

# U.S. Structured Finance Chart Book: May 2024

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May 9, 2024

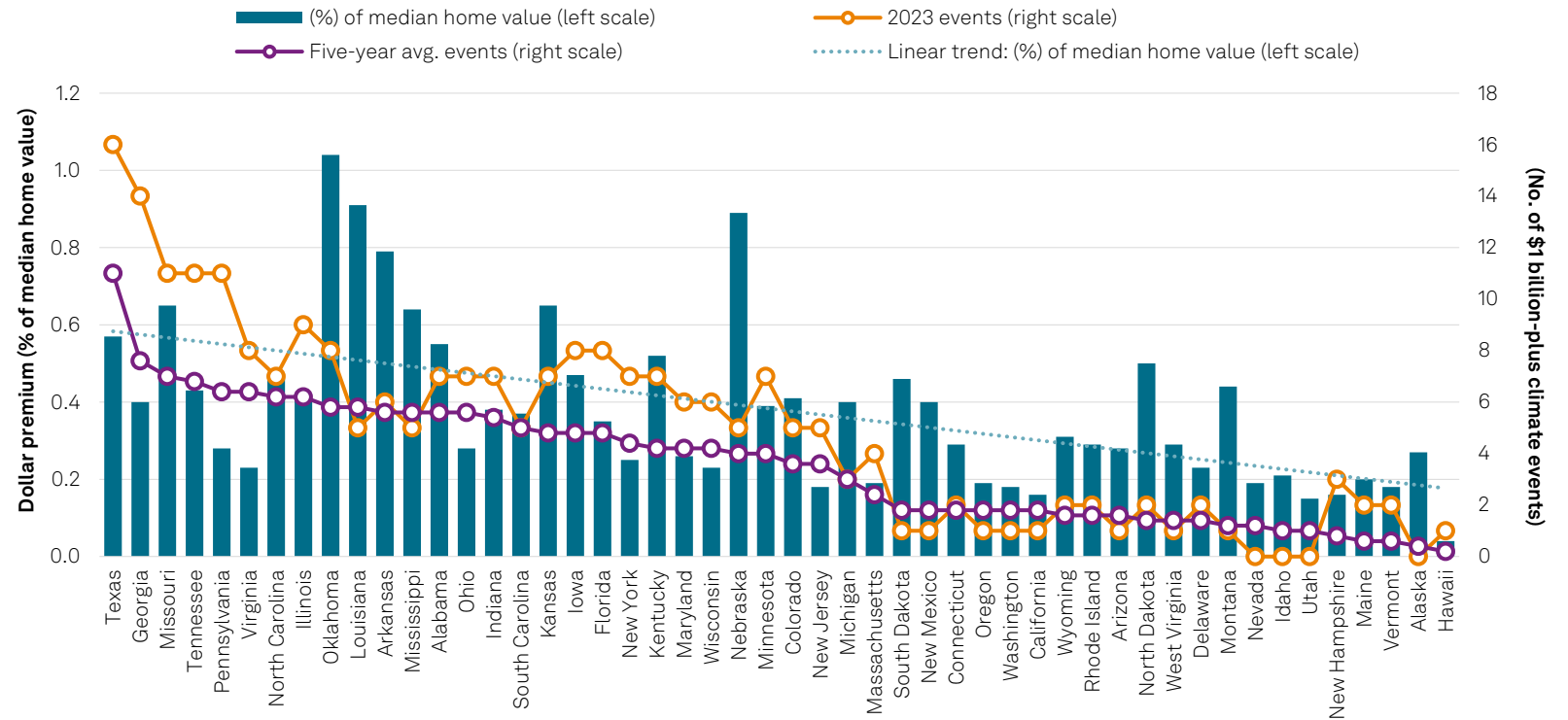




# Highlights | The Impact Of Rising Insurance Premiums On U.S. Housing

- The trend of rising home insurance premiums is familiar to housing market participants; however, the home price impact associated with this increasing cost is not well understood. There is substantial regional variability in home insurance costs, driven in part by the extent to which land itself contributes to the overall value of the property.
- Assuming borrowers have a limited tolerance for increases in total monthly costs, a scenario analysis involving shocks to typical insurance premiums indicates that a homeowner with a fixed-rate mortgage could effectively wind up with an implied adjustable-rate feature.
- Assuming that future excess insurance premium payments are incorporated into current home values, one could expect as much as a 10% discount on prices if one expects premiums to rise 20% annually for the next 20 years.

## State-level insurance premium and billion-dollar loss comparison



The average insurance premium is based on a \$350,000 dwelling coverage normalized to the median dwelling value per state. The dwelling value is based on the median home value of each state and the average cost to build a home. Source: The median home value is sourced from IHS Markit as of fourth-quarter 2023. The average insurance premium and the average cost to build a home per state are sourced from "The Average Home Insurance Cost For April 2024," Forbes, published April 1, 2024, and "How Much Does It Cost To Build A House?" Forbes, published Dec. 22, 2023. The number of climate events are sourced from the National Oceanic and Atmospheric Administration.

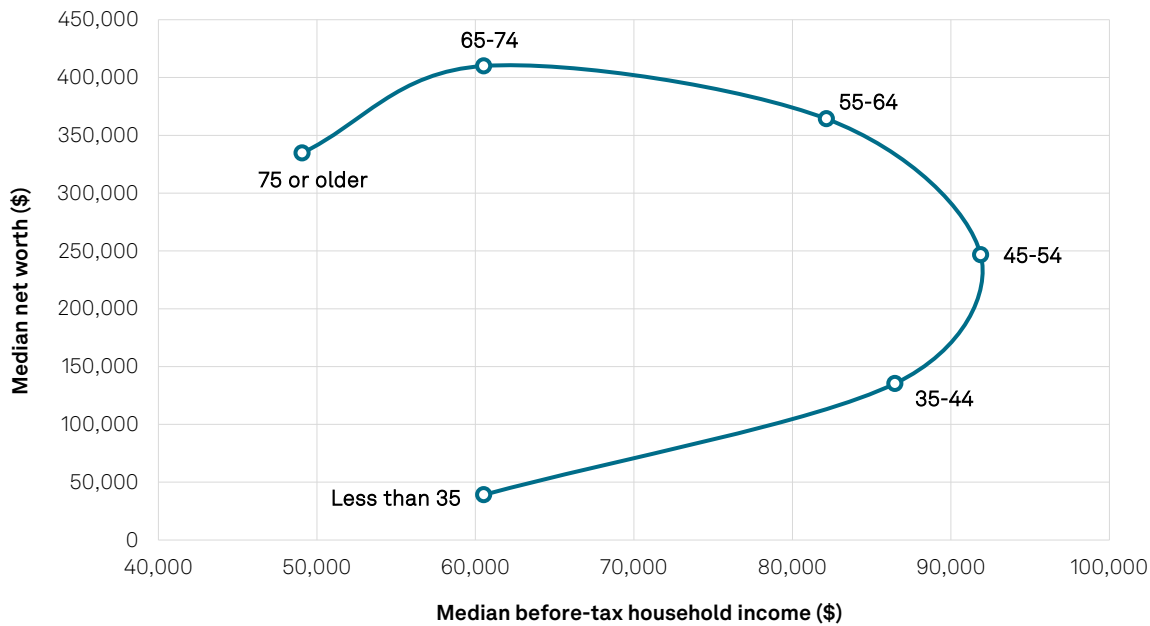
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# Highlights | Demand Could Grow For Reverse Mortgage Securitization

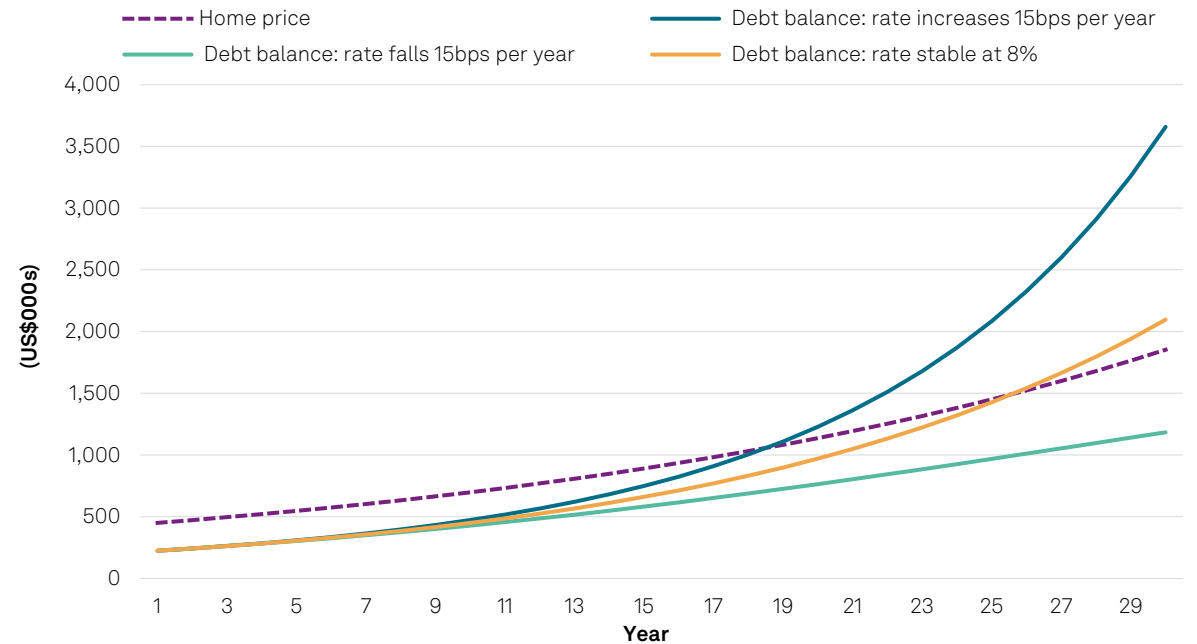
- Typically, as people age beyond their mid-50s, net worth increases while income decreases.
- Many regions (e.g., Japan, Italy) have aging populations. Reverse (or equity release) mortgages allow asset-rich/cash-poor individuals to tap their home equity.
- Depending on the path of interest rates and home prices, reverse mortgages can present risks to homeowners and lenders.

## Annual income and net worth by age cohort



Data as of 2022. Source: U.S. Federal Reserve.

## Lump sum reverse mortgage crossover point by rate path



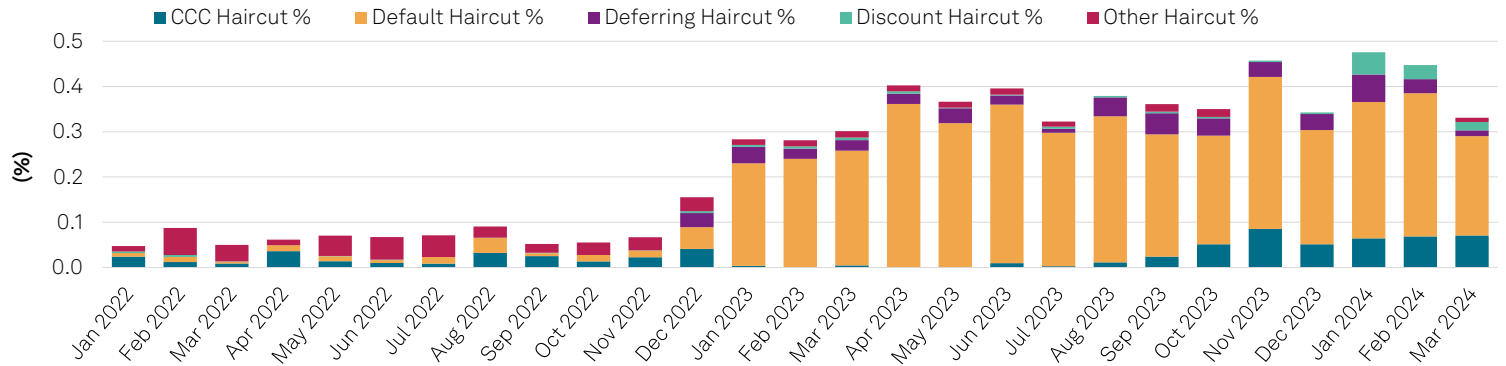
HPA—Home price appreciation. Analysis assumes a beginning home price of \$450,000, 5% annual HPA, a base annual coupon rate of 8%, and a 50% loan-to-value ratio. Source: S&P Global Ratings.



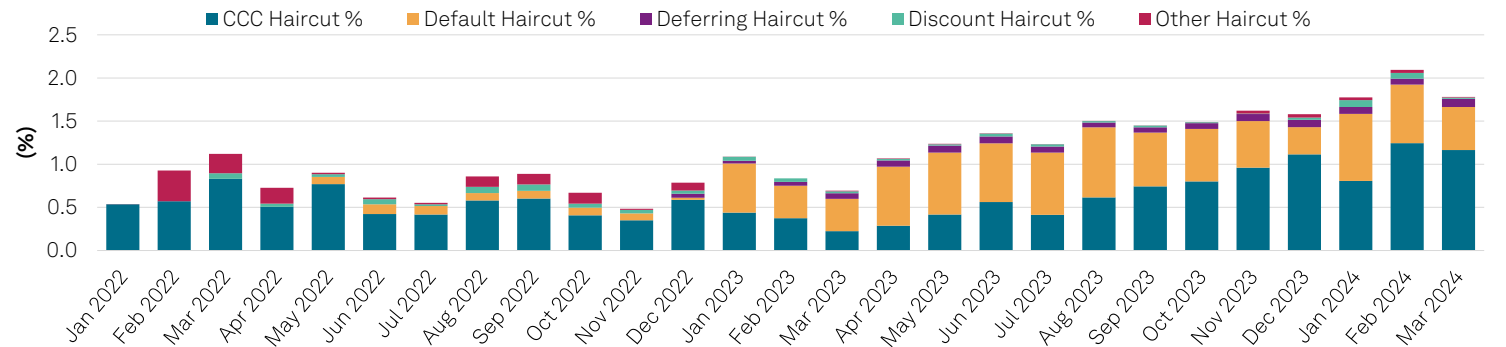
# Highlights | Private Credit And Middle-Market CLO Quarterly: Not A Sunset, Just An Eclipse

- Middle-market (MM) CLO issuance has been robust this year, but it hasn't yet reached the 35% of total U.S. CLO issuance that many market participants had been expecting in late 2023, largely because broadly syndicated loan (BSL) CLO issuance has been so strong.
- The step increase in benchmark rates and higher debt servicing costs continued to drive MM obligor credit estimate downgrades in first-quarter 2024. However, MM CLO credit metrics maintained remarkable stability--exposure to 'CCC' assets was little changed (15.47% in March versus 15.59% at the start of 2024). This leaves the average MM CLO with some cushion before breaching the typical excess 'CCC' asset threshold of 17.5%.
- Overcollateralization (O/C) test cushions across reinvesting U.S. MM CLOs declined slightly over the past 12 months, but most transactions still had a significant cushion (avg. of 6.62%) at the end of the first quarter.
- Despite the higher average haircuts, the junior O/C cushions for amortizing transactions are higher than reinvesting transactions due to senior note paydowns.

Average O/C test haircut for reinvesting U.S. MM CLOs



Average O/C test haircut for amortizing U.S. MM CLOs



O/C—Overcollateralization. MM—Middle-market. Source: S&P Global Ratings.

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# Highlights | U.S. CMBS Update Q1 2024: Office Performance And Interest Rates Are Still Driving The Conversation

- The U.S. commercial mortgage-backed securities (CMBS) overall delinquency and special servicing rates continued to trend upward in first-quarter 2024, largely driven by the office sector. Property type exposures in conduits and single-borrower transactions have largely mirrored market credit concerns.
- The pace of issuance increased significantly year over year, with \$18 billion issued in first-quarter 2024. Conduit issuance remained steady at \$6 billion, while single-asset single-borrower (SASB) issuance rose approximately 70% to \$12 billion, largely due to several large industrial transactions. Conduit transactions have also featured lower leverage levels over the past five quarters, though the offerings have been smaller and more concentrated.
- We declined to give preliminary rating feedback on most of the single-borrower offerings priced in the first quarter due to debt service coverage constraints, based on our cash flow analysis and current SOFR levels.

## Summary of S&P Global Ratings-reviewed SASB CMBS

	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Trend
No. of transactions reviewed	20.0	6.0	8.0	3.0	5.0	6.0	8.0	9.0	6.0	
No. of transactions rated	5.0	2.0	2.0	2.0	2.0	1.0	2.0	5.0	2.0	
Average deal size (mil. \$)	615.0	1740.0	841.0	450.0	712.0	628.0	598.0	547.0	762.0	
SPGR LTV (%)	128.7	108.2	107.1	93.2	75.1	87.3	86.8	80.2	90.4	
SPGR capitalization rate (%)	7.8	8.4	7.8	7.1	8.4	8.0	7.7	8.4	8.3	
SPGR NCF haircut (%)	-15.4	-19.1	-16.7	-11.9	-14.1	-13.1	-14.4	-13.5	-15.9	
SPGR value variance (%)	-45.9	-45.5	-41.5	-44.5	-34.6	-32.6	-36.1	-32.7	-32.4	
Primary markets (%)	62.2	54.1	37.1	53.7	27.2	60.1	75.0	39.5	65.3	
Secondary markets (%)	24.9	40.3	26.1	24.5	35.8	27.7	6.7	44.6	17.6	
Tertiary markets (%)	12.9	5.6	36.8	21.7	37.0	12.2	18.3	15.9	17.1	
Fixed rate (%)	21.0	0.0	0.0	0.0	60.0	50.0	75.0	44.4	33.3	
Floating rate (%)	79.0	100.0	100.0	100.0	40.0	50.0	25.0	55.6	66.7	

Apart from average deal size, the statistics within this table reflect only those transactions that we reviewed. CMBS--Commercial mortgage-backed securities. SASB--Single-asset single borrower. LTV--Loan-to-value. NCF--Net cash flow. Source: S&P Global Ratings.

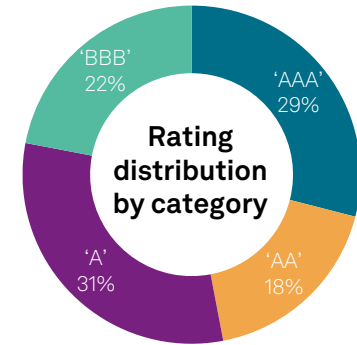
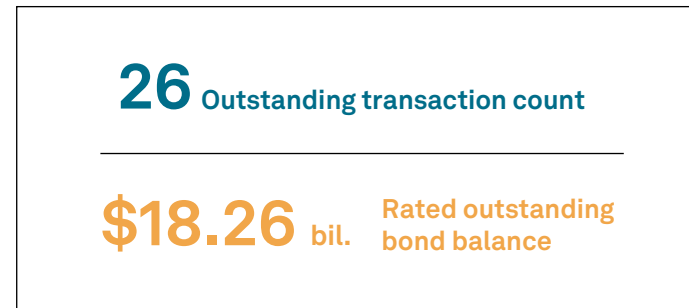
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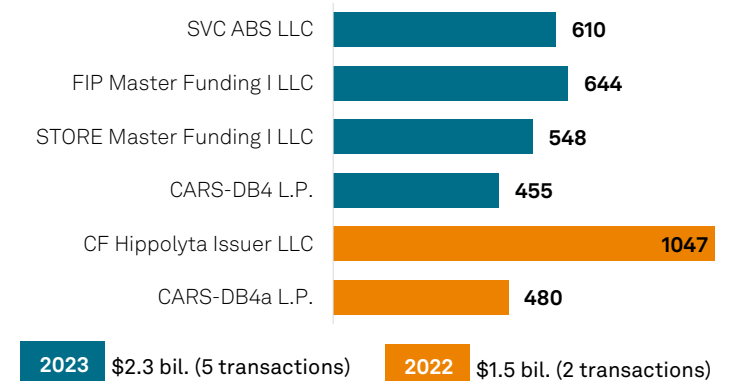
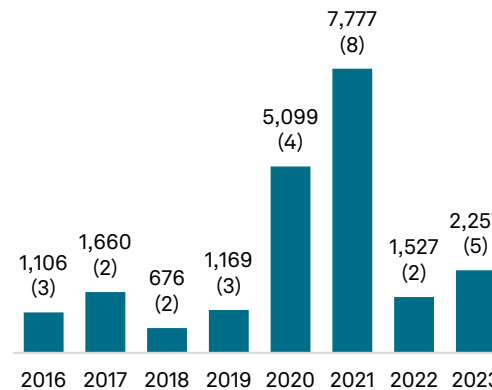
# Highlights | North America Triple-Net Lease ABS Newsletter

- We rated five new triple-net lease (NNN) ABS transactions in 2023 totaling \$2.3 billion.
- Throughout 2023, we took various rating actions on our rated North American NNN ABS, including 14 upgrades, 19 downgrades, and 60 affirmations. The rating actions were largely related to the implementation of our updated criteria, "[Criteria: North American Real Estate Securitizations Backed By Triple-Net Leases: Methodology And Assumptions](#)," published Aug. 24, 2023.
- Delinquencies and vacancies increased in 2023 in some portfolios, which we partially attribute to tenant bankruptcies and consumers cutting back on discretionary spending. We expect the trend to continue into 2024.
- Despite lower collections, debt service coverage ratios in most transactions remain well above performance triggers.

## U.S. triple-net lease ABS at a glance



### New issuance (mil. \$, no. of transactions)



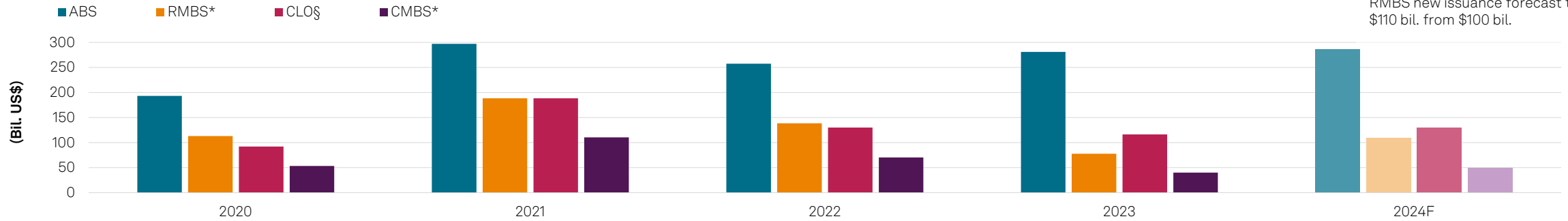
Data as of February 2024 payment date. Source: S&P Global Ratings.

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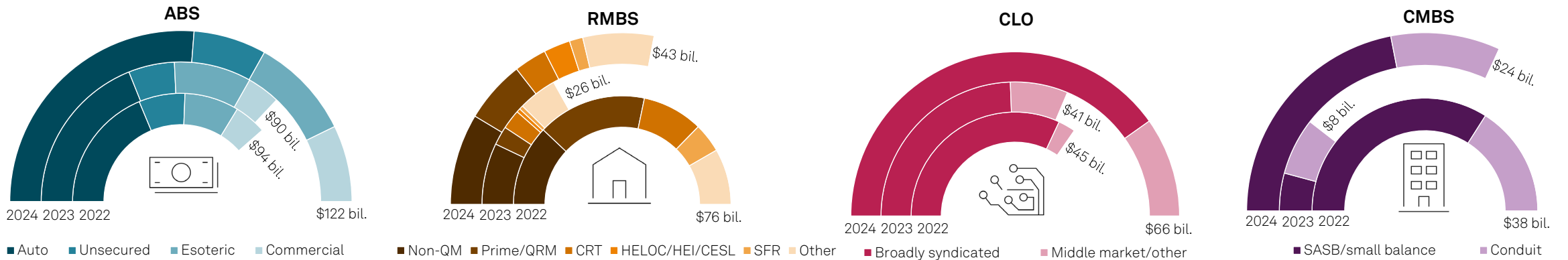
# Market-Wide Structured Finance Issuance

## Annual new issuance



**RMBS**  
We increased our 2024 private-label RMBS new issuance forecast to \$110 bil. from \$100 bil.

## New issuance through end of April

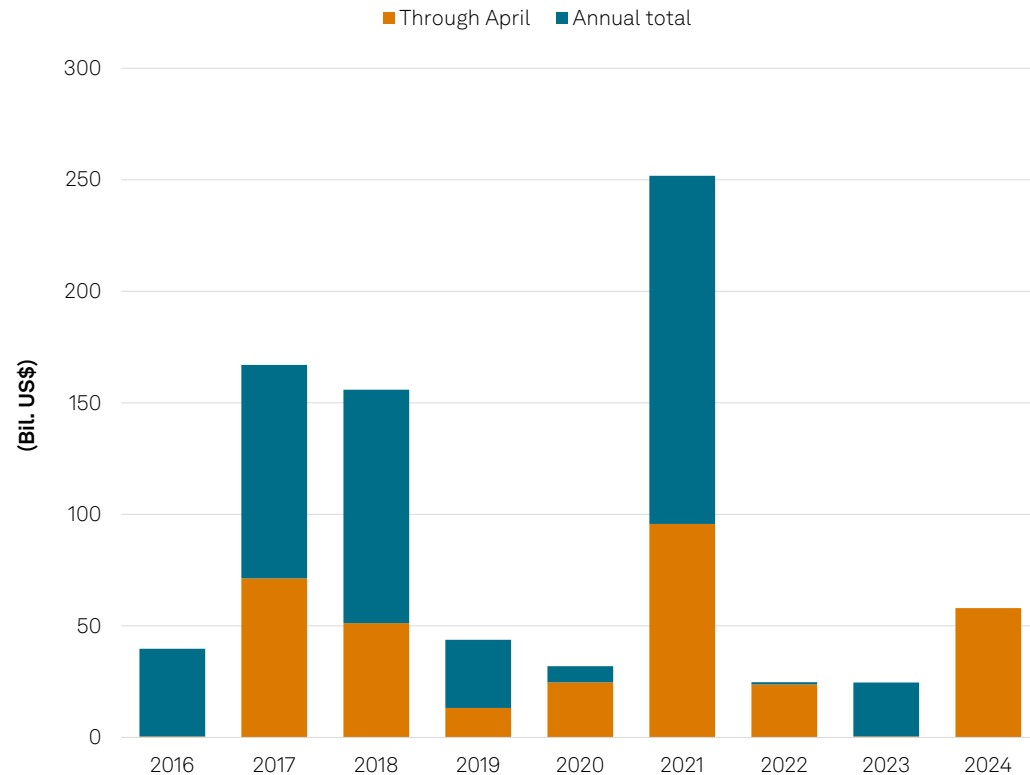


Issuance volumes are rounded. New issuance volumes exclude CRE CLO transactions. \*CMBS and RMBS issuance volumes exclude agency mortgage-backed securities. §CLO refinancing-reset volume is not considered new issuance. Non-QM—Non-qualified mortgage. QRM—Qualified residential mortgage. F—Forecast. CRT—Credit 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. Sources: S&P Global Ratings, Bloomberg, and Green Street.



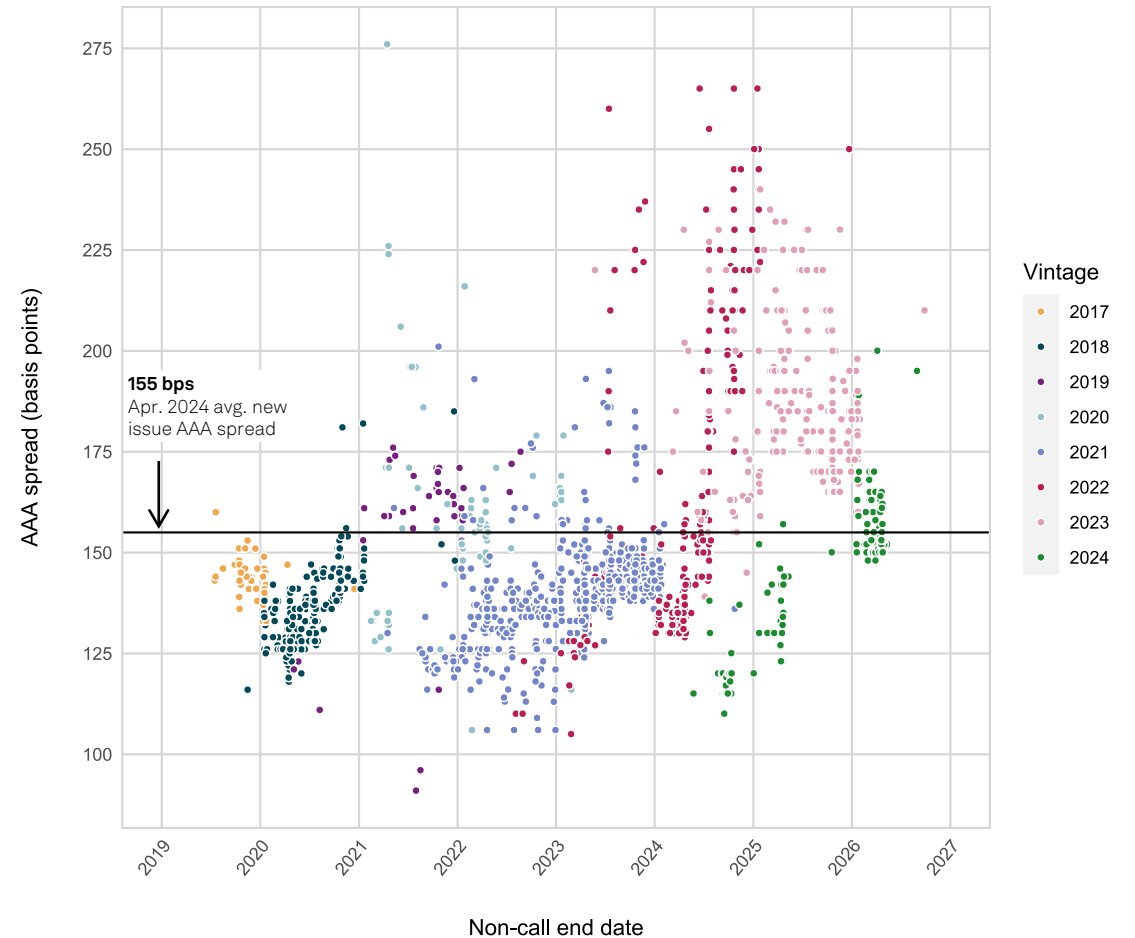
# CLO Refinance/Reset Activity Picking Up Speed

## CLO refinance/reset issuance volume



Source: Pitchbook LCD.

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

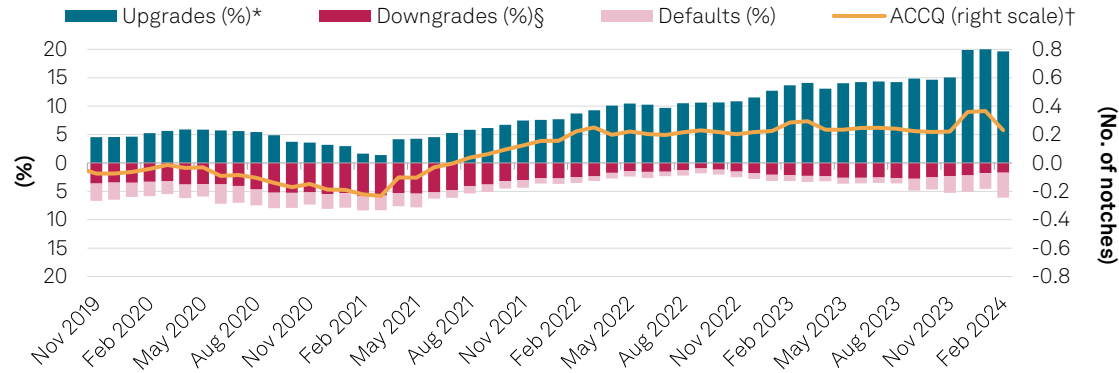


The spreads of reinvesting transactions and transactions within two years of their reinvestment period end date are plotted. The spreads of transactions that have already refinanced or reset previously are plotted. Sources: Pitchbook LCD and S&P Global Ratings.

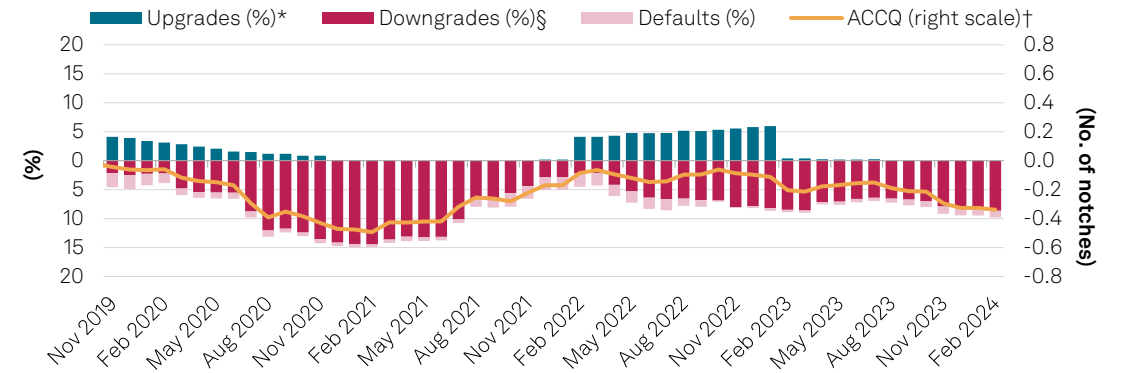


# Ratings Performance | Average Change In Credit Quality By Sector

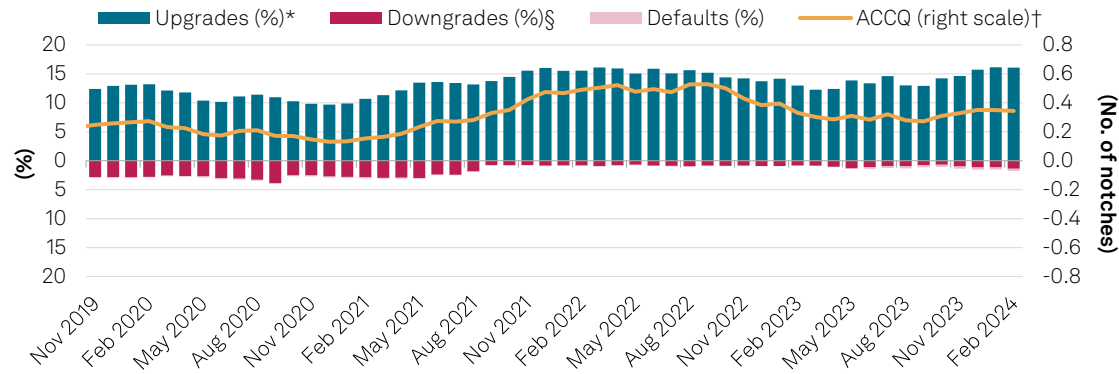
## RMBS



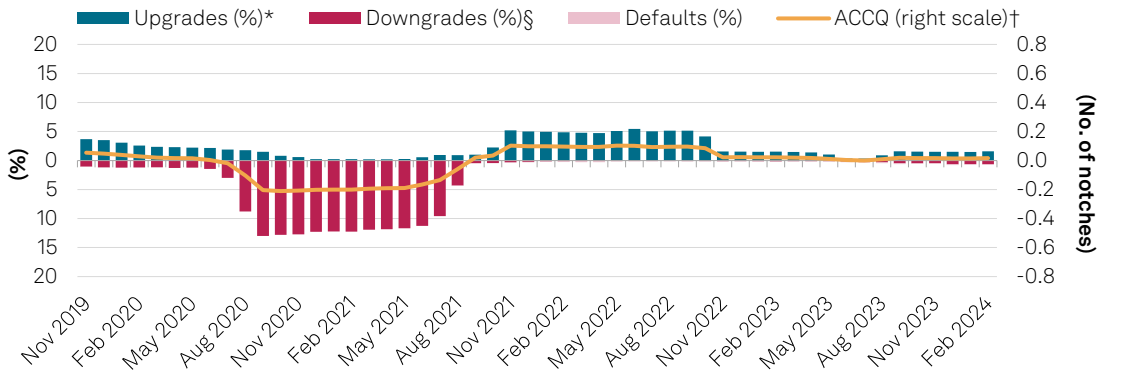
## CMBS



## ABS‡



## CLO

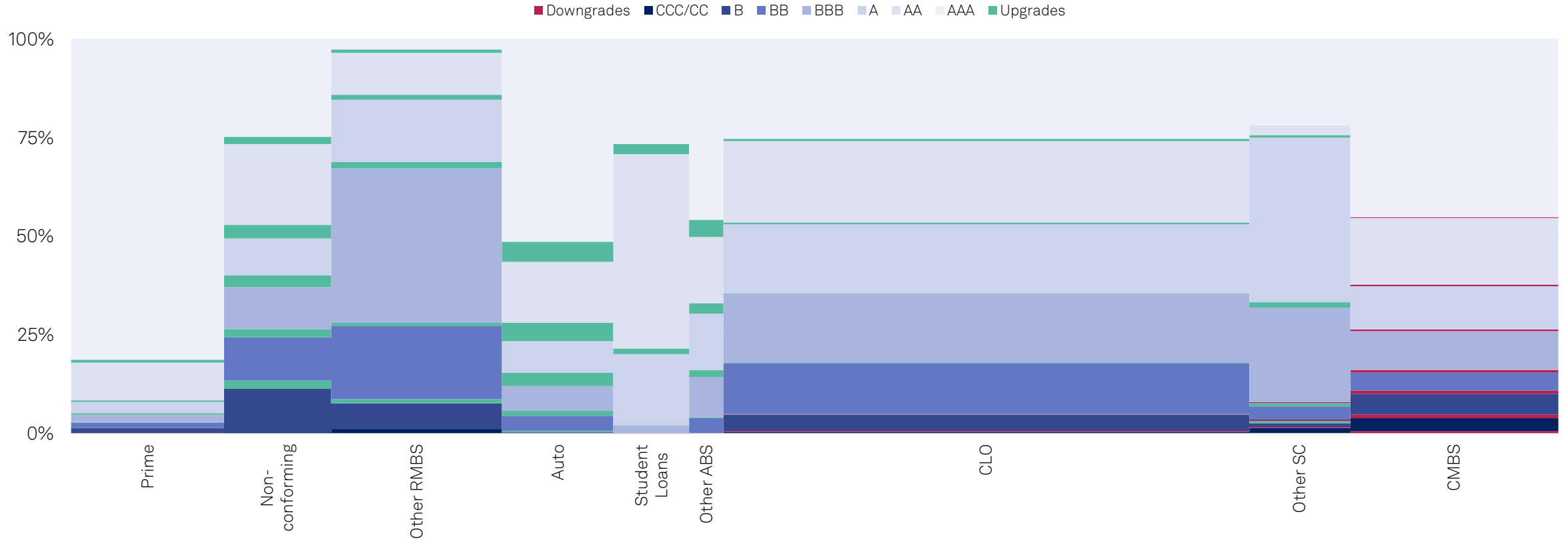


\*Total number of upgrades (downgrades, defaults) divided by the total number of outstanding ratings in the sector on a trailing 12-month basis. Securities whose ratings migrated to NR over the sample period are classified based on their rating prior to NR.  
 ‡The downgrade proportion excludes defaulted 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.  
 ACCQ—Average change in credit quality. NR—Not rated. Source: S&P Global Ratings Credit Research and Insights.



# Ratings Performance | Outstanding Ratings Heatmap

Distribution of ratings and 12-month rating transitions: post-GFC vintages



Only includes transactions first rated after 2008. Based on rating transitions over the previous 12 months as of end-April 2024. Excludes confidential ratings. GFC--Global Financial Crisis. SC--Structured credit. Source: S&P Global Ratings.

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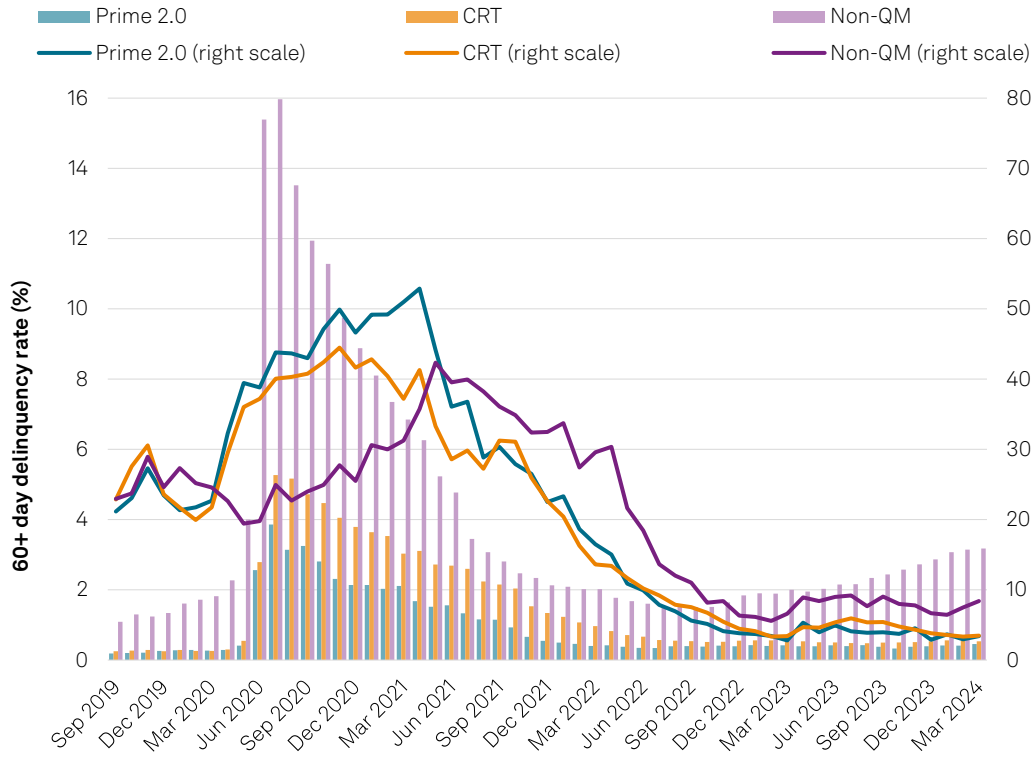
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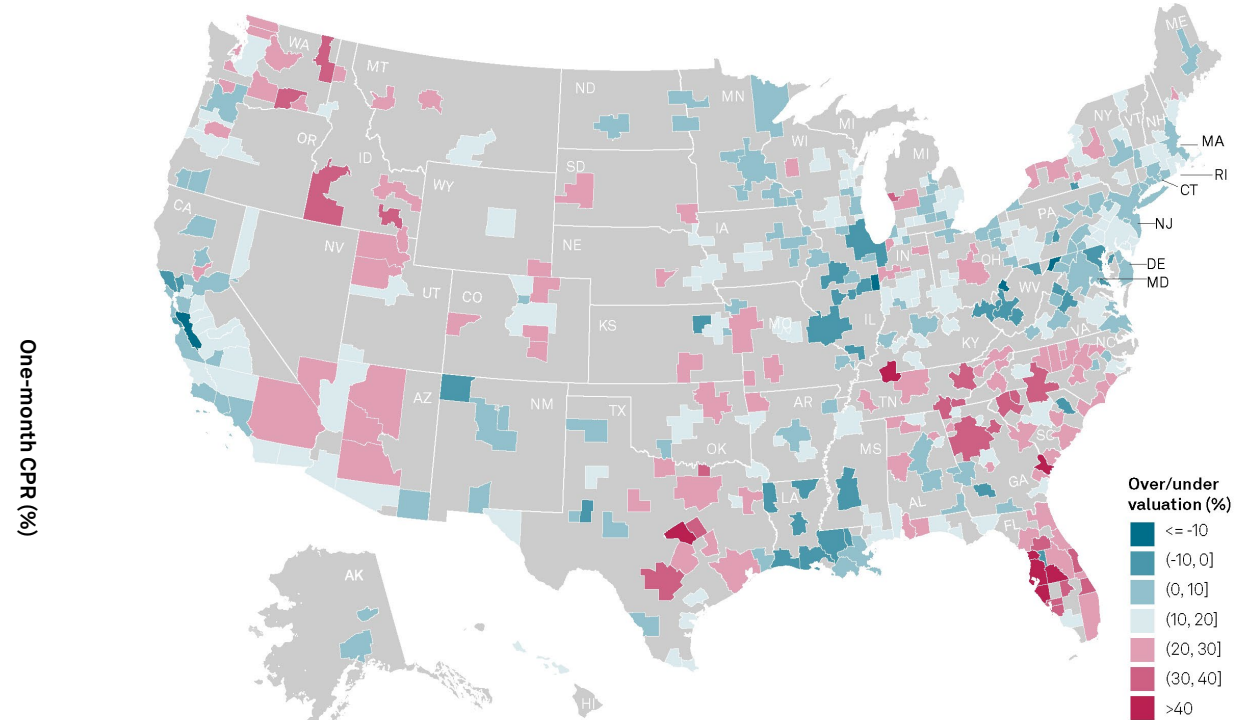
# **RMBS | Collateral Performance And Over/Undervaluation Update**

## RMBS collateral performance\*



\*Data as of March 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.

## Home over/undervaluation by MSA (as of Q4 2023)\*



\*Non-seasonally adjusted data. Ten MSAs depict combined data from two or more metropolitan divisions due to overlapping geographic locations. The over/undervaluation data from the metropolitan division with the highest core city population was chosen for each combined MSA. MSA--Metropolitan statistical area. Source: Federal Housing Finance Agency All Transactions Home Price Index and S&P Global Ratings. For more information on our over/undervaluation methodology, [click here](#).

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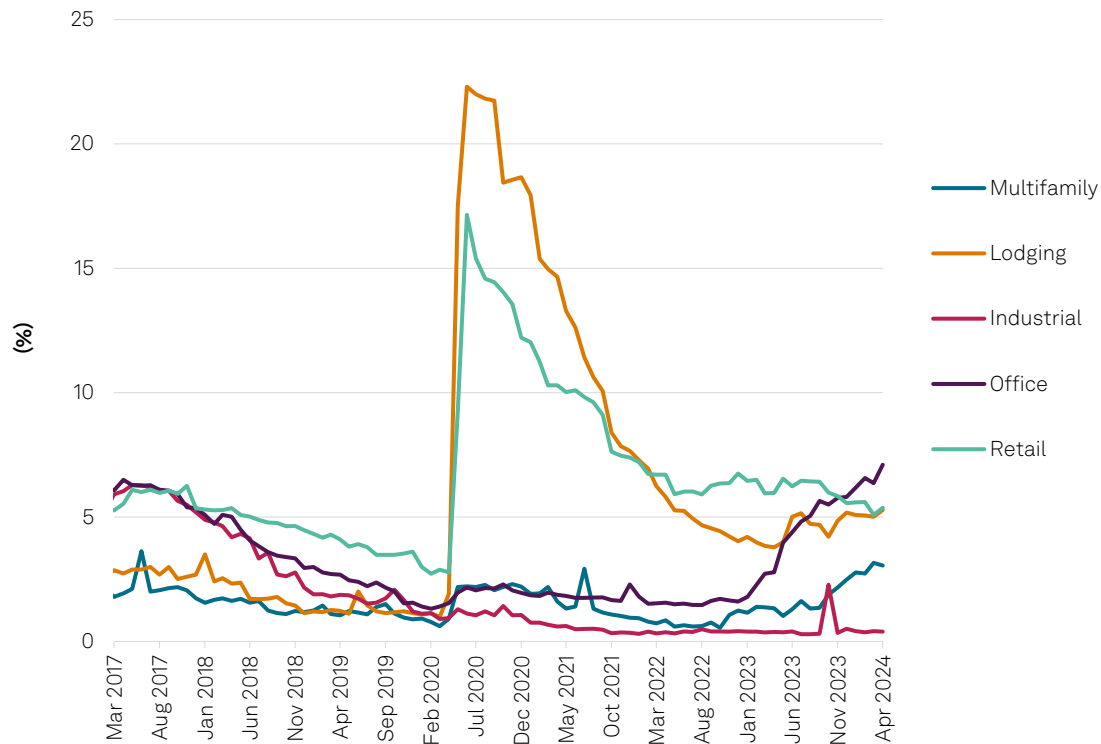
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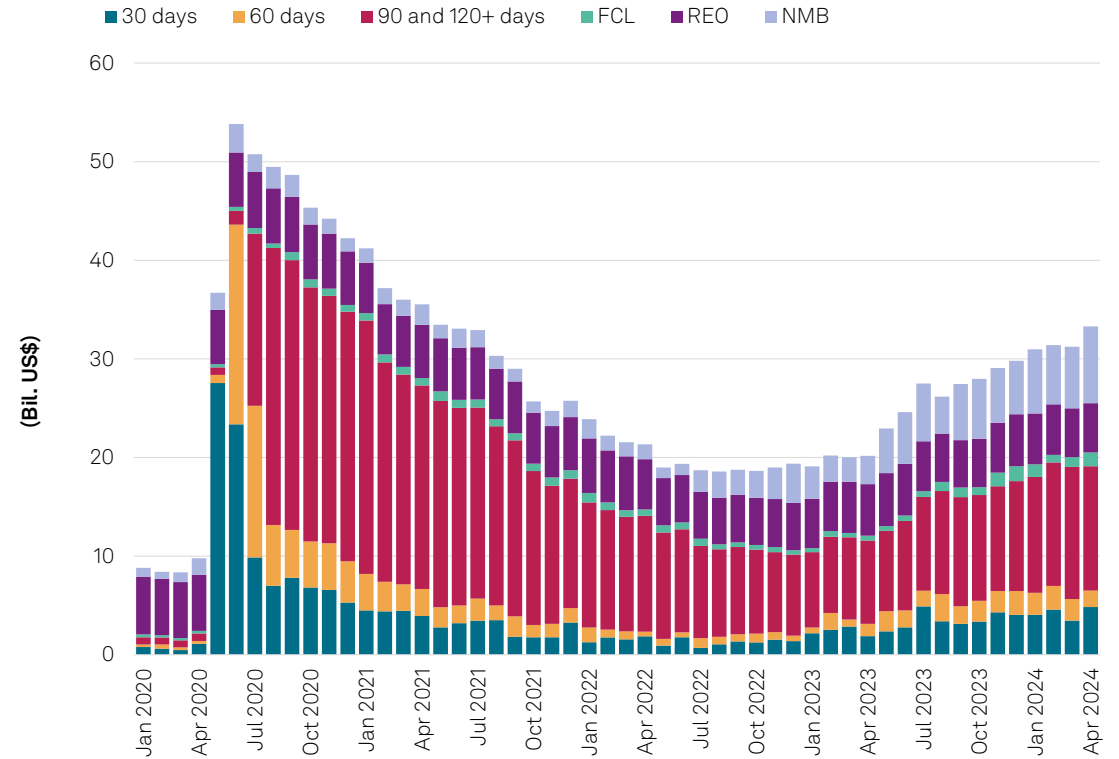


### Delinquency rate by property type



Based on loans backing CMBS transactions rated by S&P Global Ratings. CMBS--Commercial mortgage-backed securities. Source: S&P Global Ratings.

### Delinquency balance by severity



Based on loans backing CMBS transactions rated by S&P Global Ratings. CMBS--Commercial mortgage-backed securities. FCL--Foreclosure. REO--Real estate owned. NMB--Non-performing matured balloon payment. Source: S&P Global Ratings.

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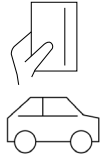
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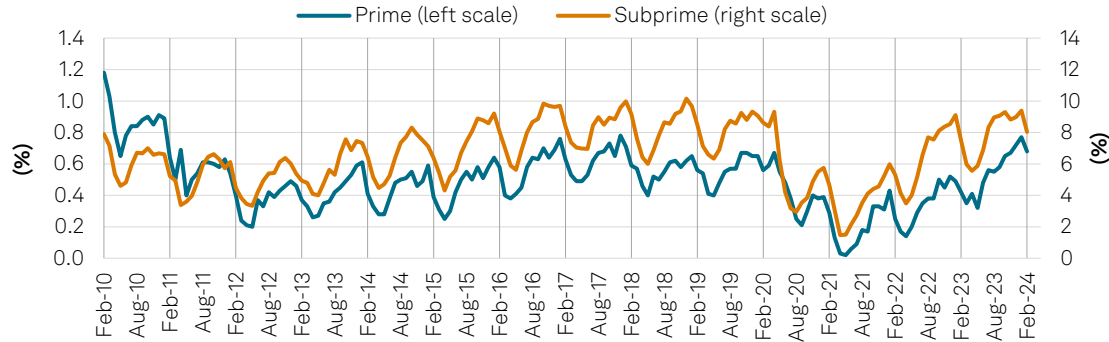
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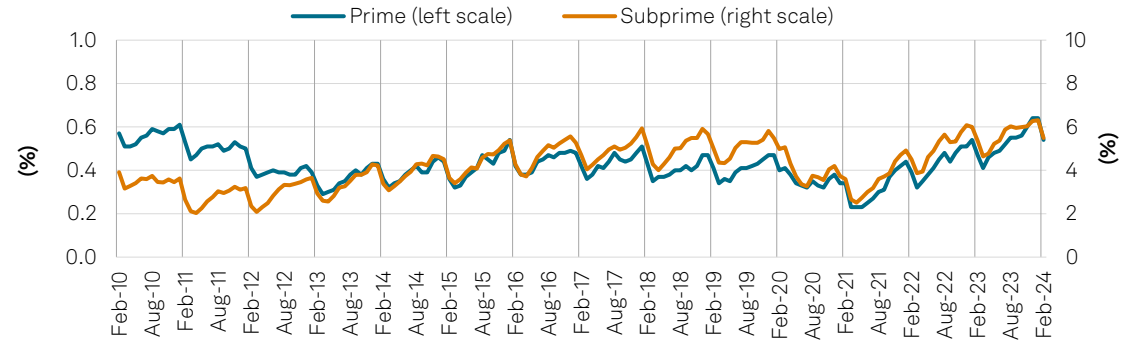


# ABS | Auto Loan ABS Performance Improves Due To Seasonal Factors; Credit Card ABS Net Loss Rates Continue Normalizing From Historic Lows

### Auto loan ABS net loss rates

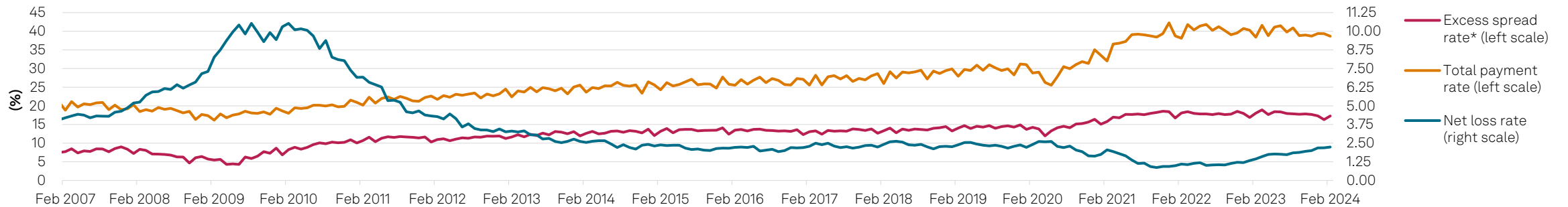


### Auto loan ABS 60+ day delinquency rates



Based on S&P Global Ratings-rated auto loan ABS transactions. Monthly net loss rates are annualized. Source: S&P Global Ratings.

### Bankcard Credit Card Quality Index



Based on S&P Global Ratings-rated credit card ABS transactions. \*Yield minus base funding rate minus charge-off rate. Net loss rates and excess spread rates are annualized. Source: S&P Global Ratings.



# Esoteric ABS



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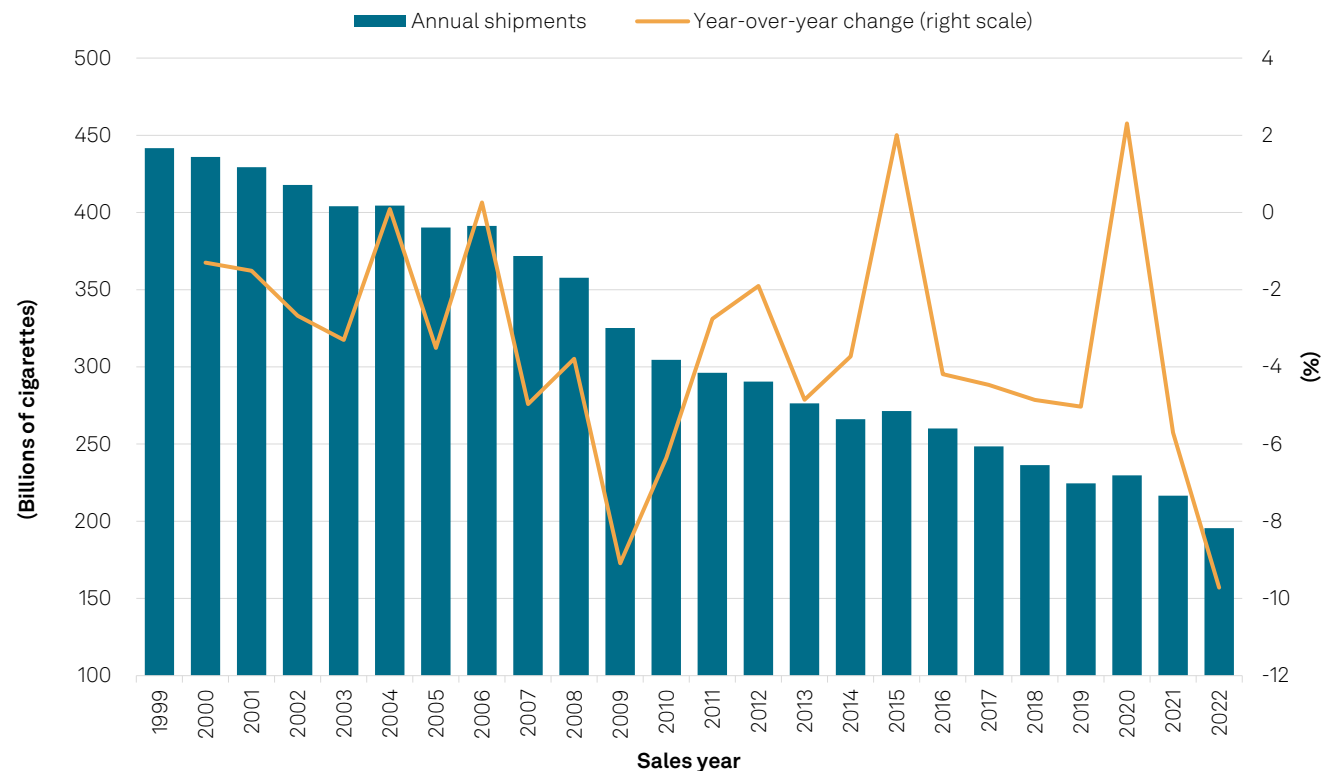


# Esoteric ABS | Declines In Cigarette Shipment Volume Not Expected To Affect Tobacco Settlement-Backed Bond Ratings

- Tobacco settlement securitizations are backed by tobacco settlement revenues from master settlement agreement (MSA) payments.
- Under the terms of the MSA, the base annual amount paid by the cigarette manufacturers is adjusted by U.S. cigarette shipment volume, inflation, and the market share of the participating manufacturers, among other factors. The National Association of Attorneys General reports these metrics annually in April.
- We anticipate the percentage decline in U.S. cigarette shipment volume for the 2023 sales year will be in the high single digits, with a slight easing in 2024 as inflation softens. The expected decline in 2023 volume is more severe than the assumptions incorporated in our cash flow analysis of tobacco settlement securitizations.
- Accordingly, we performed a cash flow sensitivity analysis on a sample of rated tobacco settlement securitizations with higher shipment volume decline assumptions.
- Our analysis indicates that, all else equal, cigarette shipment volume declines as high as 8% in the 2023 sales year and 7% in the 2024 sales year would not have an impact on our ratings on tobacco settlement-backed bonds.

[Click here](#) to access the press release.

## U.S. cigarette shipment volume



Source: National Association of Attorneys General (NAAG).

# CLO



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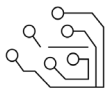
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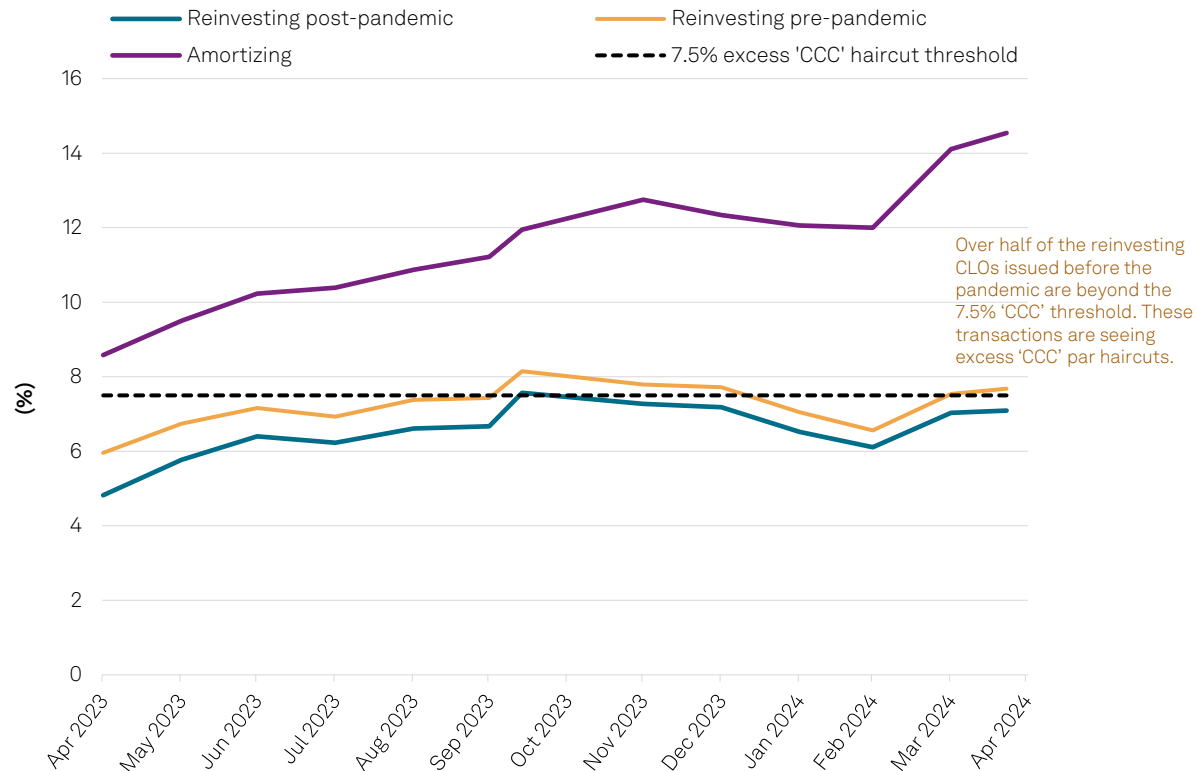
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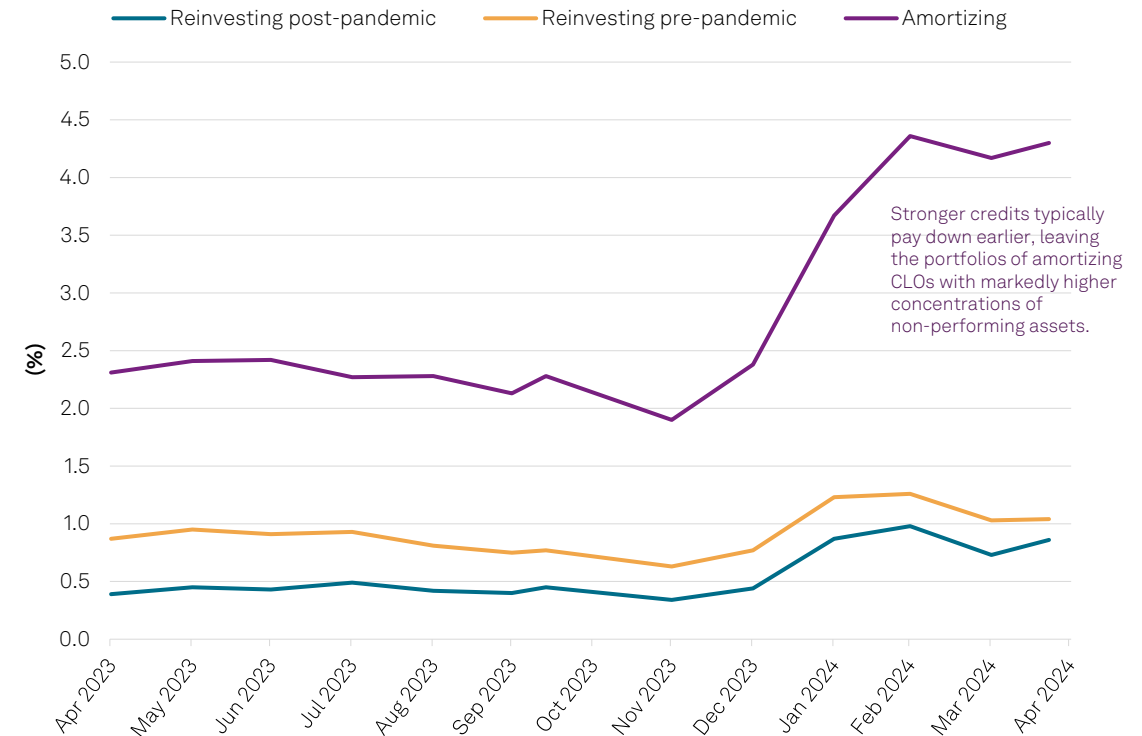
# CLO | Evolution Of 'CCC' And Nonperforming BSL CLO Portfolio Exposures Over The Past Year

Average 'CCC' buckets across U.S. BSL CLOs



Data as of April 22, 2024. BSL--Broadly-syndicated loan. Source: S&P Global Ratings.

Average non-performing exposure across U.S. BSL CLOs



Data as of April 22, 2024. BSL--Broadly-syndicated loan. Source: S&P Global Ratings.

# ABCP/ Muni-Structured

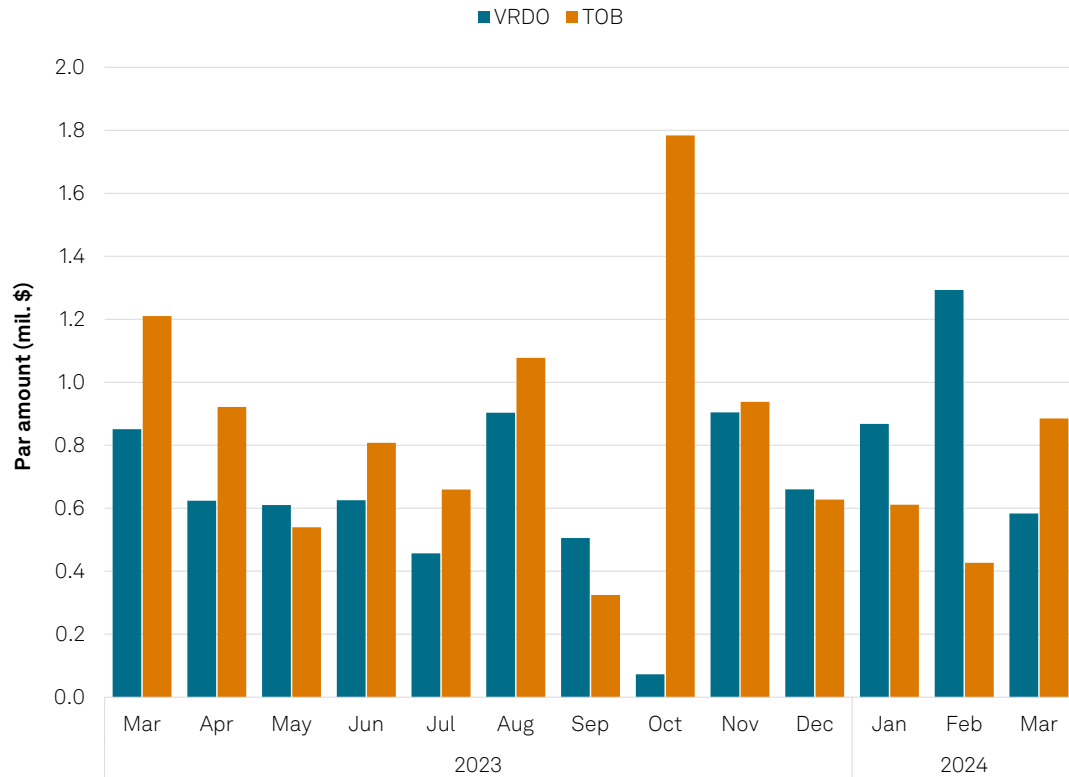


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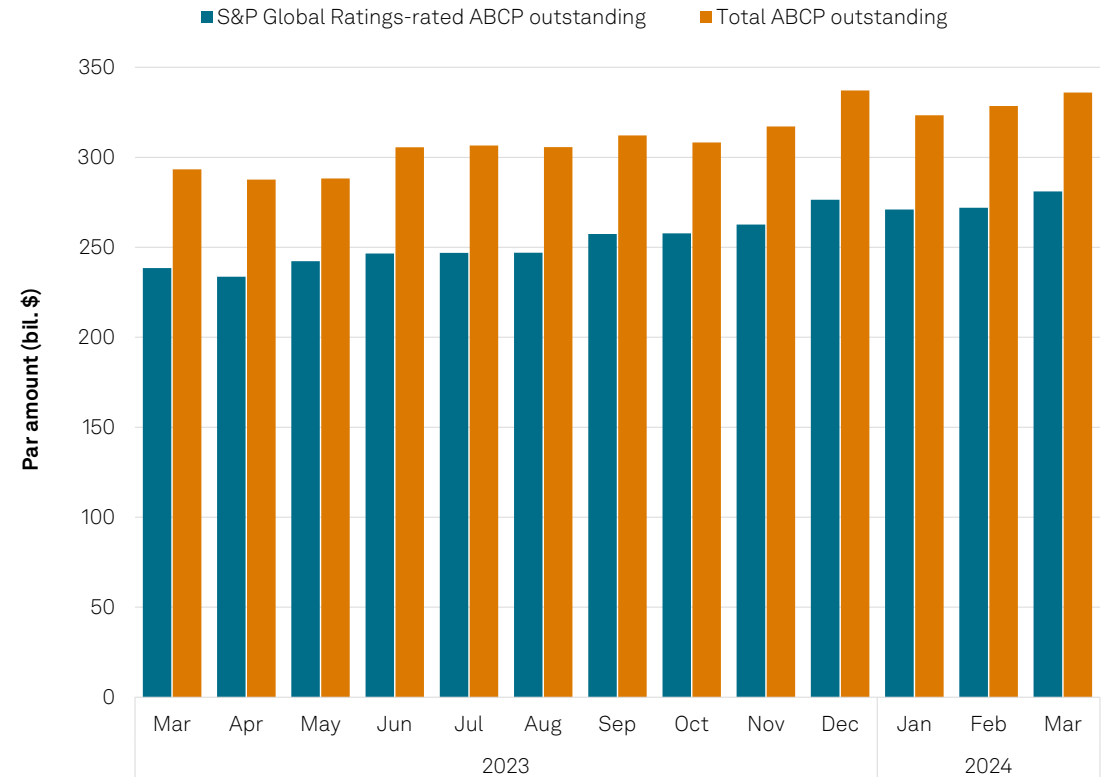
# ABCP Muni-Structured | New Issuance And Outstanding Amounts

## S&P Global Ratings-rated VRDO and TOB trust par new issuance



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

## Par ABCP outstanding



ABCP--Asset-backed commercial paper. Source: S&P Global Ratings, U.S. Federal Reserve.



## Recent Research

Sector	Publications
RMBS	<a href="#">U.S. Home Price Overvaluation Softens As Wage Growth Outpaces Home Price Gains</a>
CMBS	<a href="#">SF Credit Brief: U.S. CMBS Overall Delinquency Rate Increased By 32 Bps To 4.7% In April 2024; Office Loans Had The Highest Increase</a>
ABS	<a href="#">U.S. Auto Loan ABS Tracker: February 2024</a>
	<a href="#">U.S. Credit Card Quality Index: February 2024</a>
Esoteric ABS	<a href="#">U.S. Corporate Securitization Newsletter: April 2024</a>
	<a href="#">Structured Finance Esoteric Quarterly Roundup: Q2 2024</a>
CLO	<a href="#">CLO Insights U.S. BSL Index: 'CCC' Buckets Brush Up Against 7.5% Threshold After Altice France Downgrade</a>
	<a href="#">Thirty Years Strong: U.S. CLO Tranche Defaults From 1994 Through First-Quarter 2024</a>
	<a href="#">The Impact Of Asset Diversification On CLO Performance</a>
ABCP/Muni-Structured	<a href="#">Your Three Minutes In U.S. VRDOs: Joint Sensitivity Analysis</a>
	<a href="#">The Role Of Management Reviews And Surveillance In Rating ABCP Issued By Conduits</a>

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