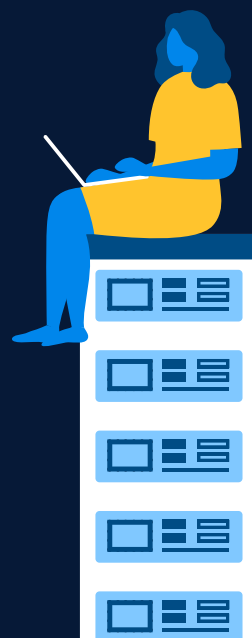


AI and fixed income: Booming demand for data center ABS and CMBS

From the Field
September 2024



Key Insights

- Artificial intelligence advances have boosted data center demand, leading to a boom in issuance of asset-backed and commercial mortgage-backed bonds backed by centers.
- Most data center tenants are highly creditworthy or rely on the data center for essential tasks, adding to the credit resilience of these ABS and CMBS deals.
- We have been finding attractive opportunities in data center ABS and CMBS, but thorough risk evaluation is essential.

Artificial intelligence (AI) has captured the imagination and enthusiasm of investors around the globe. While the market often focuses on AI in the context of equity opportunities, the fixed income market is likely to play an increasingly important role in financing digital infrastructure growth. Data center operators and developers are tapping a range of debt financing sources to fund their AI-related infrastructure investments, including the asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS) markets. We have been finding attractive value in some of these securitizations backed by data centers and other technology infrastructure,

although a thorough analysis of both the collateral and the structures of the deals themselves is essential.

AI drives increasing data center demand

Growth in AI applications has supercharged the two more traditional demand drivers of data center capacity: the migration from on-premises computing to the cloud and broader internet connectivity. This increase in data center demand is evidenced by lower data center vacancy rates, elevated leasing activity, and significant pricing power. Data



David Xu, CFA
Securitized Credit Analyst



Adam E. Haya
Securitized Credit Analyst

center vacancy rates as a percentage of megawatt total capacity¹ are approaching new lows across nearly all major U.S. geographic markets.

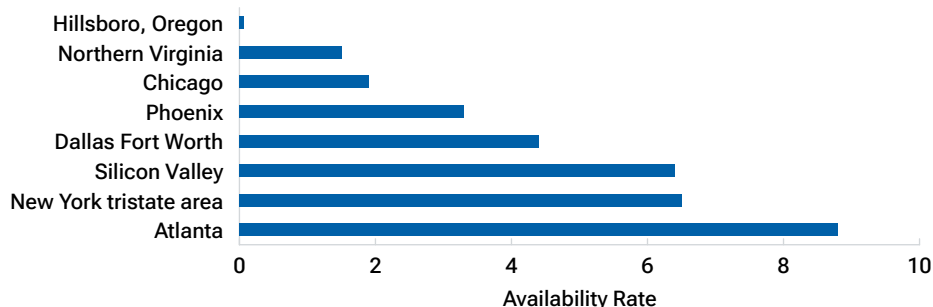
Despite a significant increase in total deliverable power capacity as developers work to fulfill pre-leased contracts with new builds, we expect most markets to remain supply constrained for the foreseeable future. Across the U.S., new leasing activity in the sector grew 82% between 2022 and 2023. In the first half of 2024, leasing volumes reached a record year-to-date high of 2.9 gigawatts,² on pace for a 25% sequential increase from 2023's record-high annual leasing volume.

¹ Because data center operations are generally more power constrained than space constrained, data center capacity is usually measured in megawatts (i.e., power supply available) rather than in square feet.

² Source: DataHawk.

Data center vacancies are near new lows

(Fig. 1) Vacancy¹ rates in regions with data center clusters



As of June 30, 2024.

Source: CBRE.

¹ As a percentage of total megawatts available.

We've seen higher demand result in data center operators wielding greater degrees of pricing power, particularly in supply constrained markets. Rent per megawatt of electricity capacity has turned meaningfully higher, in part because of generative AI demand. We expect this dynamic to persist, at least in the short to medium term, within most markets given healthy supply/demand fundamentals.

Data center pricing power supports fundamental credit, but risks remain

The current fundamental backdrop remains supportive of data center operators' pricing power, primarily driven by a significant structural increase in demand from generative AI applications. While data center supply is optically

elevated, tenants are placing a premium on securing space early and reliably, which results in the vast majority of new data centers coming to market having been leased prior to construction.³ Additionally, most data center tenants are either highly creditworthy—think of Amazon or Google—or rely on the data center for mission-critical tasks. This makes tenants less likely to move at lease expiration, adding to the overall credit resilience of the relevant ABS and CMBS deals.

Despite the currently supportive backdrop for data center operators, there are risks to their newfound pricing power that we consider and evaluate. Most notably, we are carefully monitoring for any potential oversupply or demand degradation, whether in a particular geographic market or across the sector. For example, demand degradation

might emerge if companies that have been investing heavily in data center capacity and computing resources to meet projected AI use cases were to slow their capital expenditures in response to weaker-than-expected AI monetization.

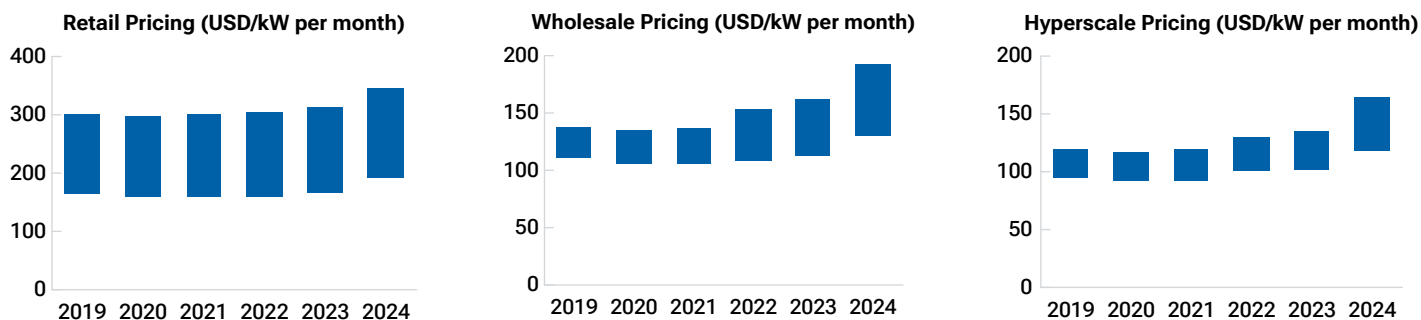
Securitized credit to play a significant role in financing tech infrastructure

We expect ABS and CMBS to play significant roles in financing capital expenditure on data centers and other forms of technology infrastructure. Both ABS and CMBS are forms of securitized credit, which involve a stream of cash flows from underlying secured collateral. Each deal has a defined structure for how those cash flows are allocated, with the highest-quality slices, or "tranches,"

³ As of June 30, 2024, 80% of supply under construction was pre-leased. Source: CBRE.

Data center rents have moved higher

(Fig. 2) Rent per kilowatt of electricity capacity¹



As of June 30, 2024.

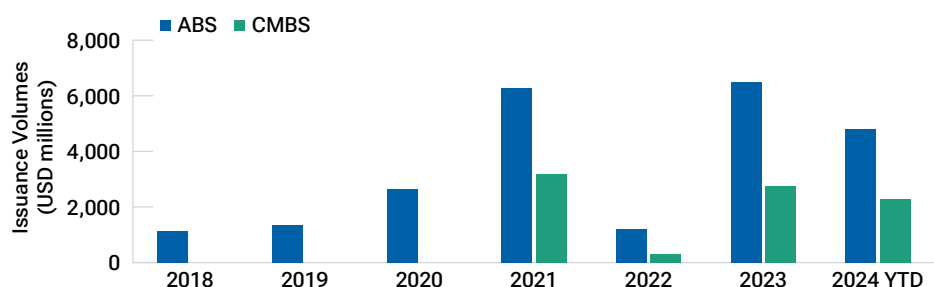
Source: DataHawk.

kW=kilowatt

¹ Highest to lowest rent in each time period.

Growth in data center securitizations

(Fig. 3) Data center ABS and CMBS new issue volumes by year



As of June 30, 2024.

Source: DataHawk.

having priority on the cash flows generated by the collateral.

The cash flows in a CMBS deal come from payments on the mortgage used to acquire or finance the underlying data center or centers. Data center ABS are backed by property interest in the underlying property, typically held in a “bankruptcy remote” master trust. Both ABS and CMBS structures allow investors to look toward the underlying assets to service their debt rather than relying on the financial health and corporate-level cash flows of the data center operator that sponsors the transaction.

Analysis of underlying asset is essential

Regardless of whether a specific data center securitization is ABS or CMBS, we begin our credit analysis by examining the quality of the underlying asset. This includes the credit quality of its sponsor, the supply/demand dynamics of the geographic location, lease rollover risk, tenancy composition, in-place rents versus both current and projected market rents, power accessibility and cost, and proximity to population centers. We also incorporate environmental, social, and governance (ESG) considerations into our analysis, evaluating

factors like power usage efficiency and water usage in cooling systems.

Securitization structure also drives some potential differences in outcomes

After examining the quality of the asset underlying a data center securitization, we review important structural factors, including implied loan-to-value ratio,⁴ debt yield,⁵ callability or other issuer optionality,⁶ equity economics and incentives, cash flow triggers,⁷ and resilience against credit stress scenarios, as part of our determination of an individual investment’s attractiveness in the context of its market price. Ultimately, the intersection of asset quality and structure-specific features drives our assessment of a specific bond’s value.

Searching for value relative to other types of ABS

We balance the merits and risks of each individual data infrastructure deal across both ABS and CMBS to identify opportunities. In doing so, we assess any trade-offs between collateral quality, securitization structure, and relative value.

For example, data center ABS are structurally similar to whole-business securitizations, which are generally backed by an interest in a company’s primary revenue-generating assets (often franchise fees and royalties). We compare the relative value in data center ABS with that of whole-business securitizations, as well as with that of ABS with more traditional collateral, such as auto or equipment loans, in an attempt to identify the best risk-adjusted opportunities across the investment universe.

Of course, data centers also require other types of digital infrastructure to function as a linchpin of AI technology, and those other types of digital infrastructure are often also financed in securitized credit markets. For example, we have evaluated ABS structures backed by more novel types of digital infrastructure, including fiber-optic networks and internet protocol (IP) addresses. Because the securitized credit market is an essential part of the funding ecosystem for AI-related infrastructure, we expect to see ongoing issuance in the relevant ABS and CMBS markets. We will continue to evaluate and selectively participate in the new deals in this evolving landscape.

⁴ Loan-to-value ratio is a measure comparing the size of a loan with the value of the assets securing said loan, commonly expressed as a percentage.

⁵ Debt yield is a measure of free cash flow or income compared with the size of the loan secured by the assets generating said cash flows, commonly expressed as a percentage.

⁶ A call option affords the issuer or the underlying equity holder the right, but not the obligation, to pay off the bonds prior to maturity.

⁷ A cash flow trigger in a securitization will generally divert collateral cash flows either toward the senior bondholders or toward a designated cash reserve account when certain credit metrics fall below prespecified levels.

INVEST WITH CONFIDENCE®

T. Rowe Price identifies and actively invests in opportunities to help people thrive in an evolving world, bringing our dynamic perspective and meaningful partnership to clients so they can feel more confident.

Important Information

This material is provided for informational purposes only and is not intended to be investment advice or a recommendation to take any particular investment action.

The views contained herein are those of the authors as of September 2024 and are subject to change without notice; these views may differ from those of other T. Rowe Price associates.

This information is not intended to reflect a current or past recommendation concerning investments, investment strategies, or account types, advice of any kind, or a solicitation of an offer to buy or sell any securities or investment services. The opinions and commentary provided do not take into account the investment objectives or financial situation of any particular investor or class of investor. Please consider your own circumstances before making an investment decision.

Information contained herein is based upon sources we consider to be reliable; we do not, however, guarantee its accuracy. **Actual future outcomes may differ materially from any estimates or forward-looking statements provided.**

Past performance is not a reliable indicator of future performance. All investments are subject to market risk, including the possible loss of principal. **Fixed income securities are subject to credit risk, liquidity risk, call risk, and interest rate risk. As interest rates rise, bond prices generally fall. Mortgage-backed securities are subject to credit risk, interest rate risk, prepayment risk, and extension risk.** All charts and tables are shown for illustrative purposes only.

T. Rowe Price Investment Services, Inc., distributor. T. Rowe Price Associates, Inc., investment adviser. T. Rowe Price Investment Services, Inc., and T. Rowe Price Associates, Inc., are affiliated companies.

© 2024 T. Rowe Price. All Rights Reserved. T. ROWE PRICE, INVEST WITH CONFIDENCE, and the Bighorn Sheep design are, collectively and/or apart, trademarks of T. Rowe Price Group, Inc.