

U.S. Structured Finance Chart Book: November 2024

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Nov. 13, 2024

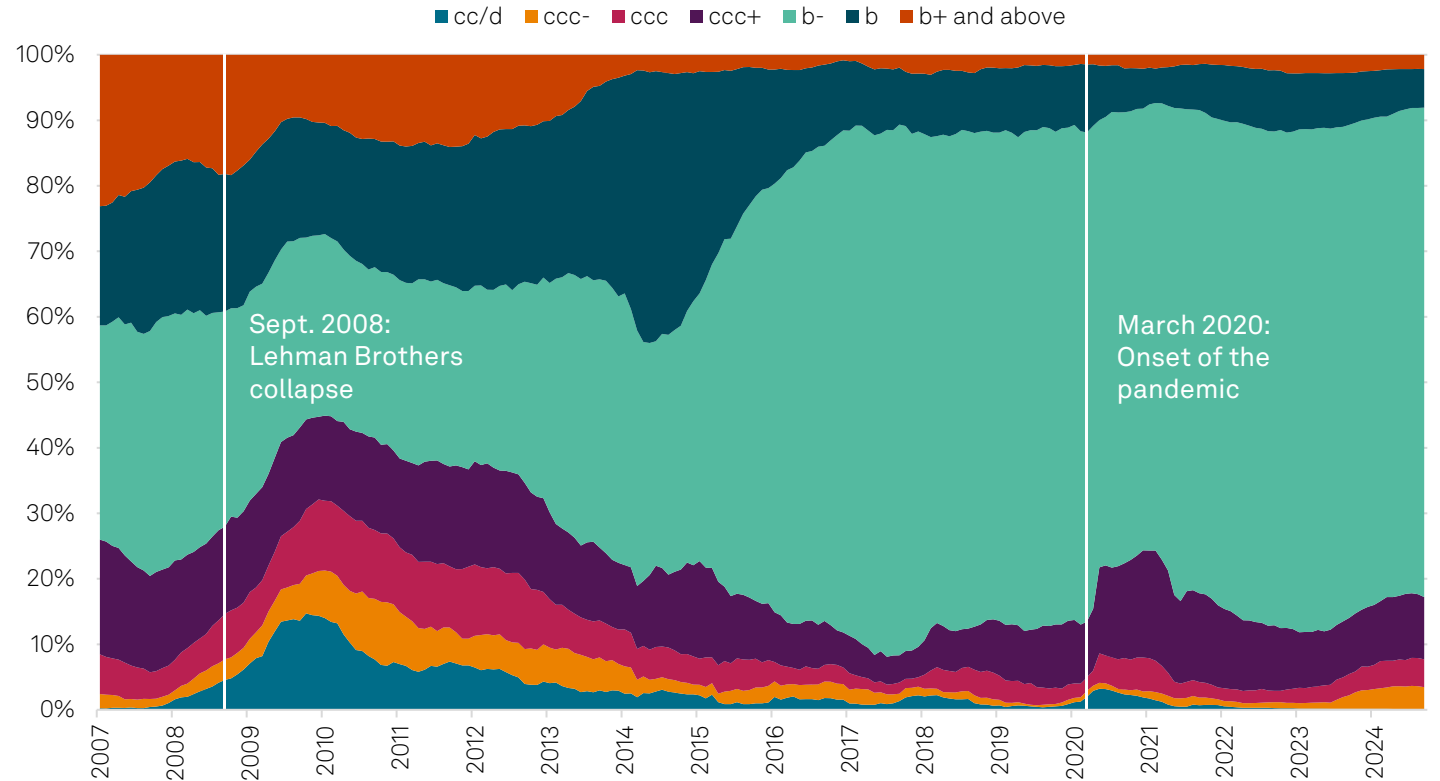




Highlights | Private Credit And Middle-Market CLO Quarterly: The Times They Are A-Changin' (Q4 2024)

- This year's record middle-market (MM) CLO issuance continues to fuel the growth of credit estimates. Year to date, we have completed a total of 2,590 credit estimates: 634 new estimates and 1,956 refreshes of existing estimates.
- Although credit estimate downgrades still outnumber upgrades, the resilience of the U.S. economy, the stabilization of inflation, and MM companies' cost-cutting efforts lead us to believe downgrades have peaked (although they will probably continue to outpace upgrades for the next few quarters). The reduction in SOFR from the Fed's September rate cut, with more cuts likely to materialize, should ease the pressure on credit metrics such as interest coverage and free operating cash flow for MM issuers.
- MM CLOs continue to show the stable credit performance that has come to characterize the asset class. MM CLO credit metrics have held steady over the past several months and remain reasonably healthy, by historical standards. The average reinvesting MM CLO 'CCC' exposure was 15.32% in late September, comfortably below the typical MM CLO 'CCC' threshold of 17.50%.

Outstanding credit estimate distribution (2007–Q3 2024)*



*Encompasses all outstanding S&P Global Ratings U.S. credit estimates, including estimates for obligors not currently held within a CLO transaction. CLO- Collateralized loan obligation. Source: S&P Global Ratings.

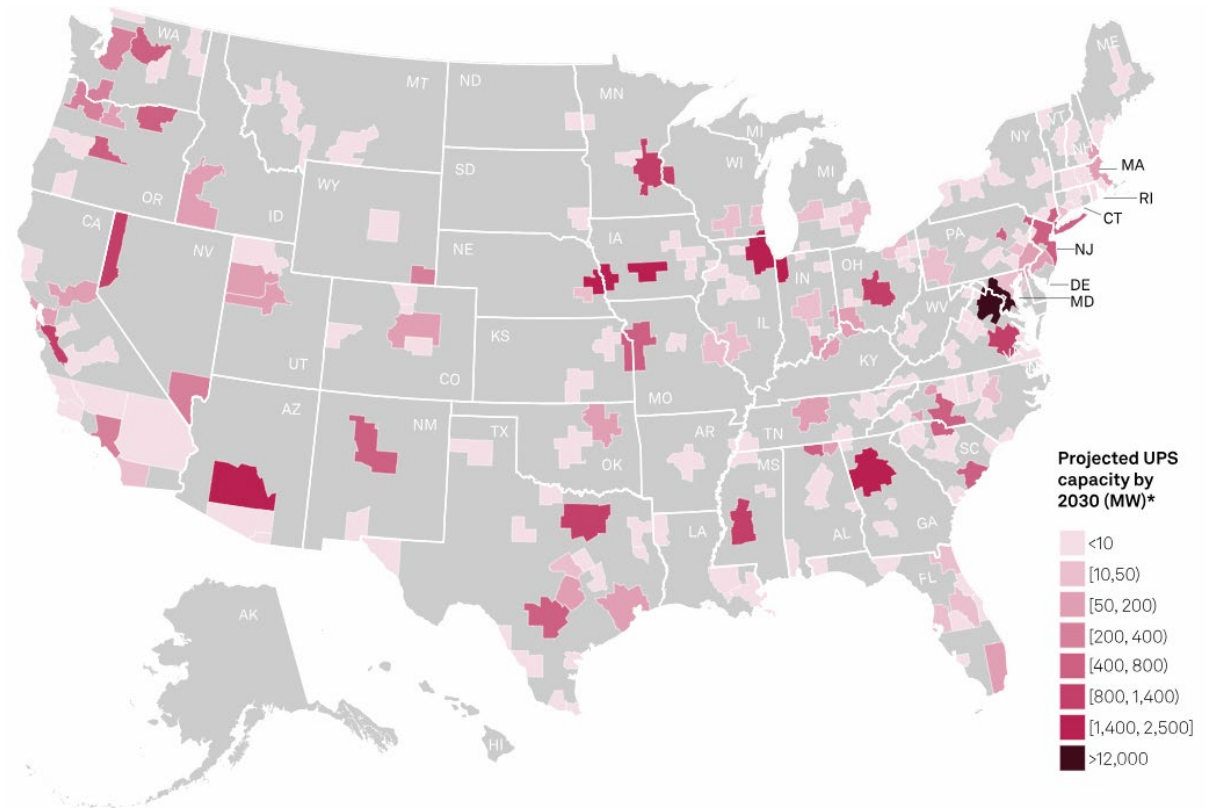
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Highlights | Data Centers: Computing Risks And Opportunities For U.S. Real Estate

- Growth potential is significant for the data center sector, with booming demand stemming from artificial intelligence and other cloud services. We expect this to support rent and overall top-line growth for U.S. data center operators.
- The surge in data center demand will create significant growth opportunities for data center entities. As projects multiply and average project sizes increase, power and water requirements, financing, tenant concentration, and cost inflation emerge as constraints. It is important to contemplate these risks when assessing the credit quality of data center owners and developers.
- Not all data center owners are the same. Credit risks differ between hyperscalers and retail/colocation leasing models. Access to energy is an increasingly important consideration. Obsolescence risk is less of a credit issue for the near and intermediate term.
- This report explores our views on the risks and opportunities in data centers and potential credit implications, regardless of financing structure. We maintain ratings on data centers across the corporate, project finance, and structured finance practices.

Significant expansion of power capacity across key U.S. markets



Data as of first-quarter 2024. Note: 41 data centers could not be accurately mapped to an MSA. As a result, about 350 MW of projected UPS capacity were not assigned to an MSA. *Projected UPS capacity is the sum of current operating UPS capacity, planned expansion to operating UPS capacity, and estimated UPS capacity of data centers in development and expected to be operational by 2030. These figures do not account for new data center construction we are unaware of, and we do not account for data center UPS capacity in Hawaii. Estimates may change as new information becomes available. UPS--Uninterruptable power supply. MSA--Metropolitan statistical area. MW--Megawatt. Sources: S&P Global Ratings, S&P Global Market Intelligence 451 Research.

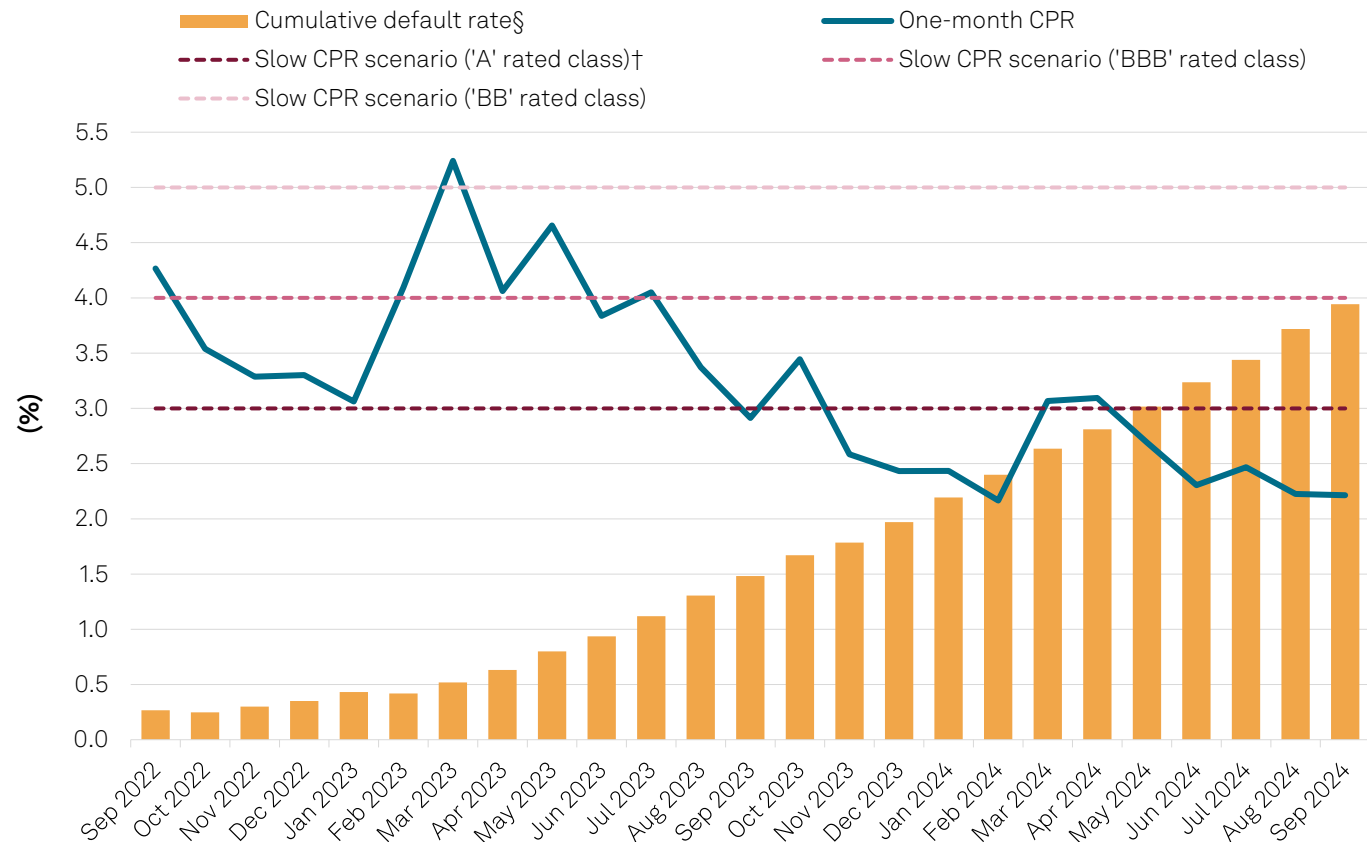
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Highlights | Solar ABS Trends: Partially Cloudy Skies

- Most solar panels are funded by loans, which in turn are often funded through securitization. Loan sizes in the U.S. vary, but the average cost is about \$30,000. Individuals who install solar panels in the U.S. are eligible for a federal tax credit of 30% of the cost of the panels.
- Often, underwriters assume the borrower will use the tax savings to prepay a large portion of their loan. That is, the initial monthly payment amount is keyed off a reduced balance that assumes an eventual partial prepayment, normally before the 18th month after origination. Should the borrower's balance not be reduced accordingly by the 18th month after origination, the loan is re-amortized to the total remaining balance, which can result in a substantial payment shock that reduces the borrower's incentive of energy-cost savings.
- In the event of a borrower default, U.S. lenders' most immediate recourse is that the solar panels can be remotely deactivated. It is often costly and time-consuming for lenders to repossess solar equipment or obtain a default judgement on the borrower. Given the uncertainty in both the timing and value of recoveries, we generally assume there will be no recoveries on defaulted loan balances.
- Default rates have accelerated for solar loans, and prepayment rates among our most-recently rated transactions have been slower than expected. In this article, we discuss the drivers of performance deterioration and the nuances of solar ABS structures, among other topics.

Weighted average solar loan pool statistics*



*Weighted averages across six solar loan ABS transactions rated by S&P Global Ratings. §Net of any recoveries. †S&P Global Ratings' slow CPR stress scenario for notes initially assigned an 'A' category rating. CPR--Conditional prepayment rate. Source: S&P Global Ratings.

[Access Article](#) >



Highlights | Home Improvement Securitization Proposals Are On The Rise

- We have observed an increase in proposals for home improvement loan ABS transactions over the last year, and we expect that the funding needs for these loans will continue to grow over the next few years.
- There are several medium- and longer-term trends driving this view. First, high interest rates and rising home prices have created a lack of affordable housing, so homeowners often choose to renovate instead of moving. Second, improvements to aging housing stock are expected to continue as new home construction takes time to add inventory.
- Alongside the increase in proposals that we've observed, the securitization market has also expanded. Per Green Street data, of the \$6 billion in issuance over 19 transactions since 2019, half of the dollar volume was priced this year, across eight deals.

Comparison of home improvement loans and personal loans

	Home improvement loans	Personal loans
Typical term	15-30 years	2-8 years
Typical loan size	\$10,000-\$20,000, but can exceed \$100,000	Less than \$10,000
Loan repayment options	Standard principal amortization and interest with deferment options	Standard principal amortization and interest
Permitting/inspection	Sometimes required	Not required
Disbursement of funds	Directly to third-party dealers/installers, not the obligor	Directly to obligor
Loan purpose	Project-specific	General

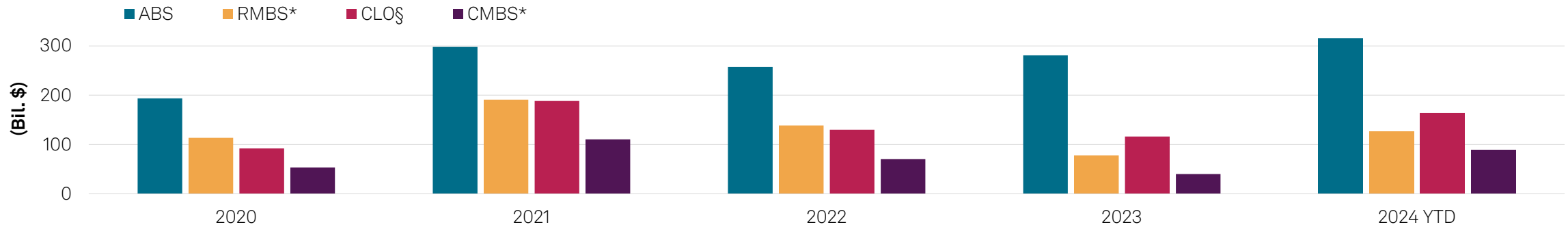
Sources: S&P Global Ratings and Green Street.

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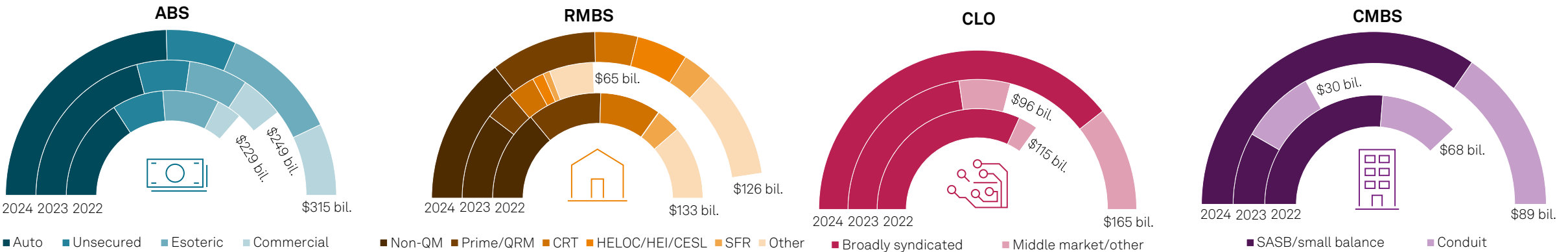


Market-Wide Structured Finance Issuance | October Was 2024's Busiest Month For ABS, RMBS, And CMBS New Issuance

Annual new issuance



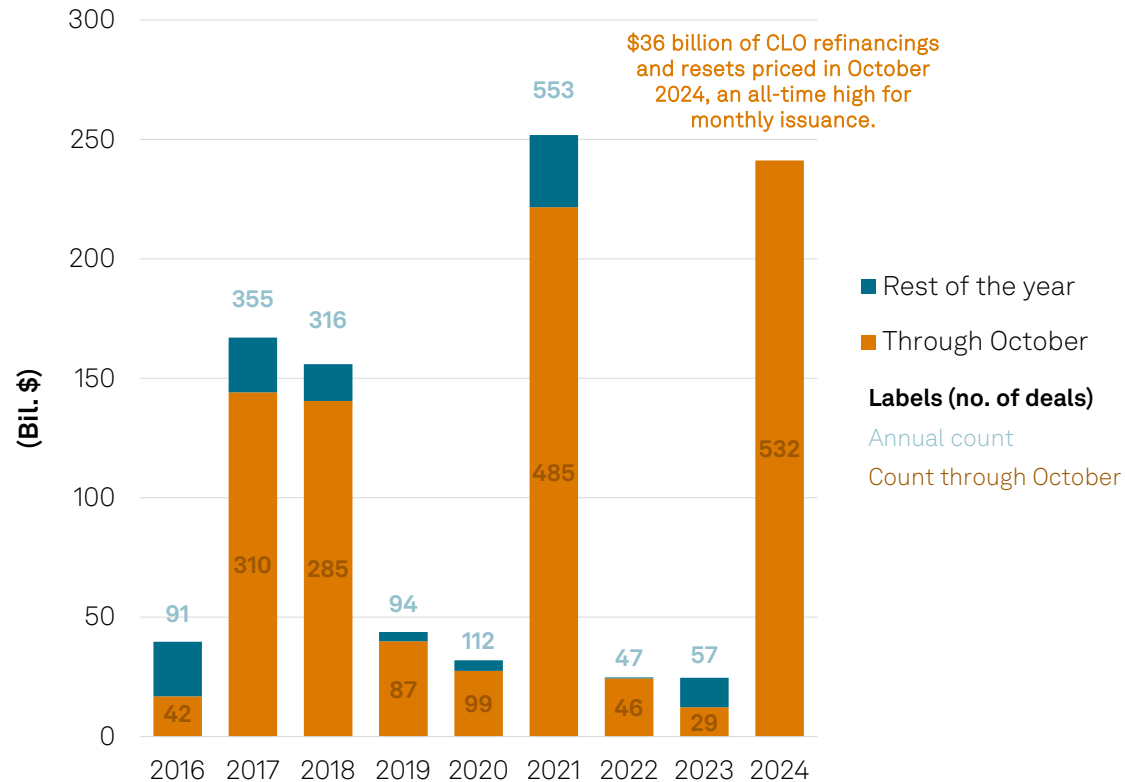
New issuance through the end of October



Note: Issuance volumes are rounded. New issuance volumes exclude CRE CLO transactions. *RMBS and CMBS issuance volumes exclude agency mortgage-backed securities. §CLO refinancing-reset volume is not considered new issuance. ABS--Asset-backed securities. RMBS--Residential mortgage-backed securities. CLO--Collateralized loan obligations. CMBS--Commercial mortgage-backed securities. YTD--Year to date. Non-QM--Non-qualified mortgage. QRM--Qualified residential mortgage. CRT--Credit risk transfer. HELOC--Home equity line of credit. HEI--Home equity investment. CESL--Closed-end second lien. SFR--Single-family rental. SASB--Single asset, single borrower. CRE--Commercial real estate. Sources: S&P Global Ratings, Intex, Pitchbook LCD, Bloomberg, and Green Street.

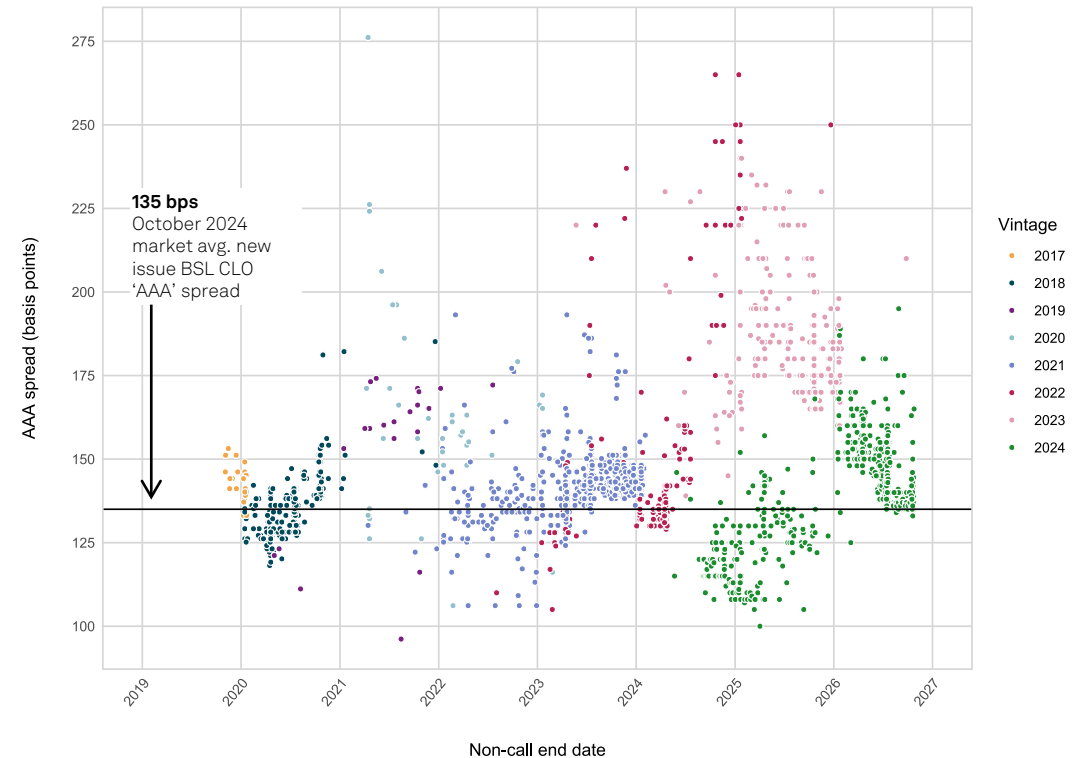
CLO Refinancings And Resets | Record Monthly Issuance In October

CLO refinance/reset issuance volume



Sources: Pitchbook LCD and S&P Global Ratings.

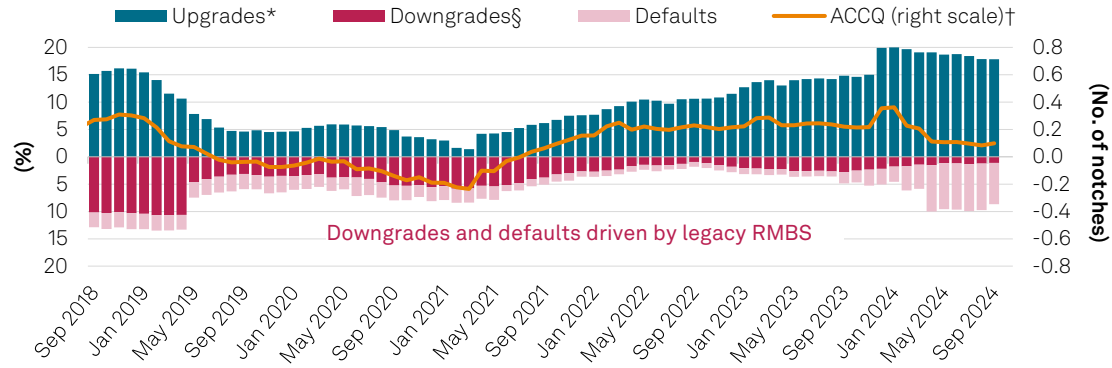
Outstanding U.S. BSL CLO 'AAA' spreads and non-call period end dates, by vintage*



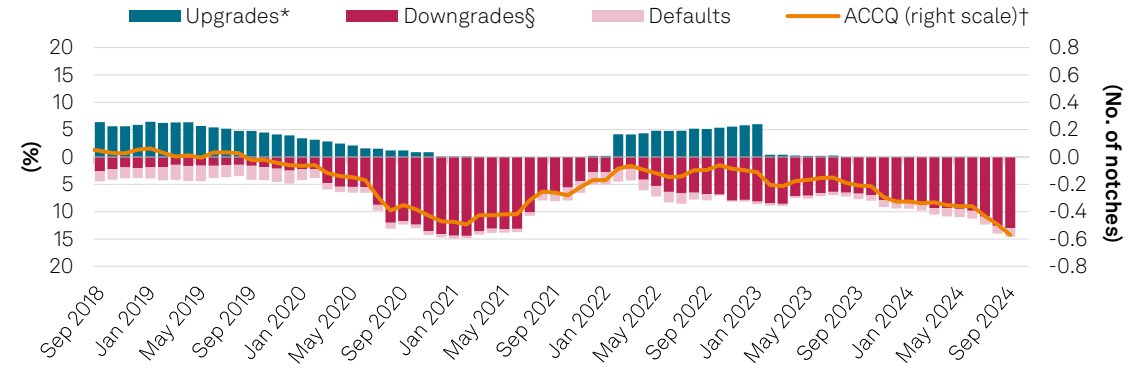
*Data as of Oct. 31, 2024. Note: The spreads of reinvesting transactions and transactions within two years of their reinvestment period end date are plotted. The spreads of transactions that have been refinanced or reset previously are plotted (vintage is adjusted to reflect most recent iteration of the CLO). BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Bps--Basis points. Sources: Pitchbook LCD and S&P Global Ratings.

Ratings Performance | Average Change In Credit Quality By Sector

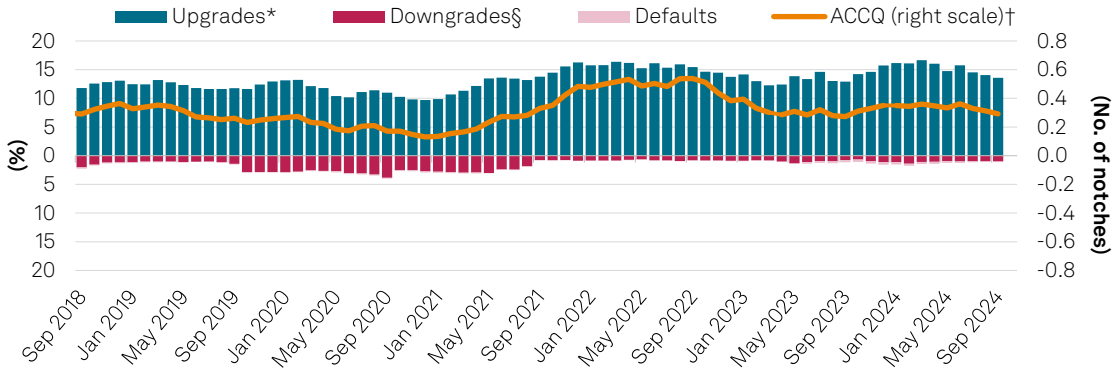
RMBS



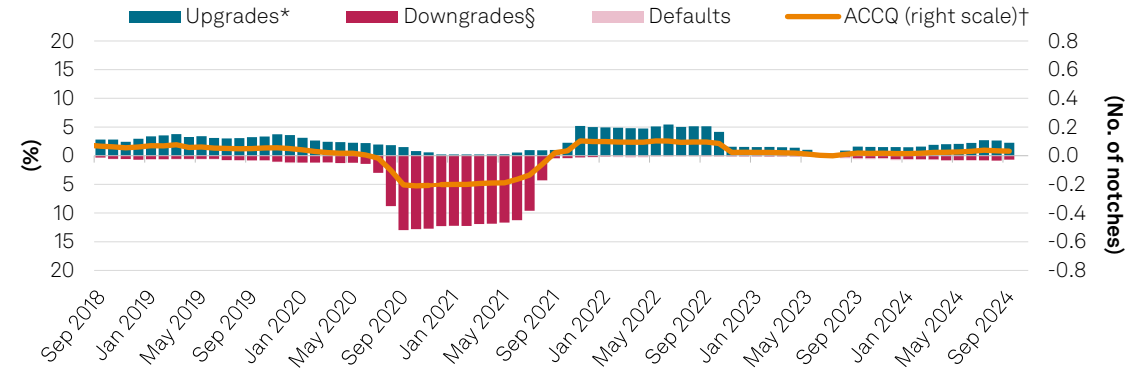
CMBS



ABS[‡]



CLO

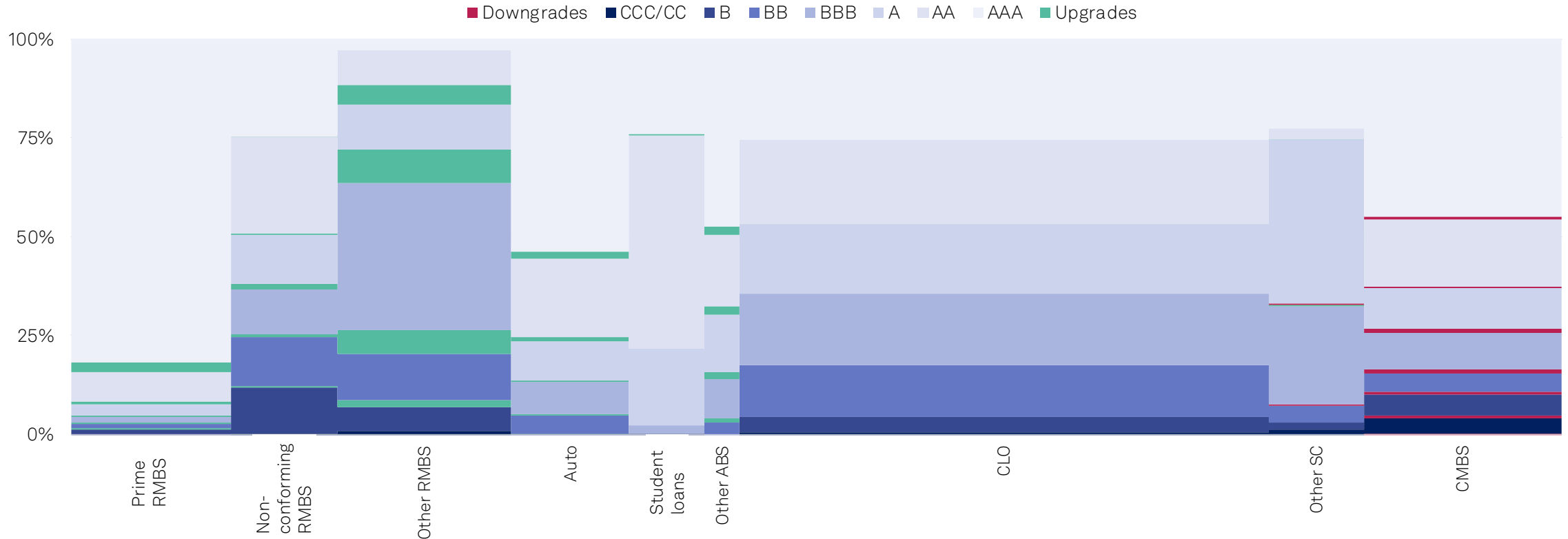


*Total number of upgrades (downgrades, defaults) divided by the total number of outstanding ratings in the sector on a trailing-12-month basis. Securities whose ratings migrated to NR over each period are classified based on their rating prior to NR.
 ‡The downgrade proportion excludes defaulted tranches. †The average number of notches by which ratings across all tranches in each sector changed on a trailing-12-month basis. §ABS includes ratings performance data from esoteric asset classes.
 RMBS--Residential mortgage-backed securities. CMBS--Commercial mortgage-backed securities. ABS--Asset-backed securities. CLO--Collateralized loan obligation. ACCQ--Average change in credit quality. NR--Not rated. Source: S&P Global Ratings.



Ratings Performance | Outstanding Ratings Heatmap

Distribution of outstanding ratings and 12-month transitions, post-GFC vintages*



*Only includes transactions first rated after 2008. Based on rating transitions over the previous 12 months as of month-end October 2024. Excludes confidential ratings. The width of each bin represents each sector's proportion of total outstanding ratings. GFC--Global financial crisis. RMBS--Residential mortgage-backed securities. ABS--Asset-backed securities. CLO--Collateralized loan obligations. SC--Structured credit. CMBS--Commercial mortgage-backed securities. Source: S&P Global Ratings.

RMBS



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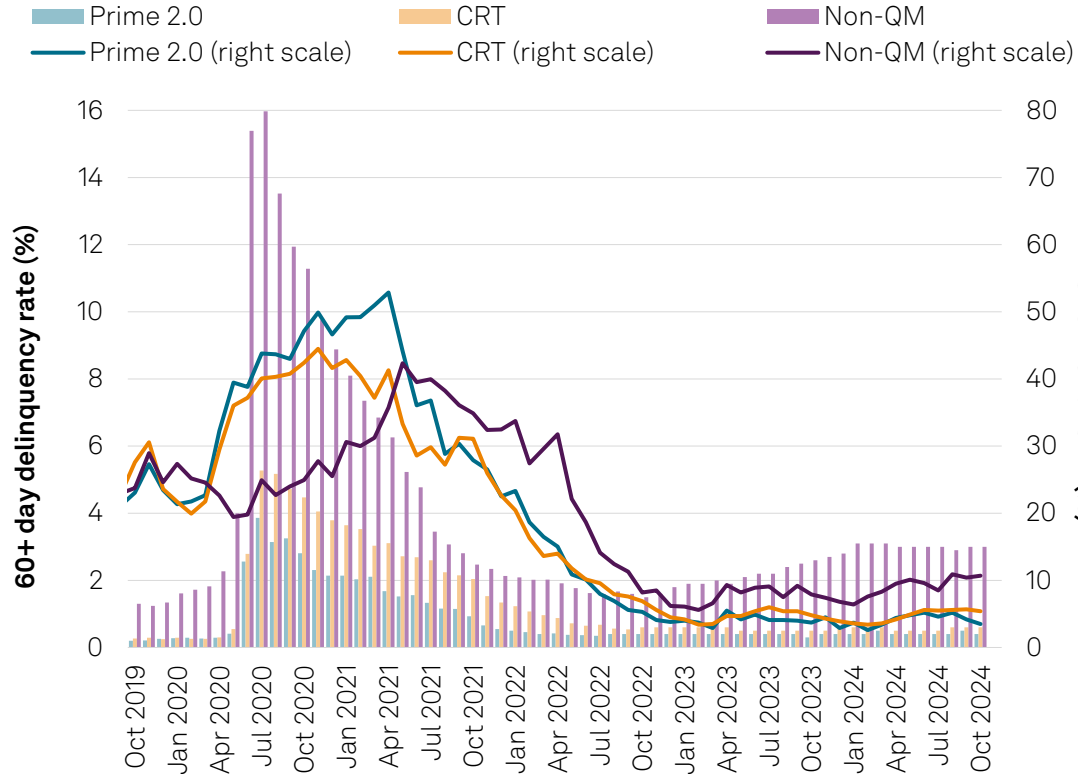


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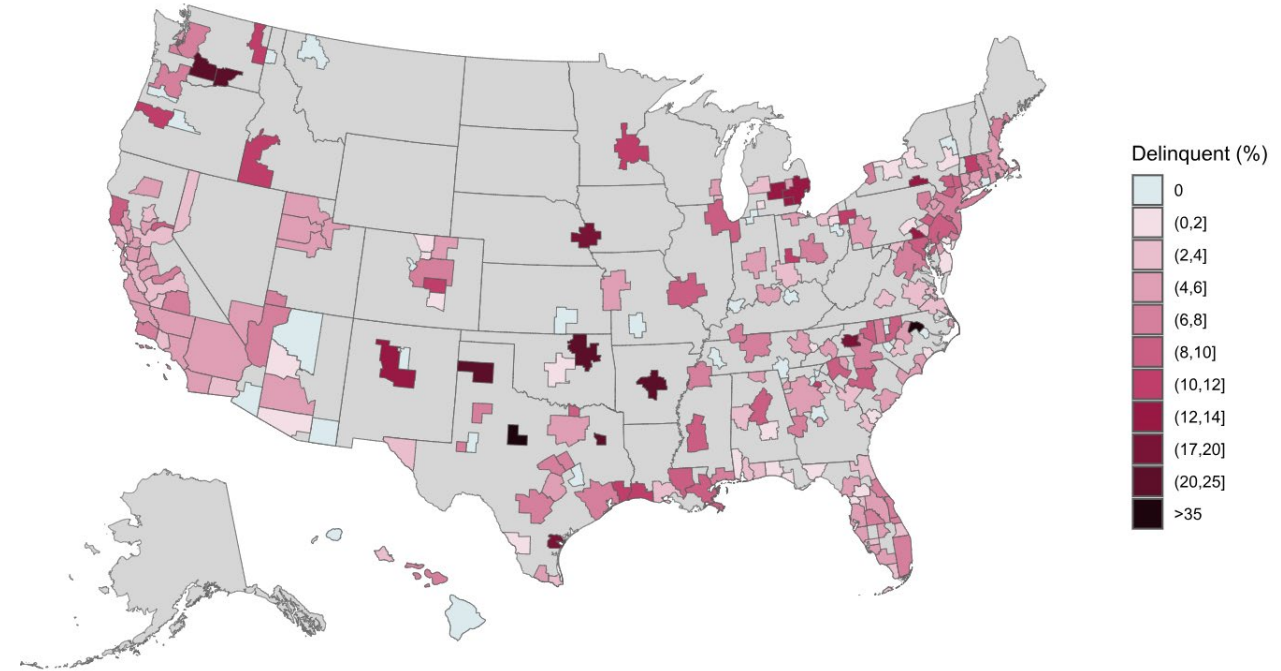
RMBS | Overall Pool Performance And Geographic Comparison Of Non-QM Delinquencies

RMBS collateral performance*



*Data as of Nov. 1, 2024. Based on loans backing RMBS transactions rated by S&P Global Ratings. RMBS--Residential mortgage-backed securities. CRT--Credit risk transfer. Non-QM--Non-qualified mortgage. CPR--Conditional prepayment rate. Source: S&P Global Ratings.

Overall non-QM delinquency rate, by CBSA*



*Based on loans backing non-QM RMBS transactions rated by S&P Global Ratings. CBSAs with less than 20 non-QM loans outstanding are excluded, and loans with delinquency data effective prior to September 2024 are excluded. Loans based within metropolitan divisions were mapped to the most proximal CBSA. Non-QM--Non-qualified mortgage. CBSA--Core-based statistical area. Source: S&P Global Ratings.

CMBS



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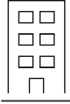
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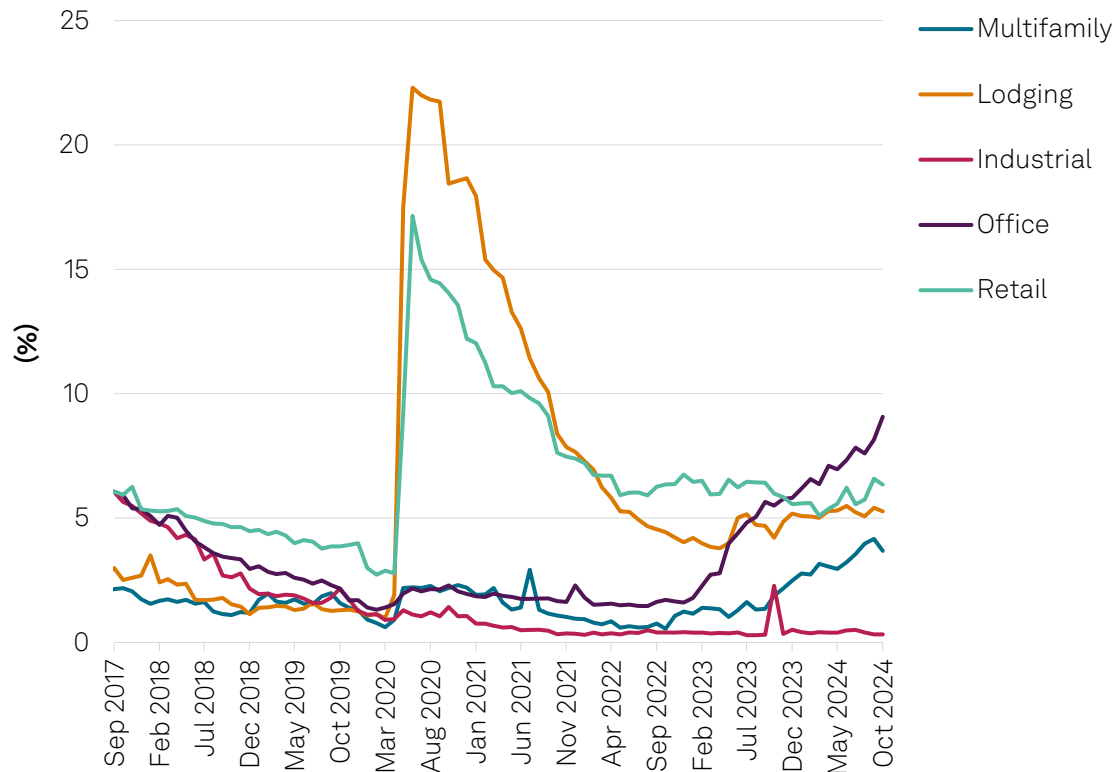
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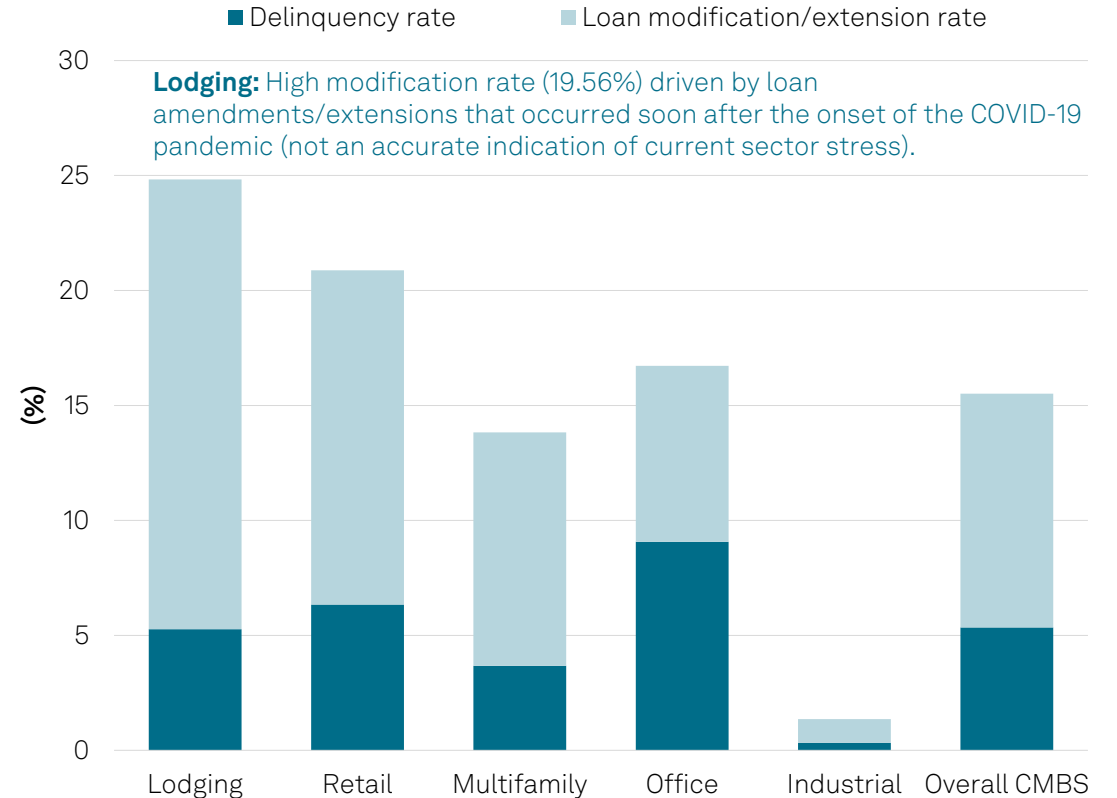
CMBS | Overall Delinquency Rate Reaches 5.3%; Office Rate Climbs Past 9%

Delinquency rate by property type



Source: S&P Global Ratings.

Delinquency and modification/extension rate by property type*



*Data as of October 2024. CMBS--Commercial mortgage-backed securities. Source: S&P Global Ratings.

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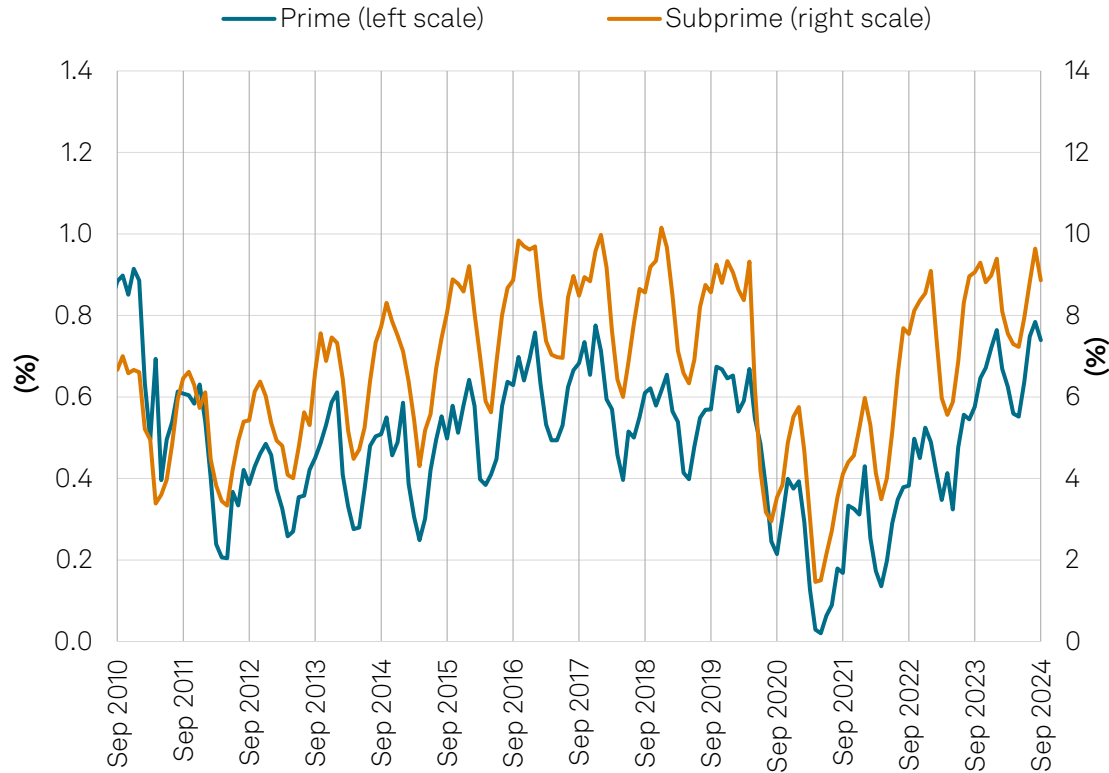
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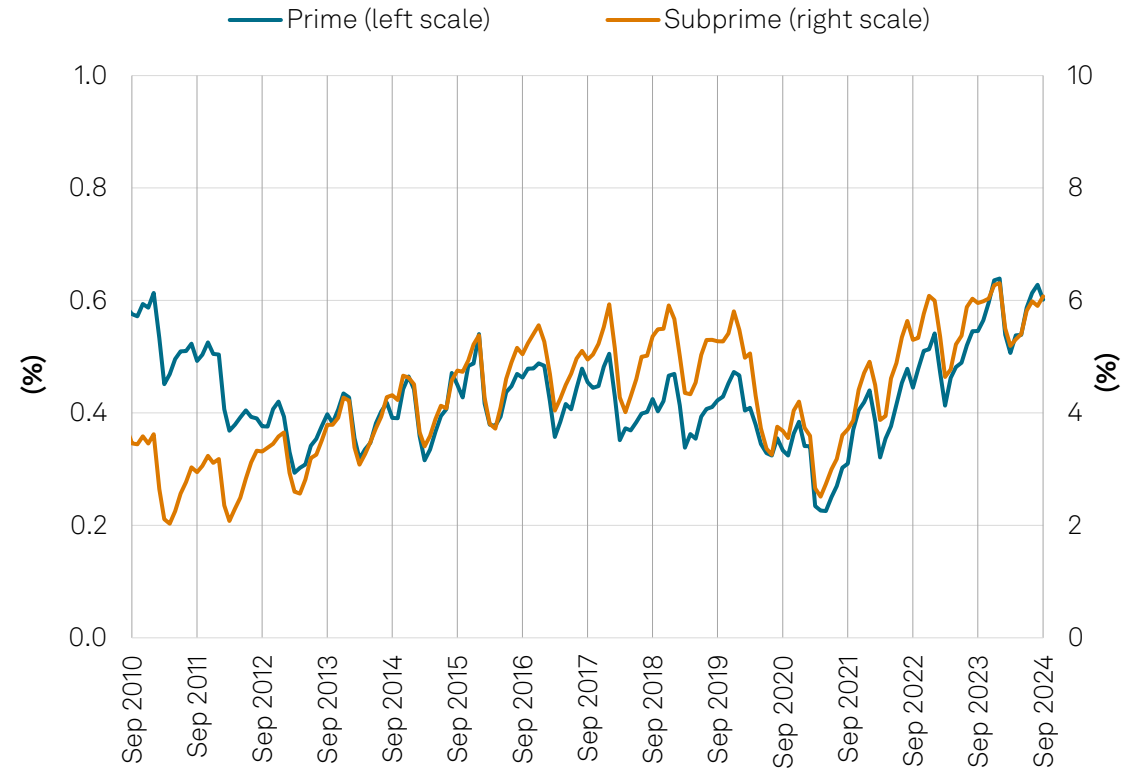
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Auto Loan ABS | Net Loss And Delinquency Rates By Credit Segment

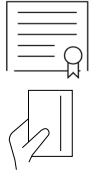
Auto loan ABS net loss rates



Auto loan ABS 60+ day delinquency rates

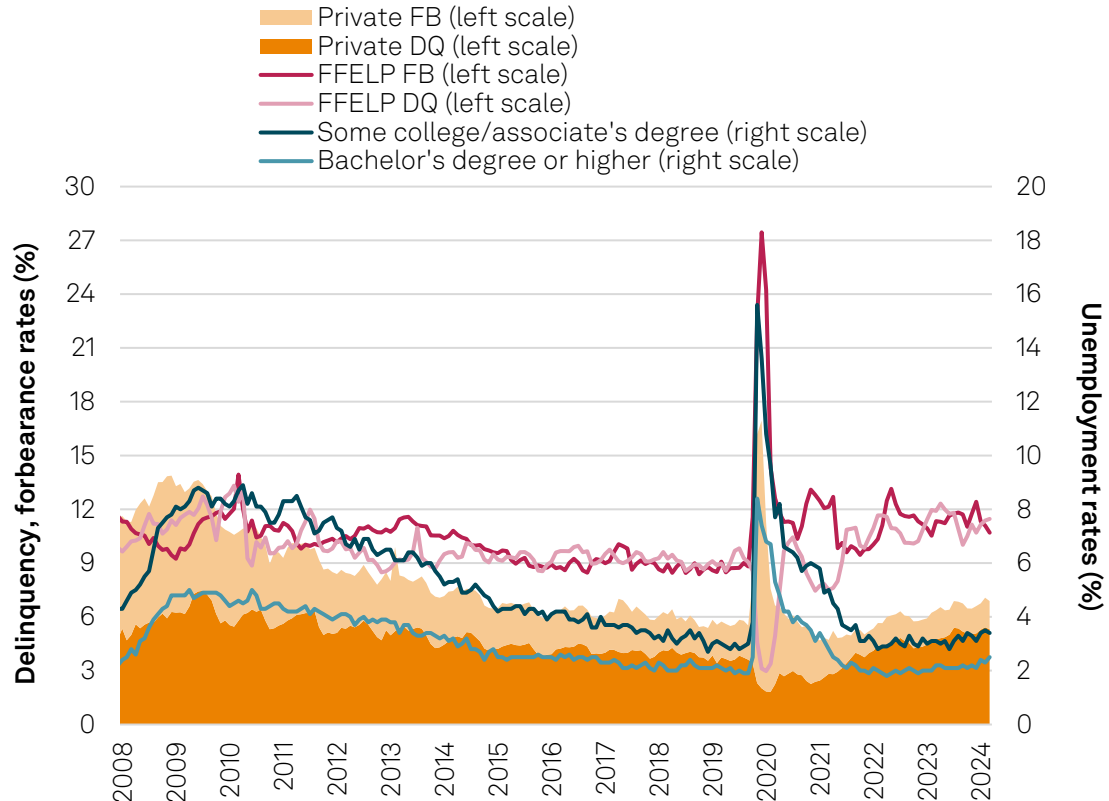


Monthly net loss rates are annualized. ABS--Asset-backed securities. Source: S&P Global Ratings.



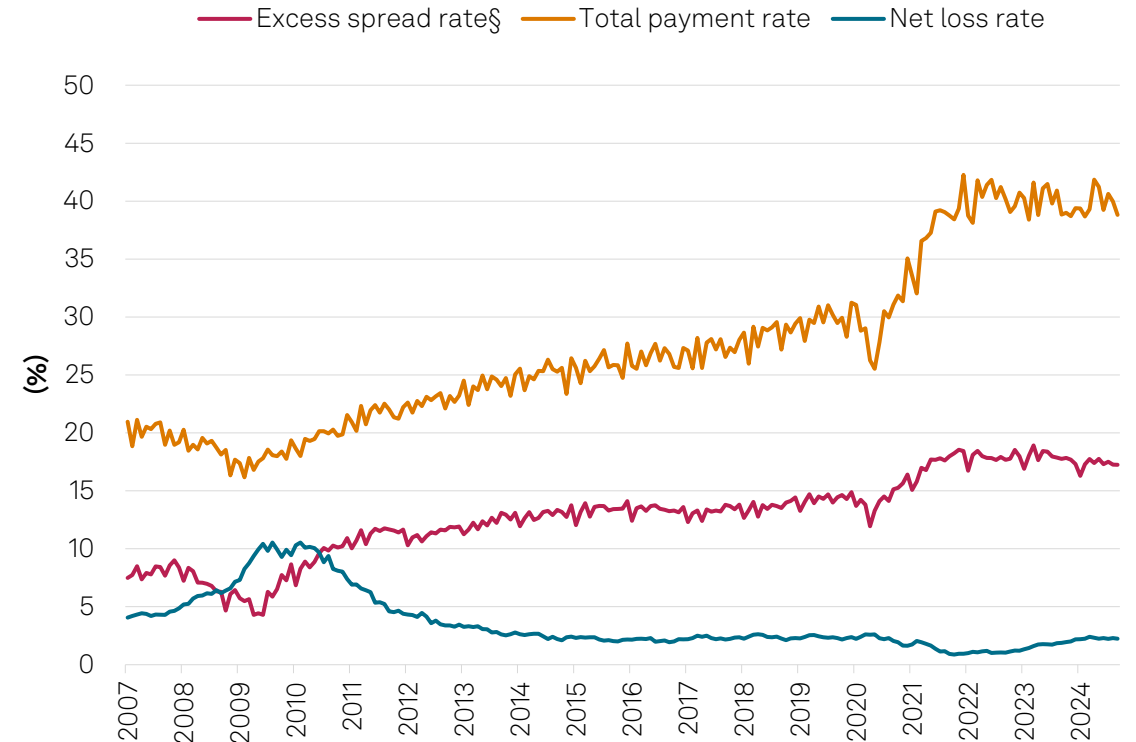
Student Loan And Credit Card ABS | Collateral Performance Overview

Unemployment by education vs. delinquency, forbearance rates*



*Data as of August 2024. Forbearance and delinquency data are derived only from student loan ABS transactions rated by S&P Global Ratings that provide monthly pool performance statistics. FB-- Forbearance. DQ--Delinquency. FFELP--Federal Family Educational Loan Program. Sources: U.S. Bureau of Labor Statistics and S&P Global Ratings.

Bankcard Credit Card Quality Index*



*Data as of September 2024. Based on credit card ABS transactions rated by S&P Global Ratings. §Yield minus base funding rate minus charge-off rate. Monthly net loss rates and excess spread rates are annualized. Source: S&P Global Ratings.

Esoteric ABS



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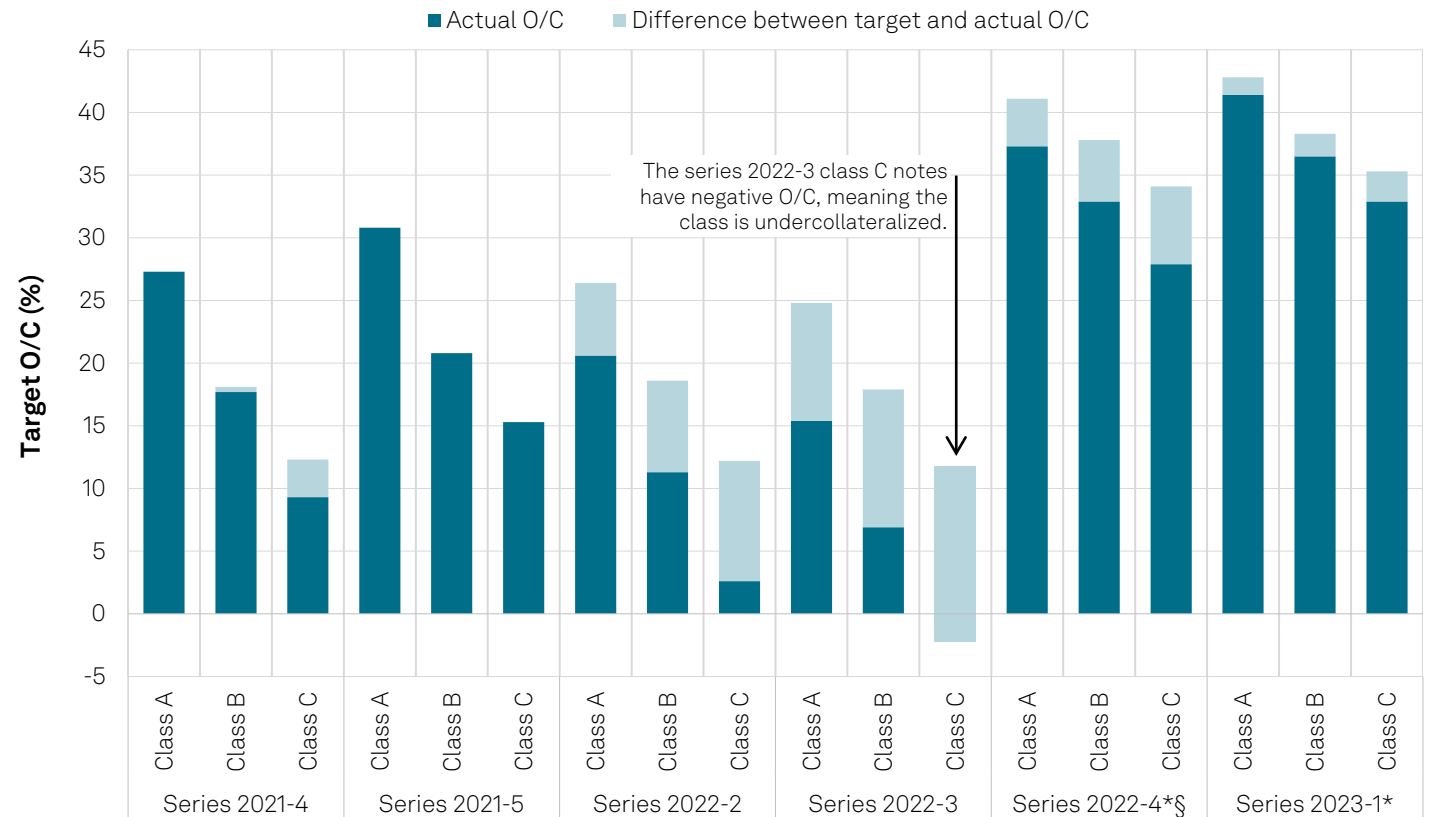
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✈️ Esoteric ABS | Recent Rating Actions On GoodLeap Solar ABS Transactions

- On October 18, we reviewed 16 ratings from six GoodLeap Sustainable Home Solutions solar ABS transactions, whose assets consist primarily of residential solar loans, along with some non-solar home energy efficiency loans. Of the 16 ratings, we downgraded five and affirmed 11.
- Solar loan ABS deals commonly have negative excess spread. Therefore, a portion of the assets' principal proceeds is often used to pay interest on the notes. This means that faster prepayment rates tend to contribute positively to overall credit enhancement, while the opposite is true of slower prepayment speeds. In our initial rating analysis, we considered a range of possible prepayment scenarios, from 3% to 20% conditional prepayment rates. Actual prepayment rates over the last 18 months have been near or even below the lower limits of that range.
- Along with the slower-than-anticipated prepayments, these transactions appear to be experiencing defaults at a higher level than our base-case assumptions, and even higher than some of the rating stress scenarios considered at the time of issuance.
- The rating changes and affirmations are driven by our assessment of each transaction's performance under a range of scenarios. We will continue to review whether the ratings are consistent with the credit enhancement available to support the notes.

GoodLeap Sustainable Home Solutions Trust specified O/C levels



[Access Rating Action Release](#) ➔

All data as of September 2024 payment distribution date. *Series 2022-4 and series 2023-1 calculate their O/C levels inclusive of the YSOC balance. This explains why target O/C is higher for these series. §S&P Global Ratings calculated the values shown for series 2022-4 in a manner consistent with other data provided in the servicer report. O/C--Overcollateralization. YSOC--Yield supplement overcollateralization. Source: S&P Global Ratings.

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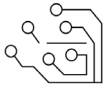
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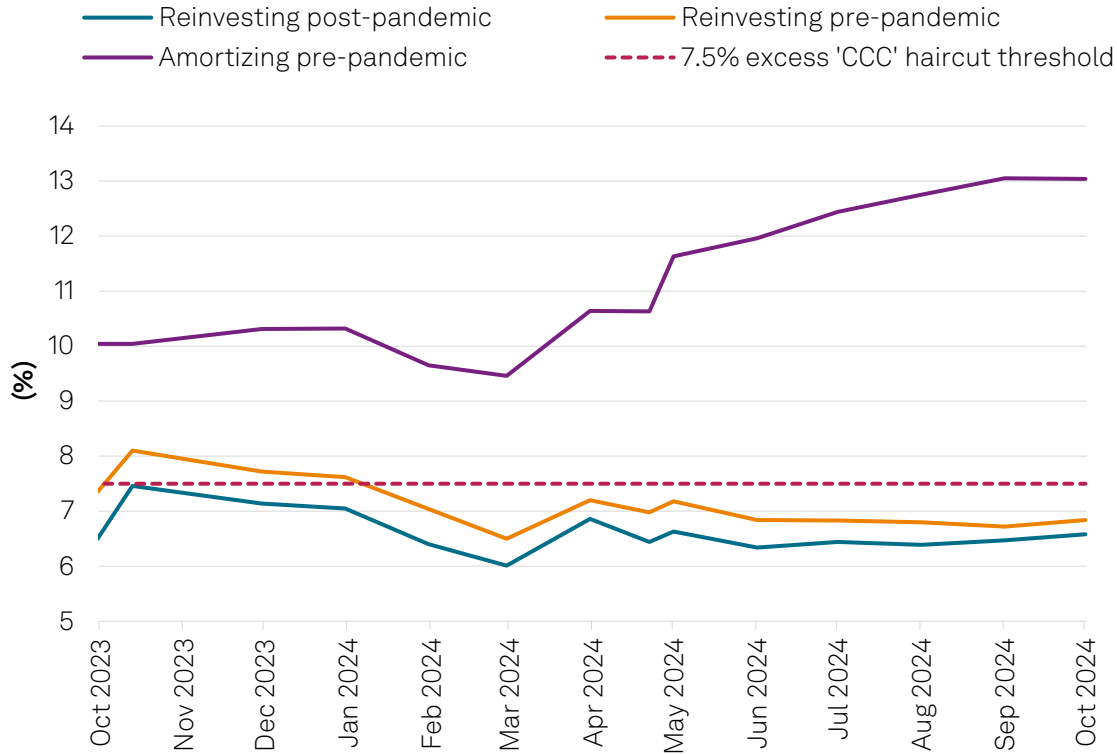
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CLO | 'CCC' Exposure Remains Tempered For Reinvesting Deals; Overcollateralization Test Haircuts Continue Falling

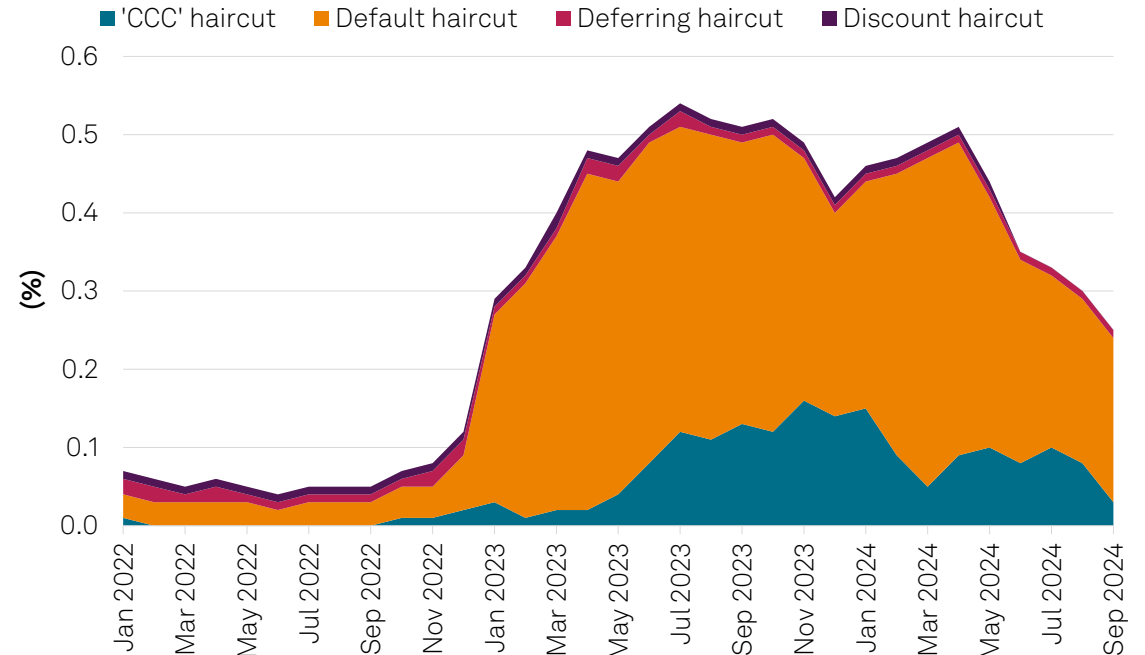
'CCC' exposure across U.S. BSL CLO Insights Index*



*Dataset is derived from transactions included in our U.S. BSL CLO Insights Index. 'CCC' exposures represent derived opinion (not ratings) on the as-of date of the dataset. Derived opinion is an input determined by S&P Global Ratings for inclusion in CDO Evaluator. September and October 2024 datapoints are in progress and based on the most recent portfolio statistics available to us. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings' [U.S. CLO Insights dashboard](#).

Average O/C haircut metrics for reinvesting U.S. BSL CLOs

Despite the decline in O/C test haircuts, O/C test cushions across our index of reinvesting transactions still fell by 0.74% on average, to 3.84% from 4.58% a year ago. This was driven mostly by par loss of 0.71% across the CLO portfolios over the same period.



O/C--Overcollateralization. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

ABCP/ Muni-Structured



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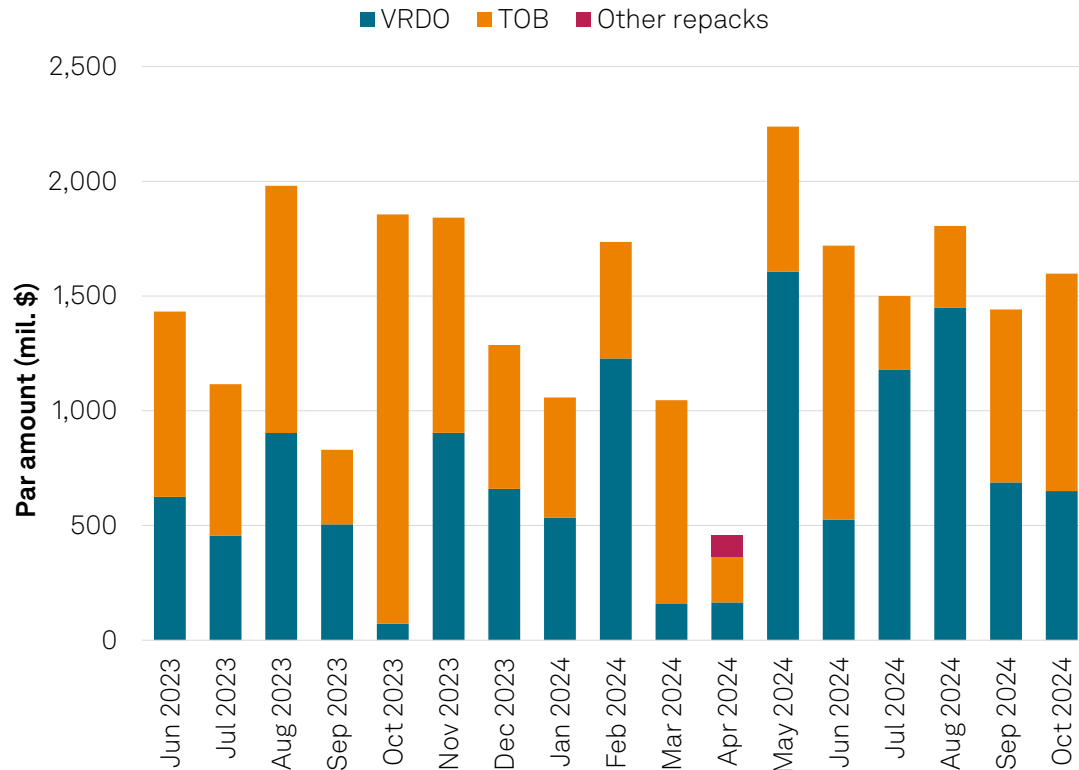
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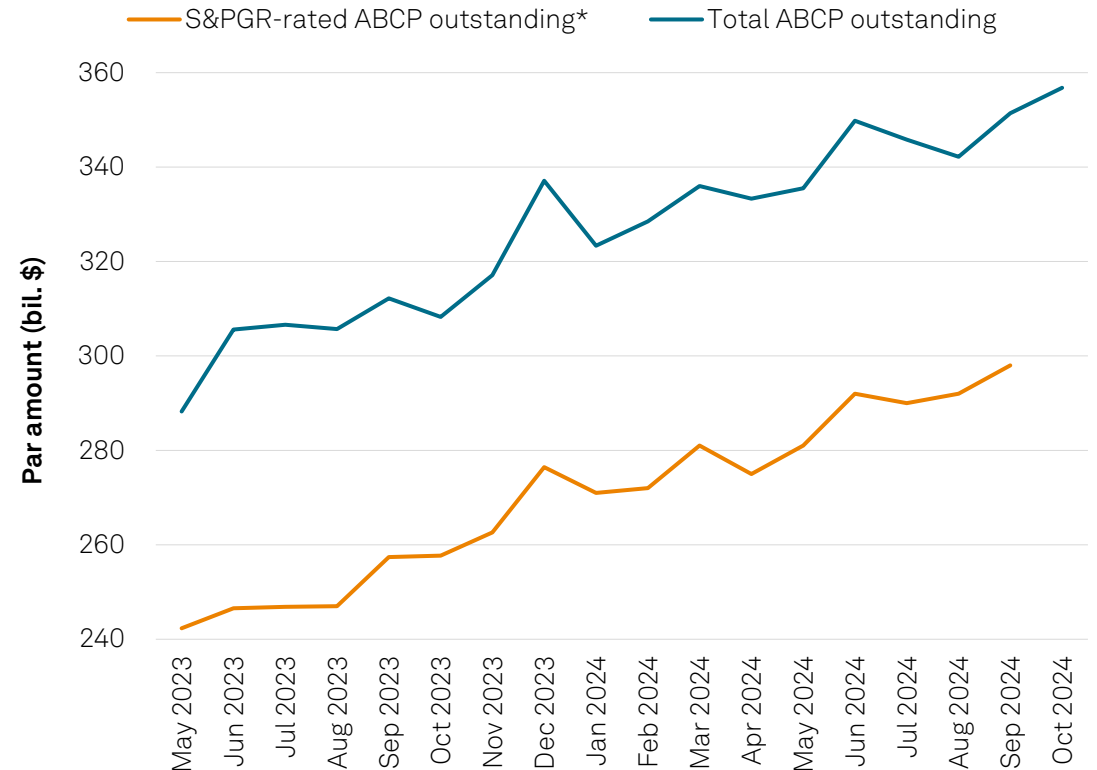
ABCP Muni-Structured | New Issuance And Outstanding Amounts

S&PGR-rated short-term variable-rate municipal issuance



S&PGR--S&P Global Ratings. VRDO--Variable rate demand obligation. TOB--Tender option bond. Source: S&P Global Ratings.

ABCP outstanding



*Data through September 2024. ABCP--Asset-backed commercial paper. S&PGR--S&P Global Ratings. Sources: S&P Global Ratings and U.S. Federal Reserve.



Recent Research

Sector	Publications
RMBS	U.S. RMBS Newsletter: October 2024
	U.S. Home Price Overvaluation Ticks Up As Wage Growth Lags Home Price Gains
	Credit FAQ: Understanding The Proposed Changes To Our U.S. RMBS Criteria
CMBS	SF Credit Brief: U.S. CMBS Delinquency Rate Rose 10 Bps To 5.3% In October 2024; Office Rate Surged Past 9.0%
	U.S. CMBS Update Q3 2024: Issuance Remains Robust Despite Accelerated Office Downgrades
ABS	Credit FAQ: U.S. Student Loan ABS Cash Flow Modeling Examples
Esoteric ABS	ABS Frontiers: Digging Our Way To Fiber Securitizations
	ABS Frontiers: The Credit DNA Of Synthetic Risk Transfer Securitizations
	Structured Finance Esoteric Quarterly Roundup: Q4 2024
CLO	U.S. BSL CLO And Leveraged Finance Quarterly: Cautious Optimism, But Still A Credit Picker's Market (Q4 2024)
	Scenario Analysis: Stress Tests Show U.S. BSL CLO Ratings Able To Withstand Significant Loan Defaults And Downgrades
ABCP/Muni-Structured	U.S. Brief: Hurricane Milton And Extraordinary Optional Municipal Bond Redemptions

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