off-balance sheet arrangements to finance individual projects, often alongside private credit firms. A common structure involves creating a special purpose vehicle (SPV) that acquires or develops the data centre, with the hyperscaler typically holding

[11] "A backlash over data centres is another threat to the AI juggernaut", BBC News, 15 Sep 2026.
[12] "Social factors present execution risk to the transition", AFII, 29 Sep 2026.
[13] "Social execution risks: a new frontier for infrastructure finance", Just Transition Finance Lab, 22 Sep 2026.
[14] "Global AI Investment Is Forecast to Exceed $1 Trillion in 2026", Goldman Sachs, 7 Aug 2026.
[15] "The economics of AI: does the winner take all or do we all win?", Schroders, 24 Feb 2025.
[16] "Lenders start pricing community opposition into data centre financing as $130bn in projects stall", Capacity, 14 Aug 2026.

a minority stake, but acting as the primary anchor tenant. The hyperscaler commits to long-term operating leases, the debt associated with which can then be kept off-balance sheet.[17] This structure can shield the hyperscaler's credit rating and maintain the apparent health of its balance sheet, both of which are needed for ongoing borrowing.[18]

Disclosed data centre lease obligations already total USD1.4tn, with an estimated USD1.1tn of this off-balance sheet. However, these have to be recognised when the data centres become operational.[19] For credit investors, these opaque structures can understate the true level of environmental and social risk associated with hyperscaler debt. Issuers have also used green bonds to highlight the sustainability credentials of data centre projects, another type of instrument that could come under additional scrutiny.[20]

As the risks are at the project level, the wider impact of data centre environmental and social concerns to the broader company may be more difficult to recognise, especially when it is not always clear how the financial structure connects the hyperscaler to the project itself. But as the case study of Oracle and Project Jupiter shows, social opposition to a specific data centre project can have wider implications.

Case study: Oracle and Project Jupiter

An illustrative case study of where the risks to data centres are materialising and causing substantial delays is Oracle's Project Jupiter.

Project Jupiter is a 1,400-acre, 2.45-gigawatt data centre campus currently under construction in New Mexico, USA. While the project has multiple companies involved as developers and energy partners,[21] Oracle is the primary anchor tenant leasing the facility.

Financing

The project is predominantly being financed through a USD18bn loan from a consortium of banks, as well as USD3bn of equity from Blue Owl Capital. As per the typical structure noted above, this debt is not on Oracle's balance sheet (as it is not the direct borrower), sitting with an SPV instead. The loans have been reported as trading at stressed levels, privately quoted at 89 to 91 cents on the dollar by syndicate banks.[22] This could in part be due to the social opposition and financial difficulties the project has faced, discussed below.

Opposition to Project Jupiter

Project Jupiter has faced significant social opposition in recent months, with pushback focused on the environmental risks described above. New Mexico has seen protests over local water supply concerns amidst drought conditions,[23] while the project is also facing issues securing power. State officials initially blocked Oracle from running a fossil gas pipeline to the data centre, citing environmental concerns.[24] The company then pivoted to an alternative energy source, which also faced similar pipeline issues. At the same time, it has

[17] "Financing the AI infrastructure boom: on- and off-balance sheet borrowing", Bank for International Settlements, 16 Mar 2026.
[18] "Moody's flags $662 billion risk at the heart of the data center build-out by just 5 companies", Yahoo Finance, 25 Feb 2026.
[19] "Hyperscalers: Now also a credit story", JPMorgan AM, 20 Aug 2026.
[20] "QTS Fayetteville: Microsoft-tied data centre green bond", AFII, 6 Aug 2026.
[21] The project is being developed by a unit of Blue Owl Capital (STACK Infrastructure), leased to Oracle as the principal tenant, with Bloom Energy providing the main power source. The project aims to deliver AI computing capacity for OpenAI under the Stargate initiative.
[22] "Oracle's $18bn data centre debt under strain amid local pushback", Financial Times, 18 Sep 2026.
[23] "In a divided America, the left and right unite to oppose artificial intelligence data centers", The Associated Press, 26 Aug 2026.
[24] "New Mexico Denies Gas Pipeline Permit for Oracle Data Center", Bloomberg, 16 Jul 2026.

had to contend with disputes and legal halts regarding air quality permits. These myriad issues have contributed to the initial phase of the project falling at least seven months behind schedule.[25]

The materiality of these risks is not lost on Oracle. Indeed, the company has launched a significant PR campaign to address the social opposition to Project Jupiter in an attempt to earn the social licence to operate.[26] Oracle has also donated to political candidates in New Mexico,[27] underscoring how political buy-in is critical to project success.[28] These actions suggest Oracle is aware of the risks to its own financial position that could result from disruptions to Project Jupiter, even though the project debt is held off-balance sheet.

Force majeure and financial consequences

Due to the site's power and pipeline setbacks, Oracle issued a 'force majeure' notice to a unit of Blue Owl Capital in later September, attempting to delay lease payments should the project be derailed and fail to come online in 2028 as planned.[29] If both sides accept that a force majeure event has occurred, Oracle could secure a three-year delay on payments once the site is operational. According to the company, the project is still on track and the 2028 target remains in place.

However, reports suggest that it is Oracle's responsibility to secure power and cover the project's debt costs. The company also cannot terminate the lease and remains liable to pay a 'carry cost' for up to three years if Project Jupiter misses its operational deadline.[30,31]

Although the environmental and social considerations appear project-specific, and the debt is off-balance sheet, these delays present financial challenges to Oracle, as evidenced by its issuing of the force majeure notice.

Oracle bond performance

The Project Jupiter case study concerns a specific, off-balance sheet lease agreement with Oracle that is subject to delays, and subsequent financial consequences. We now investigate the company's bond performance to see how ongoing concerns may be priced into bond markets.

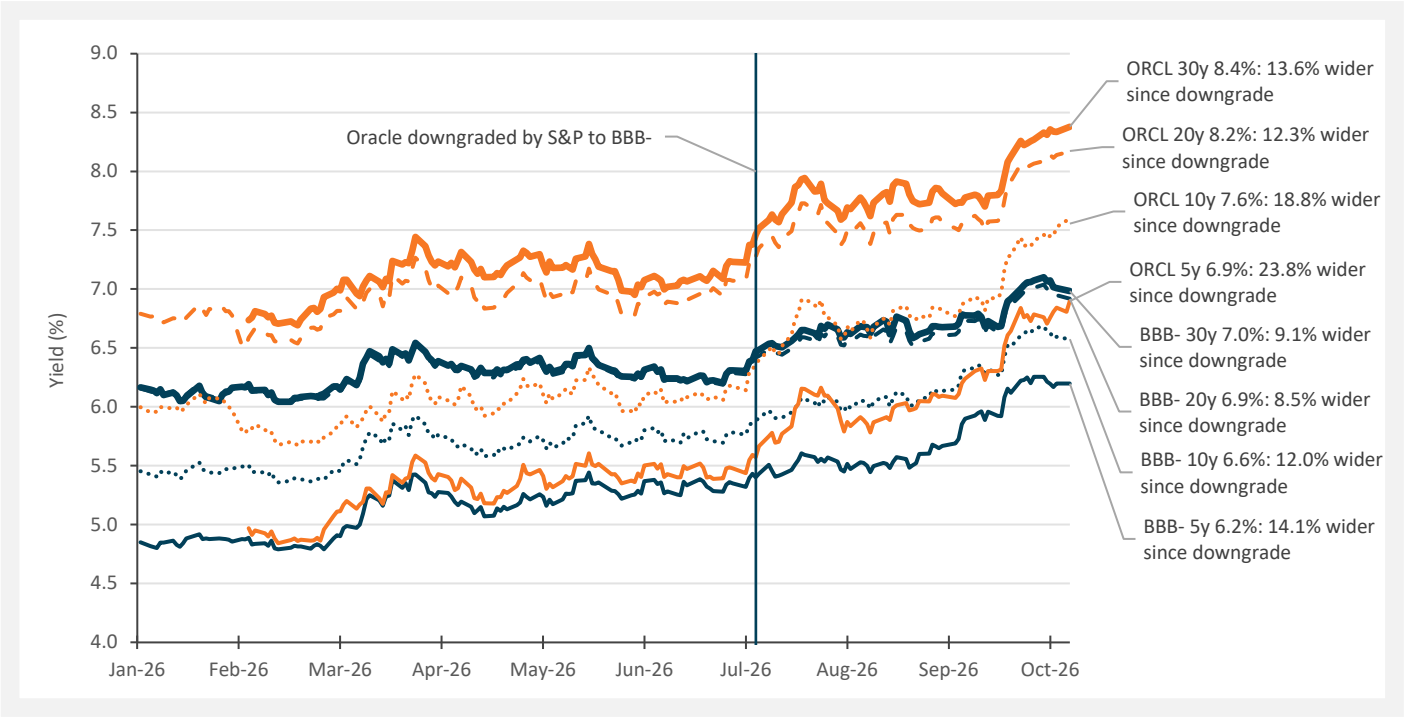
Current Oracle trading levels

To perform a market comparison, Figure 3 and Table 1 (both overleaf) use the outstanding Oracle bond closest in maturity to, but not longer than, the standard 5yr/10yr/20yr/30yr benchmark maturities, for which Bloomberg composite yields have been considered.

The bonds have been trading poorly in the past few months. Figure 3 shows the historical performance of yields compared with the BBB- composite in 2026.

[25] "Oracle's $18bn data centre debt under strain amid local pushback", Financial Times, 18 Sep 2026.
[26] "Tech Tries Charm Offensive to Save Trillion-Dollar AI Buildout", Bloomberg, 19 Aug 2026.
[27] "Data center leaders donate to Haaland even as she supports data center pause", Searchlight New Mexico, 16 Sep 2026.
[28] For further discussion on how social considerations include political risks, please see "Poland: a just transition case study", AFII, 1 May 2026.
[29] "Oracle triggers 'force majeure' on data center project over power delays, source says", Reuters, 24 Sep 2026.
[30] "Oracle on the hook to pay data centre investors even if site has no electricity", Financial Times, 24 Sep 2026.
[31] "$165bn Project Jupiter: What Oracle's force majeure notice means for AI data centre risk", Capacity, 2 Oct 2026.

Figure 3. Oracle bond yields compared with BBB- composite yields (BVABDC Index). Source: Bloomberg Finance L.P., accessed 14 Oct 2026.



Oracle was downgraded by S&P from BBB to BBB- on 7 July 2026, due to heavy infrastructure spending and high exposure to OpenAI.[32] Since that date (as shown on the graph), Oracle bonds have underperformed the BBB- composite index, widening c.50% more across maturities. This is perhaps expected given the negative sentiment of a downgrade, but yields were already wider than the BBB- composite, so it can be argued that much of the downgrade was already priced in.

During the period where reports of the loans trading in distressed territory (18 Sep) emerged and Oracle declared force majeure (24 Sep), the BBB- composite index widened c.20bps, while Oracle bonds widened c.30bps, across maturities. This could suggest the Project Jupiter headlines had a significant impact on Oracle's spreads. However, there may also be other factors at play (e.g. the broader market widened, and hyperscalers may be seeing amplified effects due to general AI-related fears).

Table 1 compares Oracle bond yields with differently rated composites, showing how the company's current yields are even wider than the BB composite.[33] This could be due to ongoing concerns not included in the current credit rating, such as potential delays or sizeable off-balance sheet financing.

[32] "Why Oracle's recent credit downgrade could be a warning sign for stocks", Yahoo Finance, 17 Jul 2026.
[33] "Oracle Fallen Angel Risk Hangs on $660 Billion Revenue Backlog", Bloomberg, 14 Oct 2026.

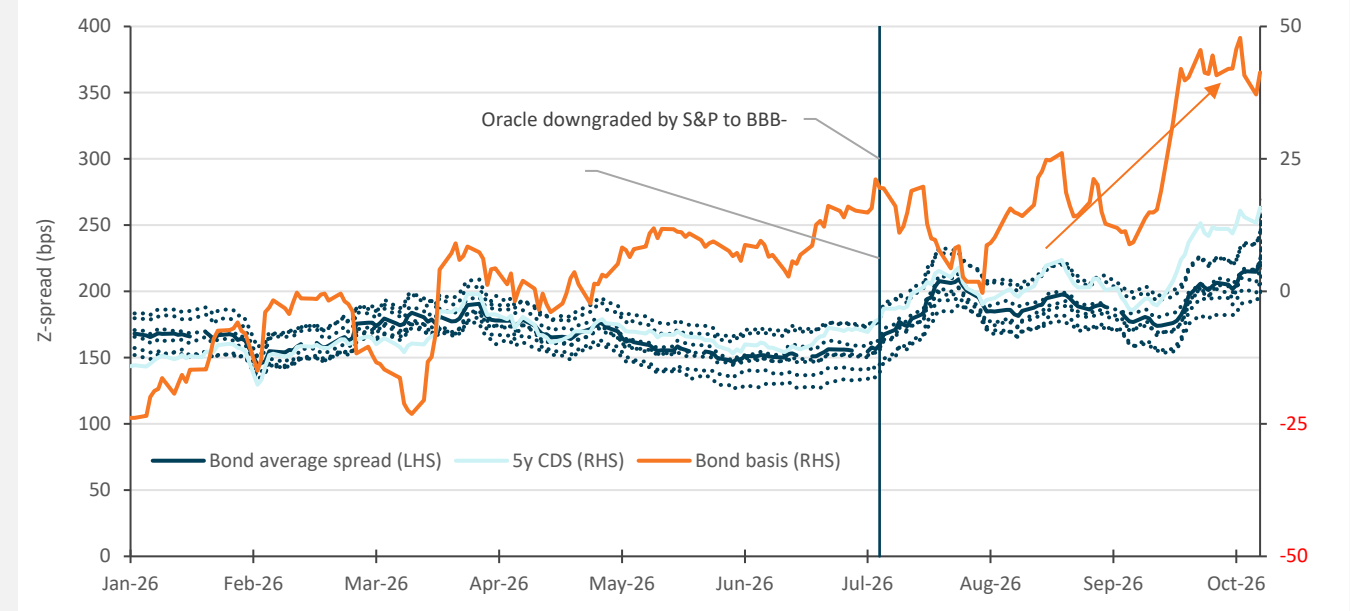
Table 1. Oracle yield comparison to Bloomberg composites. Source: Bloomberg Finance L.P., accessed 14 Oct 2026.

Bond Description	Bond ISIN	Maturity Bucket	Yield	BBB- composite yield (BVABDC)	BB+ composite yield (BVABDD)	BB composite yield (BVABDE)
ORCL 4.95 02/04/31	US68389XDX03	5y	7.04%	6.20%	6.51%	6.75%
ORCL 3.85 07/15/36	US68389XBH70	10y	7.66%	6.57%	7.06%	7.37%
ORCL 4 07/15/46	US68389XBJ37	20y	8.25%	6.92%	7.67%	8.11%
ORCL 6.7 02/04/56	US68389XEB73	30y	8.47%	6.98%	7.72%	8.24%

CDS-bond basis

As an actively traded investment grade credit, it is also interesting to compare the relative price movements of Oracle's Credit Default Swaps (CDS) and bonds. Figure 4 shows all Oracle bonds with maturities between 15 May 2030 and 9 November 2032 as well as their average spread. This is compared with the 5yr CDS contract. The basis is calculated as the difference, with negative basis implying CDS is trading tighter than bond spreads. As the graph shows, the basis was slightly negative for the first quarter, moved slightly positive in Q2, and has now grown considerably, with the CDS quoted nearly 50bps wider than the bond spreads.

Figure 4. Oracle 5yr bonds, average spread, and CDS value. Source: Bloomberg Finance L.P., AFII, accessed 14 Oct 2026.



CDS-bond basis is a technical data point, driven by the relative supply-demand for each instrument. Over the past few years investment grade basis has tended to be negative, driven by demand for synthetic credit products.[34] The story told by Figure 4 suggests investors are growing increasingly concerned about Oracle's default risk but are struggling to offload their bond positions, causing them to reach to CDS to hedge themselves.

[34] We note bond basis for CDX IG 5y index is currently calculated to be -39bps at end Sep 2026, and was -49bps in Sep 2025, according to the Bloomberg BI STRTN screen.

Conclusions

Social opposition to data centres and the associated delays this can cause are increasingly becoming a financially material risk for credit investors. Environmental concerns around energy demand, water usage, and GHG emissions form the basis of community pushback, which is increasingly delaying or cancelling projects. Given the speed of AI development and 'winner take all' industry dynamics, these delays are highly material, as they can leave a company behind its peers.

The financing structures used for data centre development may mean credit investors underestimate the importance of this social opposition. Off-balance sheet lease arrangements make project-level risks harder to trace back to the issuer. The example of Oracle and Project Jupiter is emblematic of this issue, with community opposition, together with power and pipeline setbacks, leading the company to issue a force majeure notice. However, it remains liable for payments related to the project.

Given the importance of AI capex to Oracle's strategy and the scale of Project Jupiter, the company's bonds are reflecting this broader stress. Since the July downgrade to BBB-, they have widened considerably, with investors turning to CDS to hedge against potential default risks.

Oracle's heavy infrastructure spending and OpenAI exposure also weigh on its credit, meaning the Project Jupiter turmoil could be one factor among several rather than the sole driver of this widening. Still, this case illustrates how social opposition can be financially material to hyperscaler bondholders even when the debt is off-balance sheet, and thus warrants consideration in credit analysis.

Version log

Date	Comment
19 Oct 2026	Document published
2 Nov 2026	Additional paragraph added on page 6 to include more specific details on how the bonds have moved since Oracle's Force Majeure notice

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