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2025 U.S. And Canada Structured Finance Outlook

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This report does not constitute a rating action

Trends We're Watching | Top 10 For 2025

The following items represent our view of the top ten trends that will define U.S. Structured Finance in 2025

1. **Issuance Abounds:** We expect another strong year led by ABS and CLOs (see slides 5 and 6).
2. **Esoteric Assets Heading Toward Mainstream:** Public infrastructure's growing capital needs, including data center, fiber, and cell tower financing, should bring more opportunities for securitization.
3. **Collateral Performance Seeing Some Deterioration:** Consumer loans, esoteric sectors that depend on the consumer, and CMBS are among the likely culprits.
4. **Still Mostly Benign Ratings Performance:** Overall rating trends going into 2025 remain relatively benign (stable), absent expected movement in CMBS continuing into 2025 (see slides 8 and 9).
5. **Biggest Risk to the Base Case: A Re-Emergence of Inflation:** This would delay short term interest rate cuts and stress commercial real estate, consumers, and leveraged loan obligors.
6. **Private Credit Evolves and Grows:** Asset-based finance offers opportunities and risks (see slide 4).
7. **Cyber and AI:** While hard to quantify their impact, trends in cyber security and broadening use of AI may emerge.
8. **Housing Prices Remain High:** Low fixed-rate mortgages for many borrowers and low supply have been the story, but a decline in mortgage rates could shift the narrative.
9. **Policy Uncertainty May Also Bring Some Jitters:** A new administration brings changes in U.S. federal policy. For example, Basel Endgame, CFPB, and the General Services Administration's office lease footprint.
10. **CLOs, CLOs, CLOs:** More than just issuance, this market continues to expand, including into ETFs (see slide 3).

Trends We're Watching | CLO ETFs' Impact On The Broader CLO Market

- The CLO ETF market has grown to over $19 billion as of late November 2024 from $120 million in 2020, fueled in part by investor appetite for exposure to floating-rate debt in a rising interest rate environment.
- Individual funds can own substantial portions of CLO tranches. In the case of the largest player in the CLO ETF space, Janus Henderson's JAAA fund, this portion can be upwards of 90%. While most purchase activity across CLO ETFs occurs in the secondary market, primary acquisitions do take place, particularly with JAAA.
- CLO ETFs are likely contributing to the current spread tightening and improving liquidity of CLO tranches. For now, CLO ETFs are unlikely to exacerbate volatility in the case of a distressed CLO market because of the inherent decoupling between ETF investor share sales and CLO sales from the ETF's portfolio.
- If the CLO ETF market continues to grow at its current pace, it is possible that ETFs could increase CLO note price volatility in the case of a severe market dislocation.

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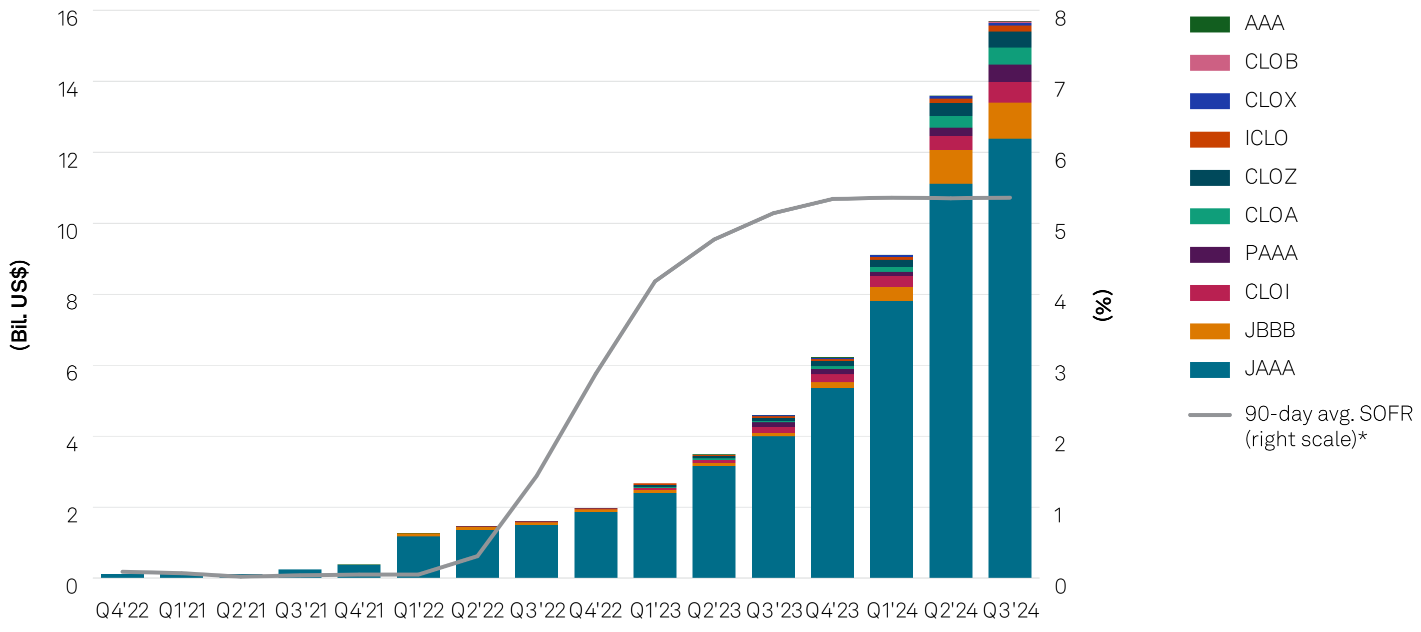
CLO ETF AUM over time



The AUM figures cited in this chart will differ slightly from those reported by the CLO ETFs themselves. This is because we source our CLO ETF portfolio valuation data from Bloomberg. *Quarterly average. AUM--Assets under management. CLO--Collateralized loan obligation. ETF--Exchange-traded fund. Source: Bloomberg, U.S. Federal Reserve, and S&P Global Ratings.

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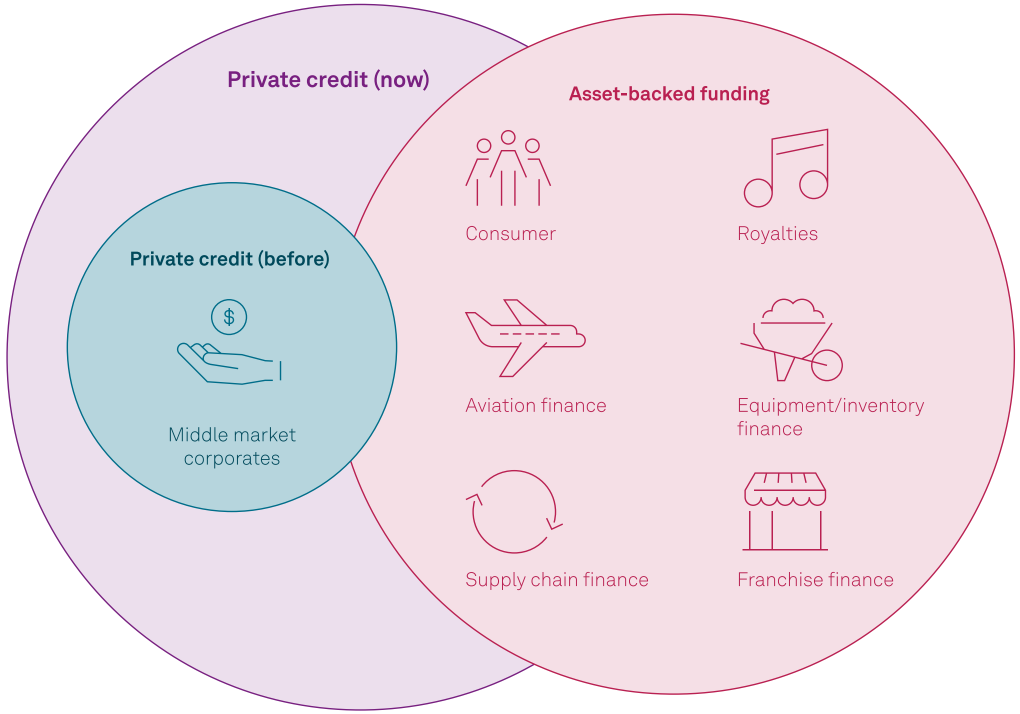
Trends We're Watching | Private Credit's Expansion Into Asset-Based Finance

- In today's market, financial innovation continues to drive change as private funding expands into a market for asset-based finance (ABF), which is enormous and largely untapped.
- With securitization already heavily used in the leveraged loan space, private credit firms are looking further afield at other types of assets.
- The potential market for private funding in ABF includes more than $5 trillion in consumer credit, along with the proliferating array of collateral in the esoteric asset-backed securitization space that stretches from intellectual property to hard assets.
- Benefits of the expansion of private credit into ABF include differentiated sources of capital available to borrowers and the potential for higher alpha for investors.
- While the possibility of higher returns and broader diversification from ABF may be enticing investors, this alpha stems from the lesser-understood and more complex nature of the assets.

Private credit expands into asset-based finance



Source: S&P Global Ratings.

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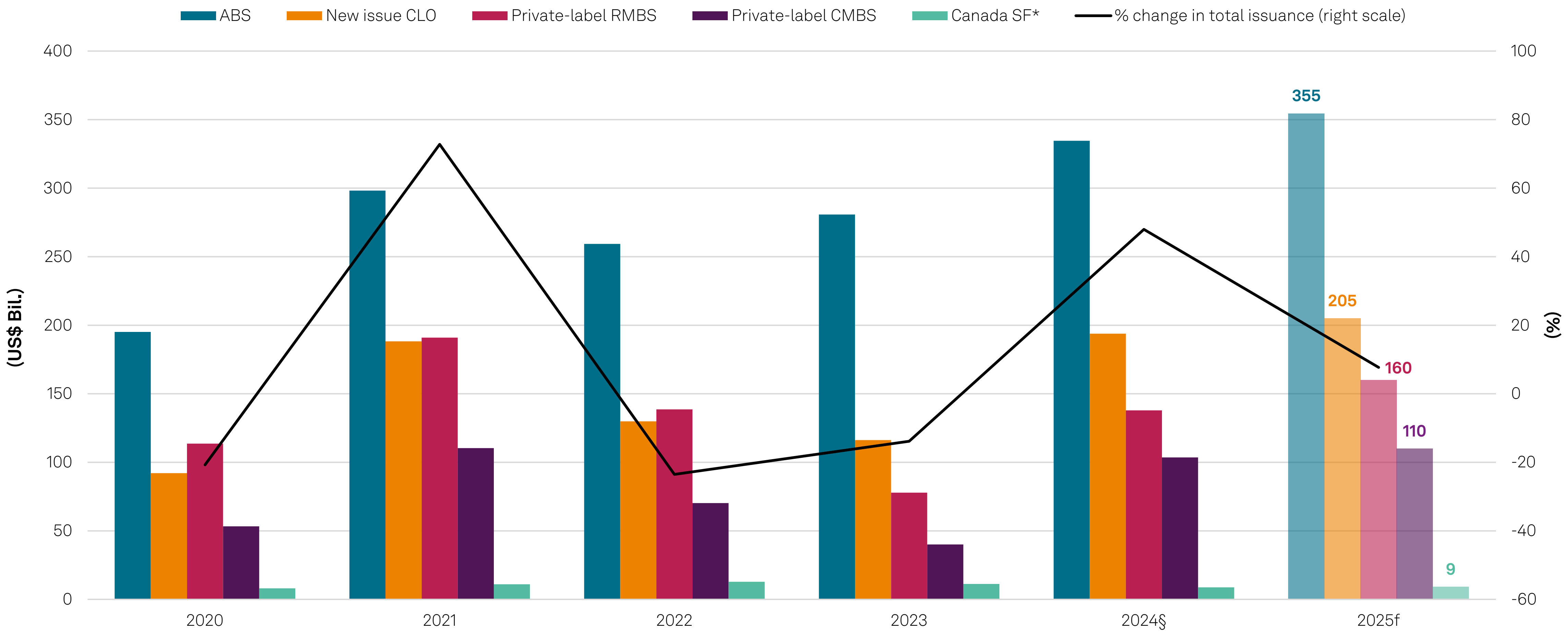
Market-Wide Structured Finance Issuance | Historical Issuance Volumes Versus 2025 Forecast



Note: CRE CLO issuance is excluded. *Canadian issuance converted to U.S. dollars using average exchange rate for each year. §2024 data as of Dec. 12, 2024. f—Forecast. Source: S&P Global Ratings, Intex, Pitchbook LCD, Bloomberg, and Green Street.

Market-Wide Structured Finance Issuance | Issuance Breakout By Subsector

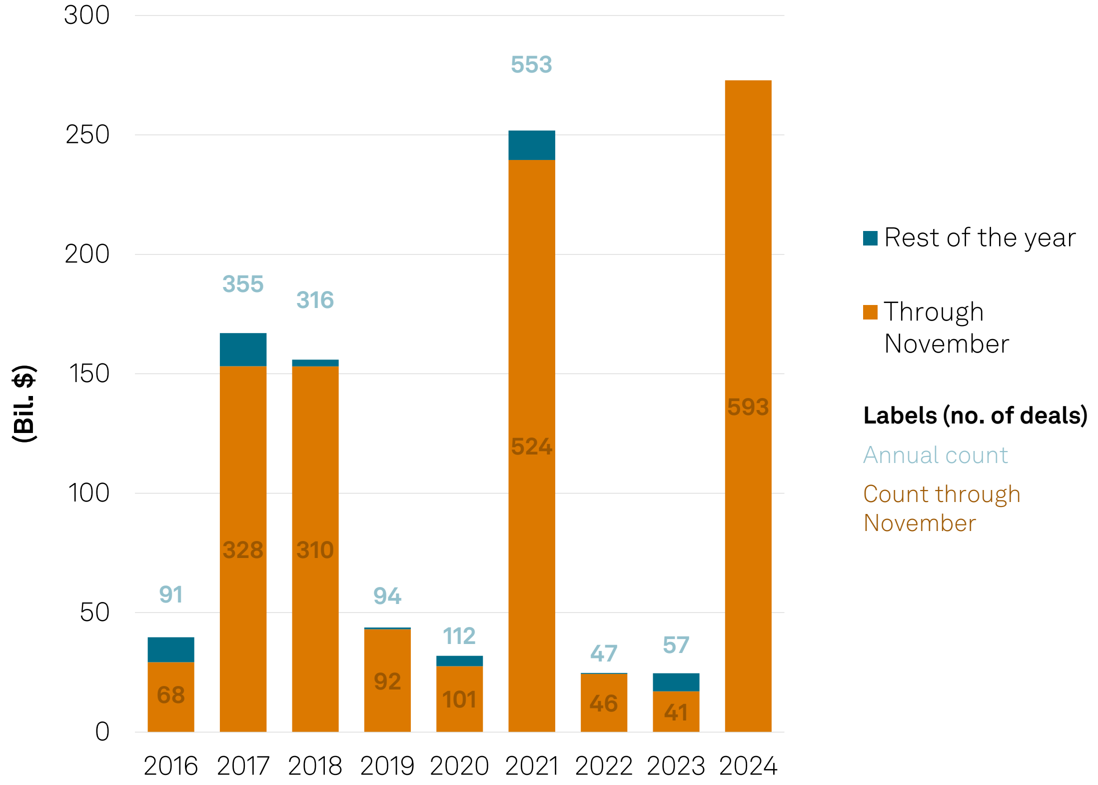
(US$ Bil.)	2022	2023	2024*	2025f
New issue CLO				
Broadly-syndicated loan	117.5	88.9	155.5	165
Middle-market	12.1	26.2	36.3	40
Other**	0.3	1.1	2.2	N/A
Total	**129.9**	**116.2**	**193.9**	**205.0**
CMBS§	**70.3**	**40.1**	**103.6**	**110.0**
RMBS§				
Non-QM and DSCR	40.4	30.9	42.9	47.5
Prime (jumbo and conforming)	31.7	11.2	32.8	37.5
HELOC/CESL	1.1	4.7	13.1	17.5
Reperforming/nonperforming	20.1	10.9	18.9	20.0
CRT (incl. mortgage insurance CRT)	23.1	10.0	9.2	10.0
Single-family rental	11.2	3.7	7.9	12.5
Other‡	11.0	6.6	13.1	15.0
Total	**138.6**	**78.0**	**137.9**	**160.0**
Secured ABS				
Auto loan	88.7	119.9	126.4	130.0
Auto lease	16.9	23.8	31.4	32.0
Rental car	5.0	5.7	3.2	4.0
Commercial ABS†	28.3	35.0	45.8	48.0
Consumer discretionary	0.8	1.2	1.4	1.5
Total	**139.7**	**185.7**	**208.2**	**215.5**

(US$ Bil.)	2022	2023	2024*	2025f
Unsecured ABS				
Credit card	30.5	23.2	20.6	33.0
Student loan	7.1	8.3	9.3	9.0
Personal loan	19.3	14.7	16.7	16.5
Home improvement loan	0.4	0.7	3.8	3.5
DPPA	4.7	4.8	7.2	7.0
Total	**62.1**	**51.7**	**57.5**	**69.0**
Esoteric ABS	**57.5**	**43.4**	**68.8**	**70.0**
Canadian structured finance				
Credit card	11.2	8.4	5.6	5.5
Auto loan, lease, and rental	0.7	1.1	2.1	2.6
Commercial equipment	0.0	0.3	0.3	0.3
RMBS	1.0	0.6	0.4	0.4
CMBS	0.0	0.9	0.4	0.4
Total	**12.8**	**11.3**	**8.8**	**9.2**
Total U.S. structured finance issuance	**598.1**	**515.1**	**770.0**	**829.5**
Total U.S. and Canada structured finance issuance	**610.9**	**526.4**	**778.7**	**838.7**

Note: CRE CLO issuance is excluded. *2024 issuance data as of Dec. 12, 2024. **Includes infrastructure CLOs and rated feeder CLOs. §Exclude agency mortgage-backed securities. ‡Includes residential transition loans, reverse mortgages, and shared appreciation loans. †Includes commercial equipment, dealer floorplan, and fleet lease ABS. f—Forecast. Non-QM—Non-qualified mortgage. DSCR—Debt service coverage ratio. HELOC—Home equity line of credit. CESL—Closed-end second lien. CRT—Credit risk transfer. DPPA—Device payment plan agreement. Source: S&P Global Ratings, Intex, Pitchbook LCD, Bloomberg, and Green Street. We may revise these data from time to time.

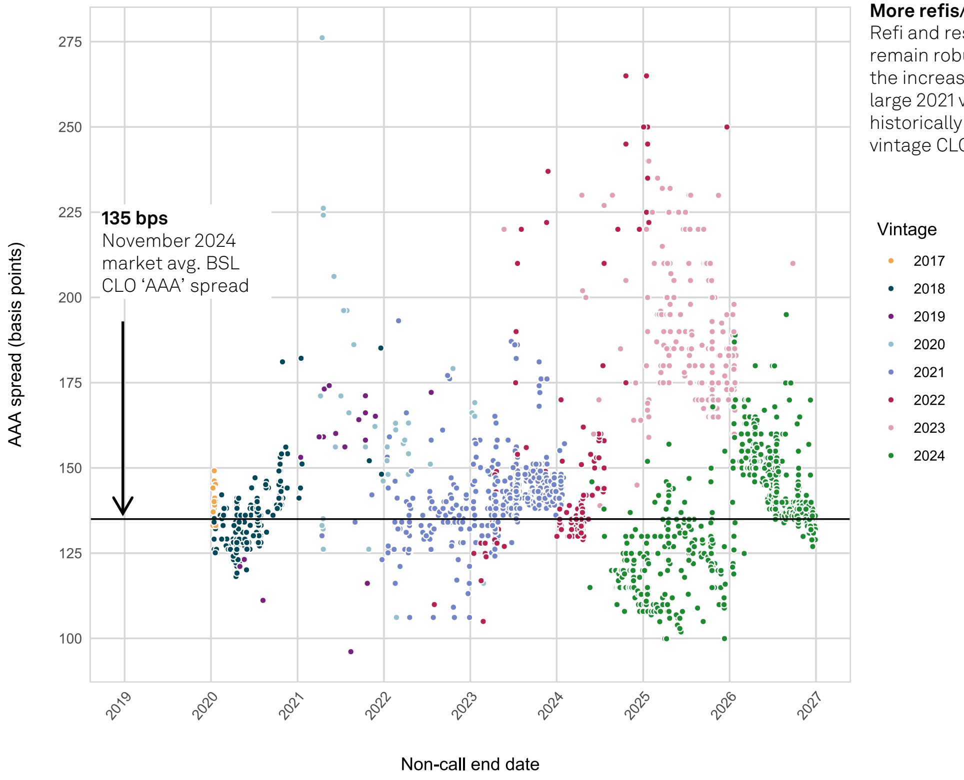
CLO Refinancings And Resets | Record Issuance In 2024
Refi/Reset Momentum Likely To Continue Into 2025

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*

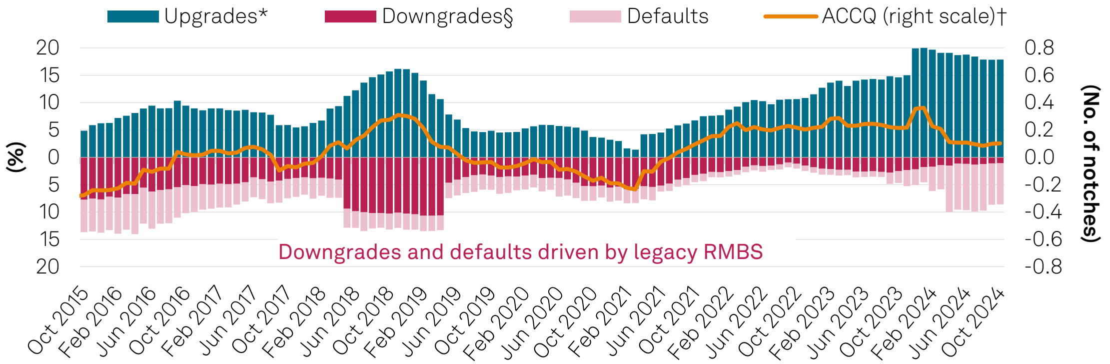


More refis/resets on the horizon: Refi and reset activity should remain robust in 2025, owing to the increasing incentive of the large 2021 vintage and the historically wide spreads of 2023 vintage CLOs.

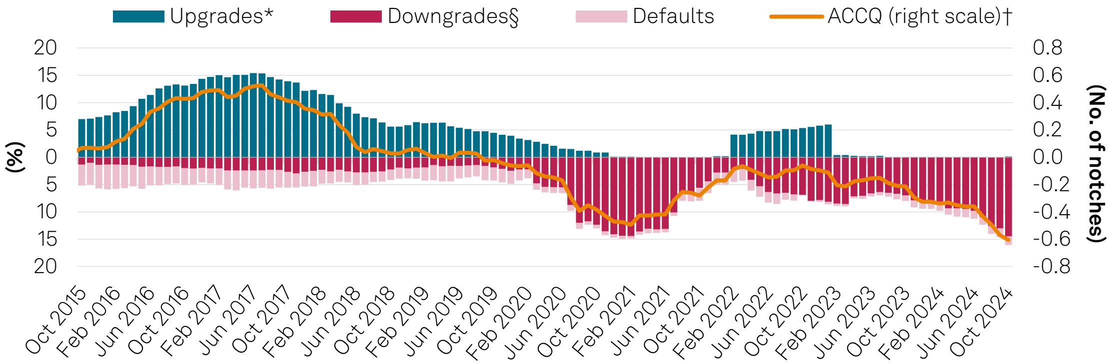
*Data as of Dec. 2, 2024. Note: The spreads of reinvesting transactions and transactions within two years of their reinvestment period end date are plotted. The spreads of transactions that have been refinanced or reset previously are plotted (vintage is adjusted to reflect most recent iteration of the CLO). Market average BSL CLO spread excludes refinances and partial refinances. 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

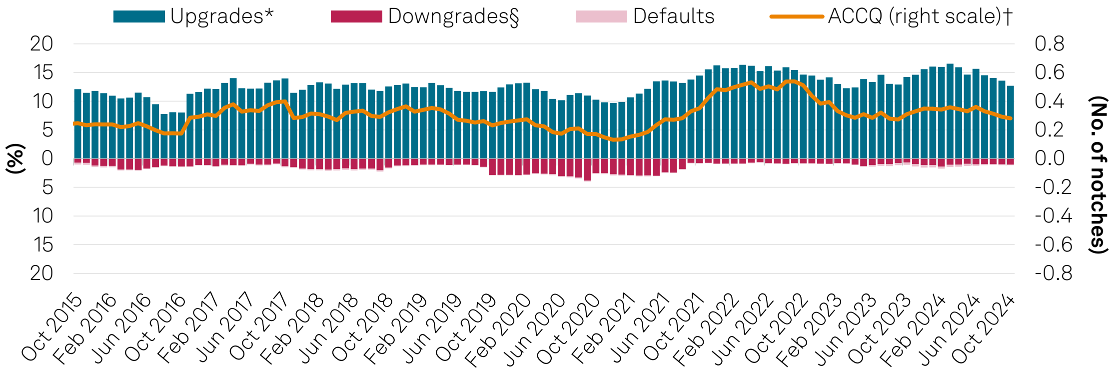
RMBS



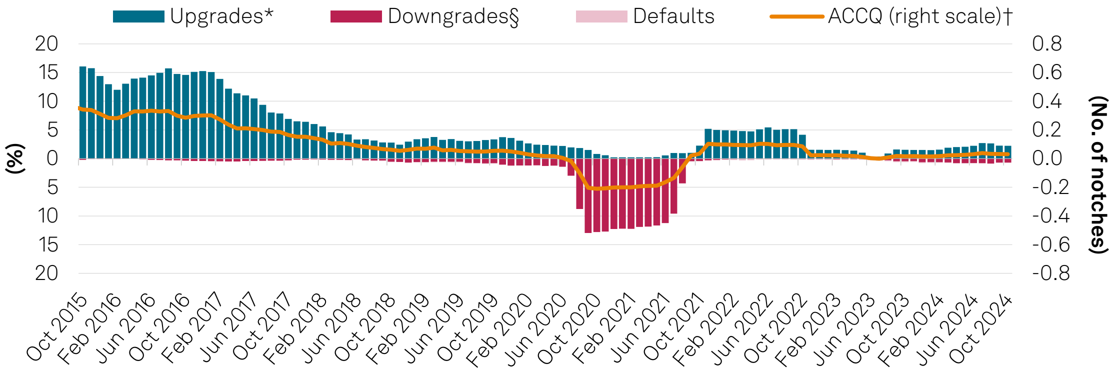
CMBS



ABS‡



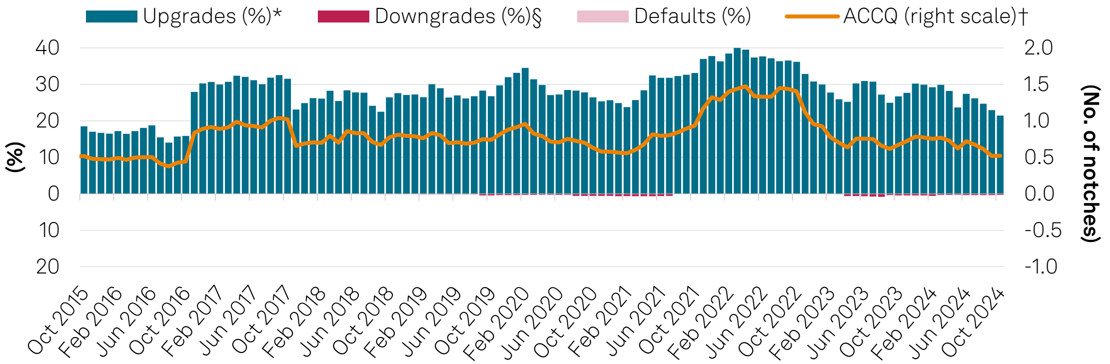
CLO



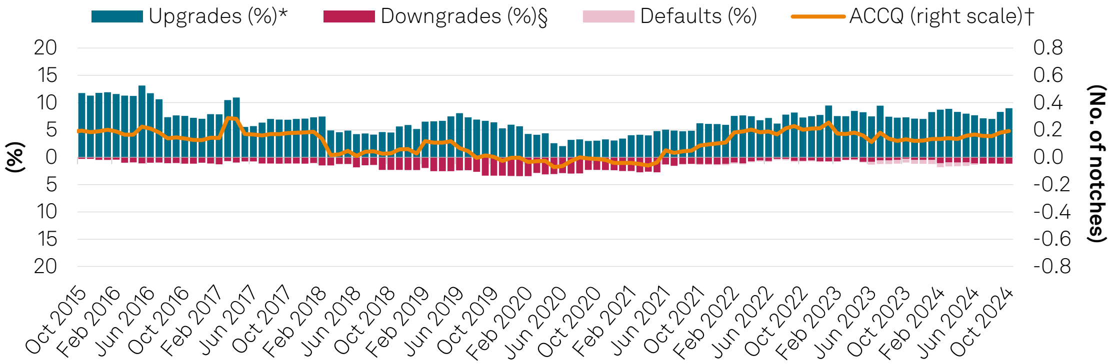
*Total number of upgrades (downgrades, defaults) divided by the total number of outstanding ratings in the sector on a trailing-12-month basis. Securities whose ratings migrated to NR over each period are classified based on their rating prior to NR. §The downgrade proportion excludes defaulted tranches. †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 | Average Change In Credit Quality By ABS Subsector

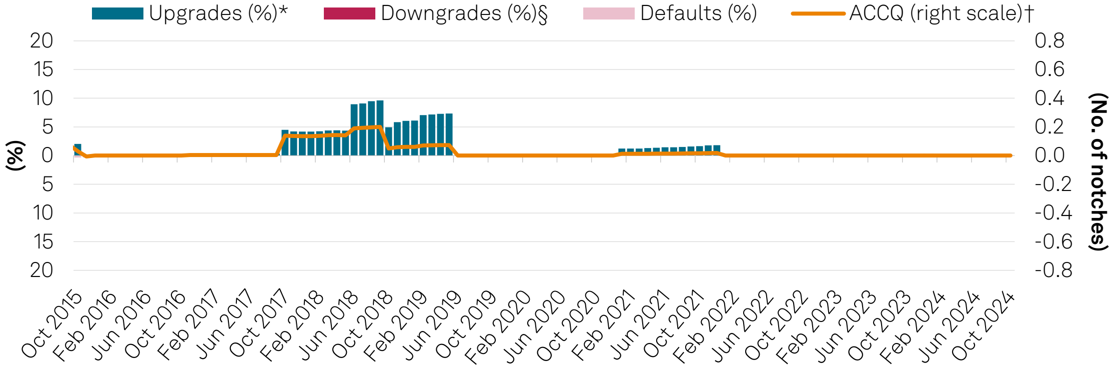
Auto loan and lease ABS



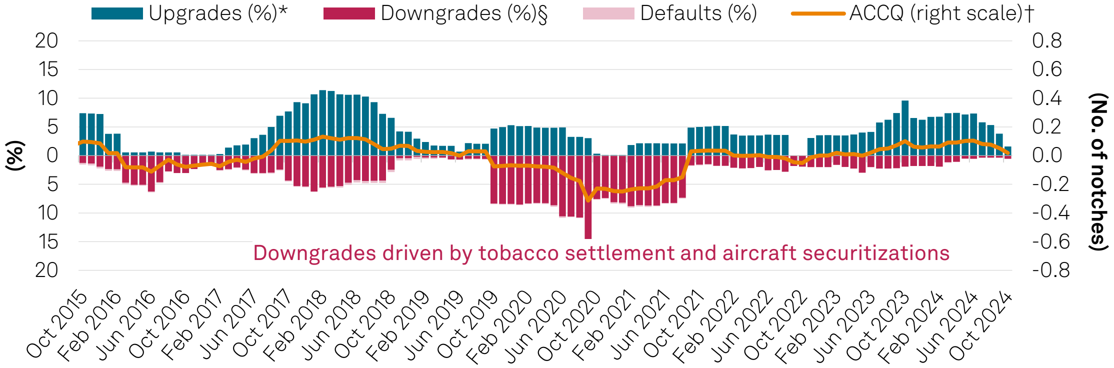
Student loan ABS



Credit card ABS



Esoteric ABS



*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--Asset-backed securities. ACCQ--Average change in credit quality. NR--Not rated. Source: S&P Global Ratings.

CLO

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CLO | Optimism Amidst Uncertainty

Credit conditions for the companies backing broadly-syndicated loan (BSL) CLOs and middle-market (MM) CLOs are improving:

- Improving credit metrics, anticipated rate cuts, and expectations for a soft landing have given the loan market confidence, and we expect loan defaults to drop to 1% by the end of September 2025.
- However, liability management transactions (LMTs) and a long-term trend of declining loan recoveries are concerns.
- Rating actions for speculative-grade corporate ratings are trending positively, with the count of upgrades increasing and downgrades decreasing. Actions for credit-estimated companies are further behind, but on the same trendline.
- Leveraged loan issuance looks set to pick up in 2025 with a resurgence of origination from mergers and acquisitions (M&A) and leveraged buyouts (LBOs). The increase in loan supply should support robust CLO issuance over the next year.

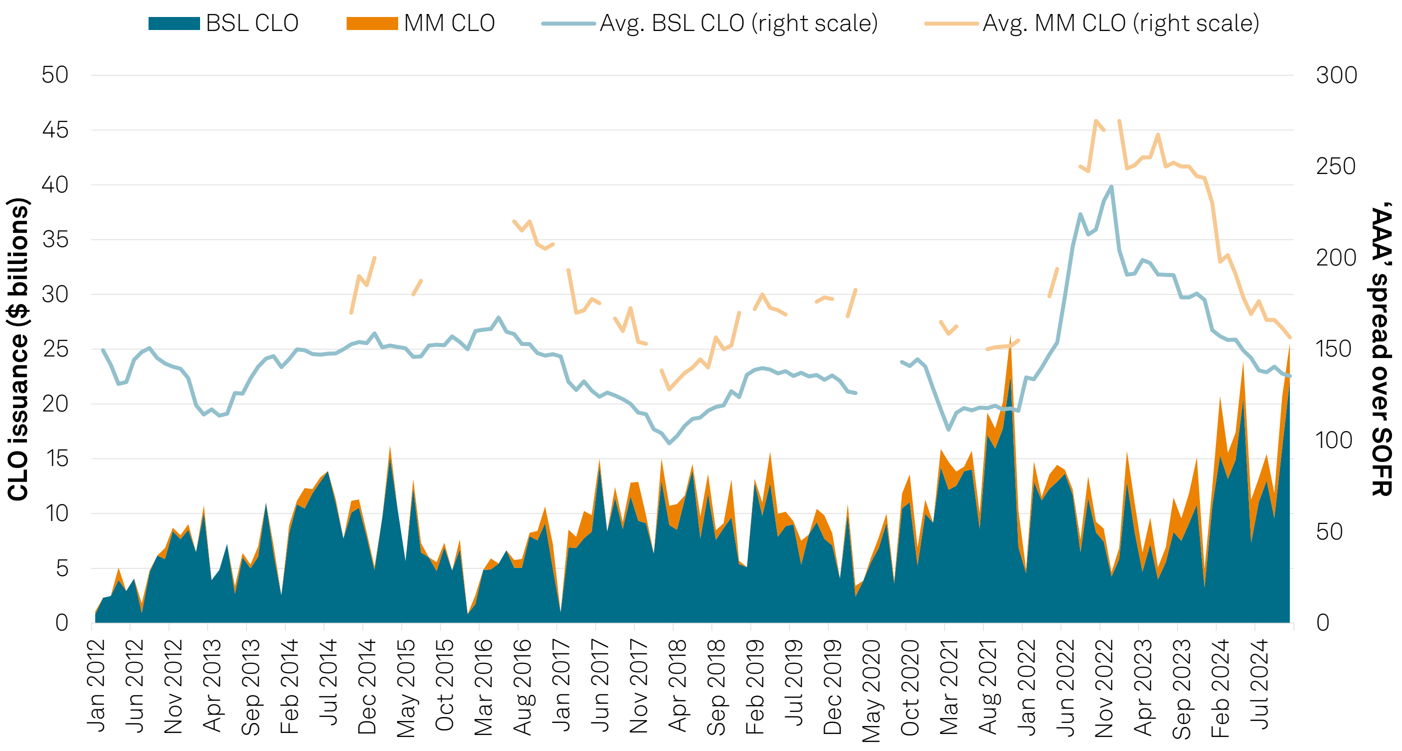
We have a stable-to-positive outlook for BSL and MM CLO ratings performance in 2025 based on:

- BSL and MM CLO 'CCC' baskets that have likely peaked and will now trend downward.
- Our view that junior overcollateralization (O/C) ratio test cushions will stabilize.
- CLO managers' ability to navigate, and potentially benefit from, volatility that could occur in the loan market.

The past couple of years have been challenging for leveraged loan issuers as interest rates rose and earnings growth slowed, and speculative-grade downgrades increased as a result. But CLO ratings have generally held up well.

CLO | Issuance Records Are Made To Be Broken

U.S. BSL & MM CLO issuance, Jan. 2012 through Nov. 2024



BSL—Broadly-syndicated loan. MM—Middle-market. SOFR—Secured overnight financing rate. Source: S&P Global Ratings and Pitchbook LCD.

- After two years of muted activity, U.S. CLO issuance roared back to life in 2024. By mid-November, the market broke the record for annual volume of resets and refinancings, and by the end of November the record for new issuance was broken.
- New issuance BSL CLO 'AAA' note spreads have tightened by more than 100 basis points since peaking in December 2022, and the basis between BSL CLO and MM CLO 'AAA' spreads has fallen to historically tight levels, along with the gap between pricing for tier one and non-tier one CLO managers.
- We expect heavy CLO issuance for 2025. A resurgence of M&A and LBO activity after several slow years could generate new loan supply and collateral for new issue CLOs. Robust investor demand for high quality floating rate assets should keep CLO tranche spreads tight, and we expect $205 billion of CLO issuance in 2025.

CMBS

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CMBS | Rate Cuts And Improving Sentiment Could Stabilize/Improve Outlook

We forecast $110 billion in new CMBS issuance, up modestly from 2024. Single asset single borrower (SASB) transactions should continue to drive issuance volume.

We expect collateral performance in 2025 to stabilize and begin to show signs of improvement on the expectation of further interest rate cuts. Still, uncertainty regarding the outlook on long-term rates (10-year Treasuries) given potential changes to fiscal policy may be a wildcard.

- Office – the narrative of 'winners' and 'losers' will become clearer as liquidity returns more consistently for class A assets relative to the rest. Moreover, we expect significant realized losses in certain office-backed SASBs in 2025.
- Multifamily – despite rent growth uncertainties, sector fundamentals should improve given lower financing costs, limited upcoming supply, and continued housing demand.
- Lodging – Revenue per available room (RevPAR) growth should be flat nationally, bifurcated by continued growth in urban markets and declines in leisure destinations.
- Retail – fundamentals should continue to improve due to robust consumer spending and the lack of retail space, leading to steady rent growth as leases come up for renewal.

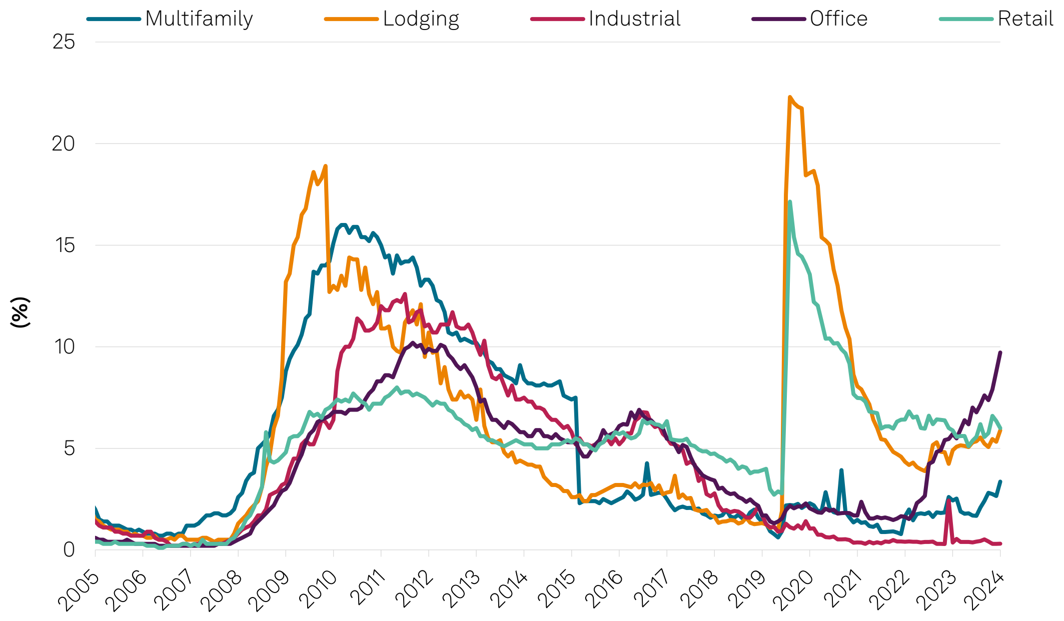
Despite the improving outlook, we expect rating performance in 2025 to continue to be negatively biased towards downgrades as already distressed transactions may not benefit enough from the overall stabilization/improvement of market conditions.

- SASBs – transactions backed by office properties will remain the most vulnerable to downgrades.
- Conduits – transactions with growing shares of distressed office loans (as other loans payoff) may also become vulnerable to downgrades.

CMBS | Delinquency And Rating Action Trends

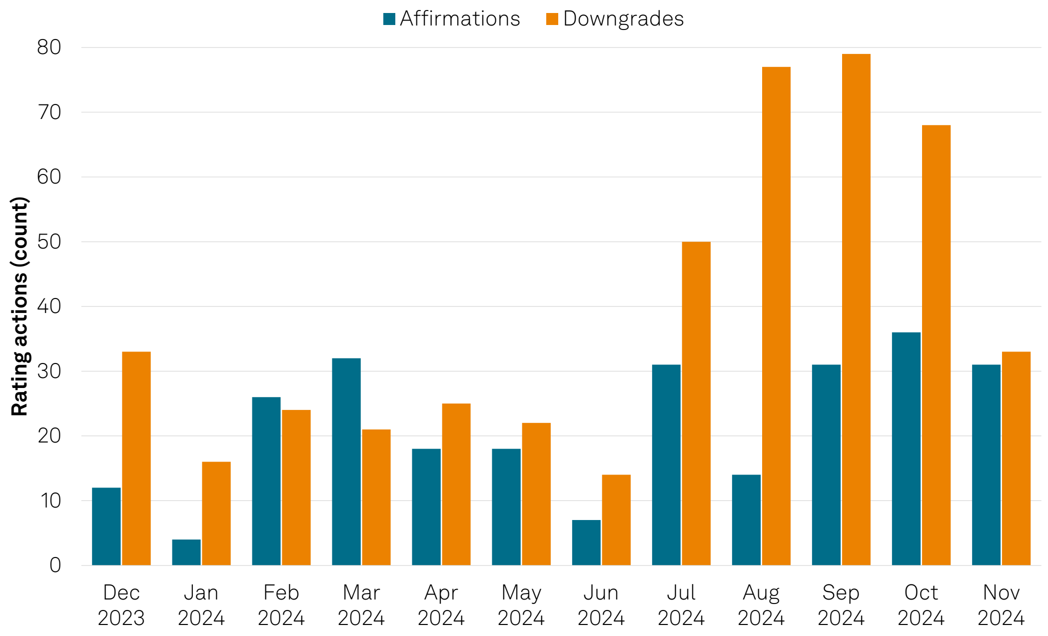
- We expect office delinquency rates to continue worsening in 2025, surpassing their Global Financial Crisis high.
- Rating actions have been biased heavily toward downgrades, which is likely to continue in the year ahead, especially for office SASBs.

Delinquency rates by property type (2005-2024)



Source: S&P Global Ratings

U.S. CMBS rating actions (prior 12 months)



Source: S&P Global Ratings

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RMBS

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RMBS | A Regional HPA Tale With A Broad Rise In RMBS Issuance

We expect national-level home price appreciation (HPA) to be positive in 2025, supported by declines in the 30-year fixed rate mortgage, lingering supply constraints, and relatively low unemployment rates. When looking at the Q2-Q3 HPA print nationally for this year, the All-Transactions FHFA Index rose 0.89%.

- The 50-year average Q2-Q3 HPA print is 1.27%. The 2019 – 2023 HPA prints were all higher, with 2021 standing out at 5.57%.
- Regional variation will continue into 2025 for the housing market, depending on regional rates of population growth and inventory levels.

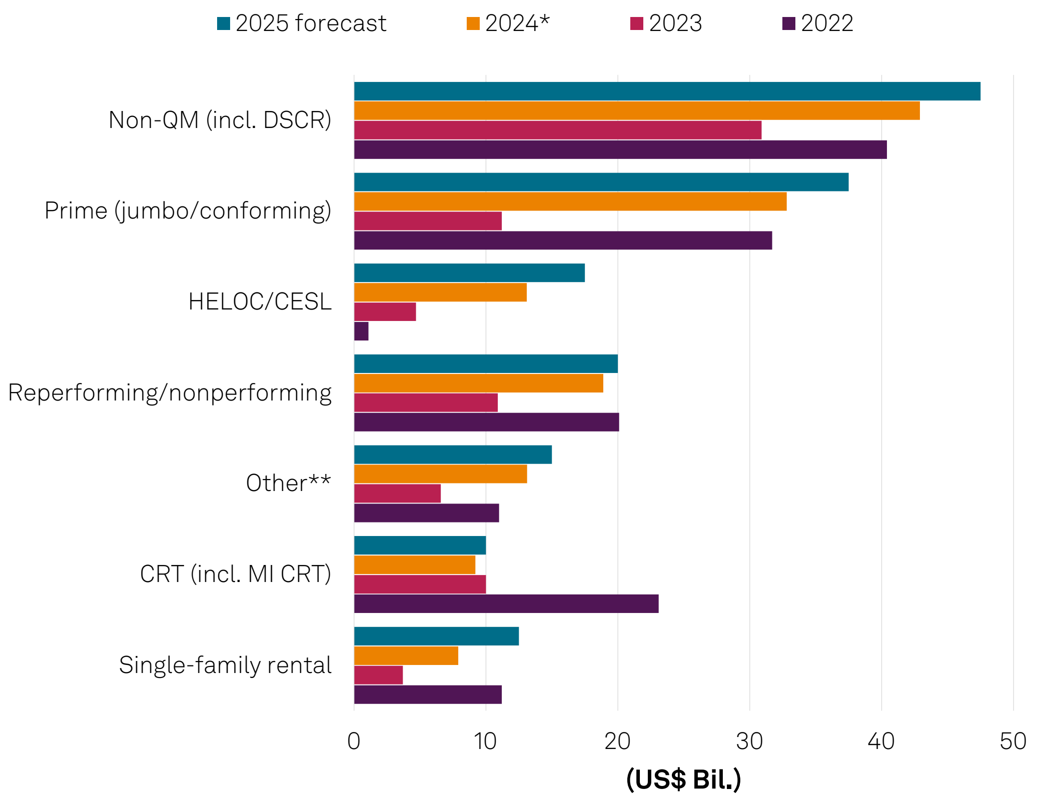
We generally expect residential mortgage performance to remain stable. However, elevated delinquencies in more recent vintages will likely continue into 2025 compared to seasoned loans that benefit from HPA equity gains and fixed rate mortgages locked in at historically low rates.

Non-agency RMBS issuance will likely increase in 2025 as a forecasted fall in the 30-year fixed rate mortgage spurs purchase and refinance activity.

- The degree of mortgage rate declines will depend largely on the spread to the 10-year Treasury, which averaged roughly 250 bps in 2024--substantially higher than the 30-year average of 180 bps. We forecast the 30-year mortgage rate to average 5.9% next year, with Q4 being 5.5%.
- We forecast private-label RMBS issuance of $160 billion for 2025, up from roughly $138 billion in 2024.

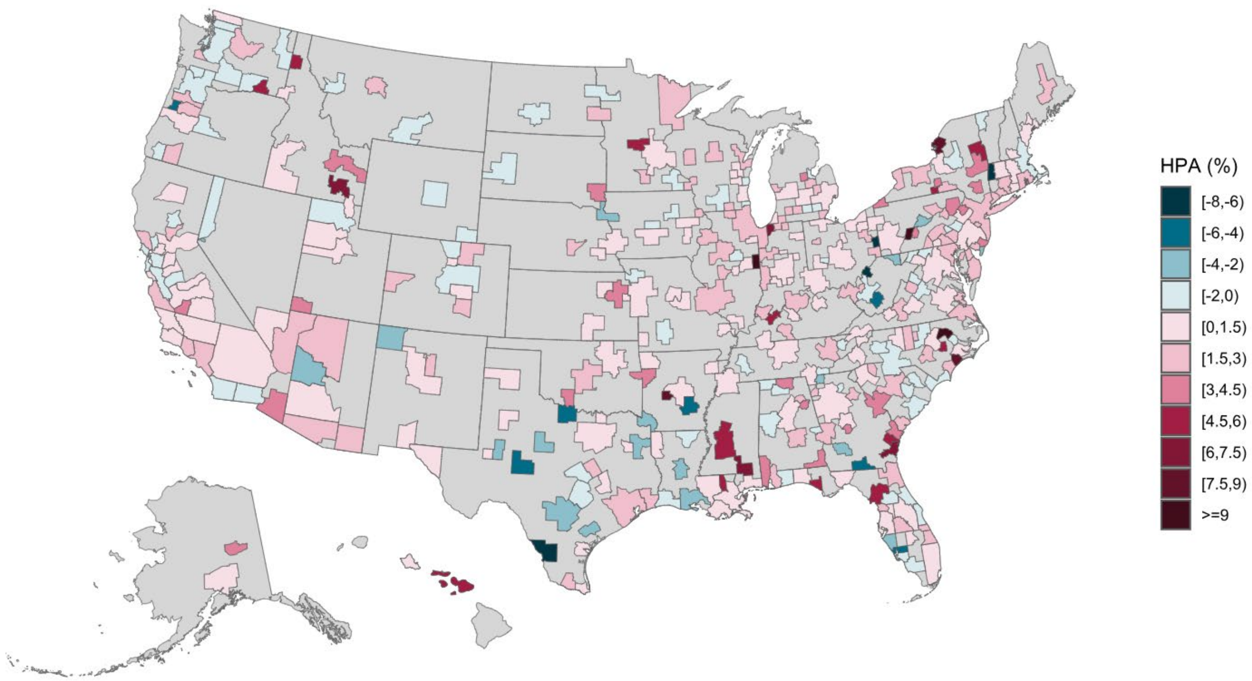
RMBS | Issuance Growth Led by Non-QM

Non-agency RMBS issuance



*Data as of Dec. 12, 2024. **Includes residential transition loans, reverse mortgages, and shared appreciation loans. Non-QM—Non-qualified mortgage. DSCR—Debt service coverage ratio. HELOC—Home equity line of credit. CESL—Closed-end second lien. CRT—Credit risk transfer. Source: S&P Global Ratings, Intex, Bloomberg.

Home price appreciation by MSA: Q2 2024 to Q3 2024*



*Ten MSAs depict combined data from two or more metropolitan divisions due to overlapping geographic locations. The HPA rate from the metropolitan division with the highest core city population was chosen for each combined MSA. MSA--Metropolitan statistical area. HPA--Home price appreciation. Sources: Federal Housing Finance Agency All Transactions Home Price Index and S&P Global Ratings.

Auto Loan ABS

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Prime Auto Loan ABS | Collateral Performance To Weaken Slightly But Ratings Expected To Remain Stable

We expect 2023 and first-half 2024 prime vintages to incur higher losses than prior years due to normalization of credit standards, borrowers' elevated debt levels, and lower vehicle values. Most of these vehicles were financed when prices were higher.

- As usual, performance results will be issuer-specific. Those lenders that have decided to cater to a wider spectrum of consumers or expand into new geographic markets will likely report higher losses.
- Those lenders that have tightened their credit standards or improved the collateral mix of their pools will be better positioned to weather higher unemployment levels.

We expect rating performance in 2025 to be generally stable.

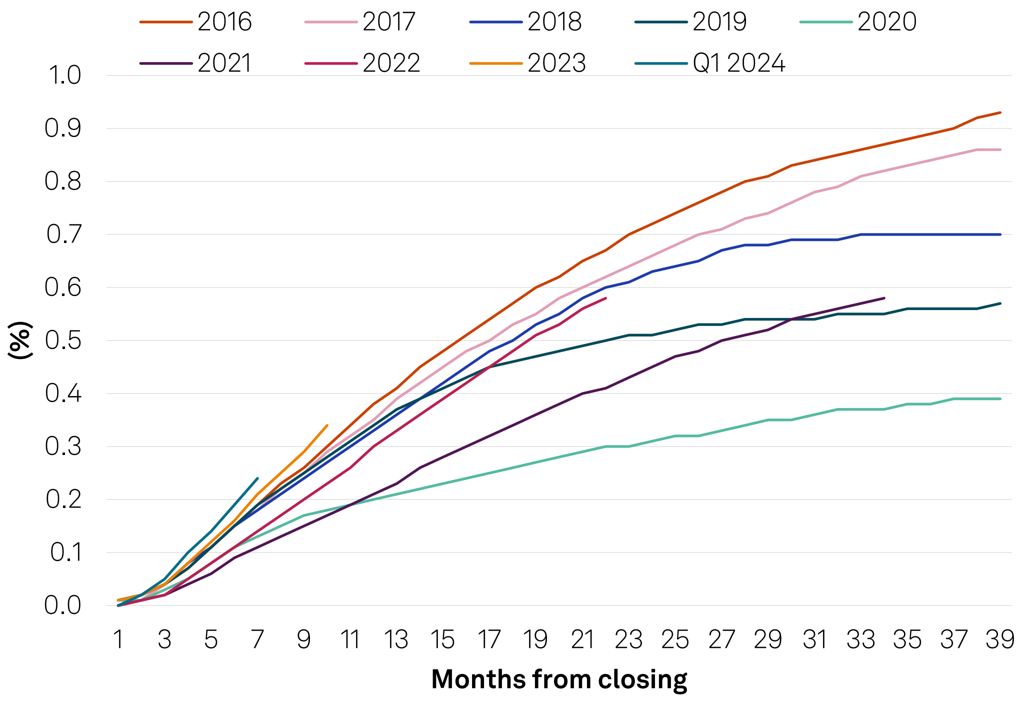
- We've revised our expected cumulative net losses (ECNLs) for most of those transactions that are performing worse than expected.
- So far, these revisions have resulted in no downgrades, primarily due to deleveraging, and approximately 94% of prime classes are concentrated in 'AAA' ratings.

We expect overall (prime and subprime) auto loan ABS volume to increase slightly to $130 billion, up from 2024's estimated $126 billion. Higher new-vehicle sales (forecast 15.8 million units, up from 2024's estimated 15.7 million), growth in incentives, and lower used-vehicle retail prices are expected to increase financing activity in 2025.

Prime Auto Loan ABS | Recent Vintages Experiencing Weaker Performance

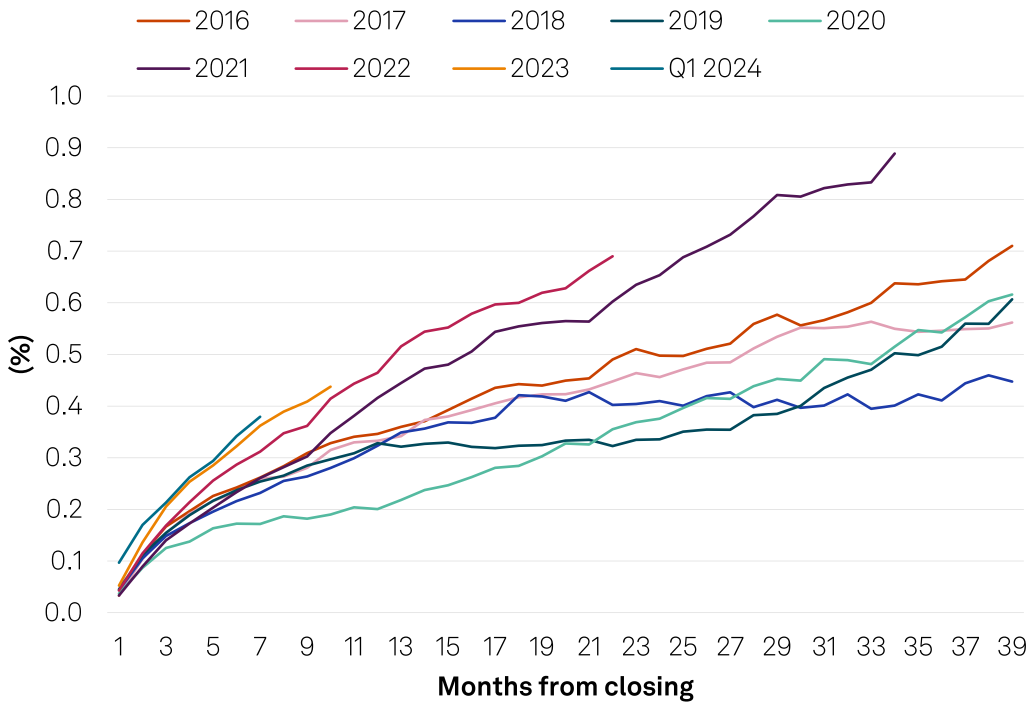
- The 2023 and Q1 2024 vintages are experiencing higher CNLs than 2016 – the last vintage unaffected by COVID stimulus.
- The 2021 through Q1 2024 vintages are experiencing higher than historical delinquency rates.

Prime CNL by vintage



Source: S&P Global Ratings.

Prime 60+ day DQ rate by vintage



Source: S&P Global Ratings.

Subprime Auto Loan ABS | Collateral Performance To Weaken Slightly But Upgrades Should Exceed Downgrades

Due to tighter credit standards, we expect the 2023 and first-half 2024 vintages to perform, in aggregate, better than 2022 vintages.

- Affordability issues, including higher vehicle insurance premiums, mounting unsecured debt levels, slower economic growth, and rising unemployment could impact consumers in general and subprime consumers in particular.
- Policy uncertainties could also impact performance.

We expect rating performance in 2025 to be generally stable.

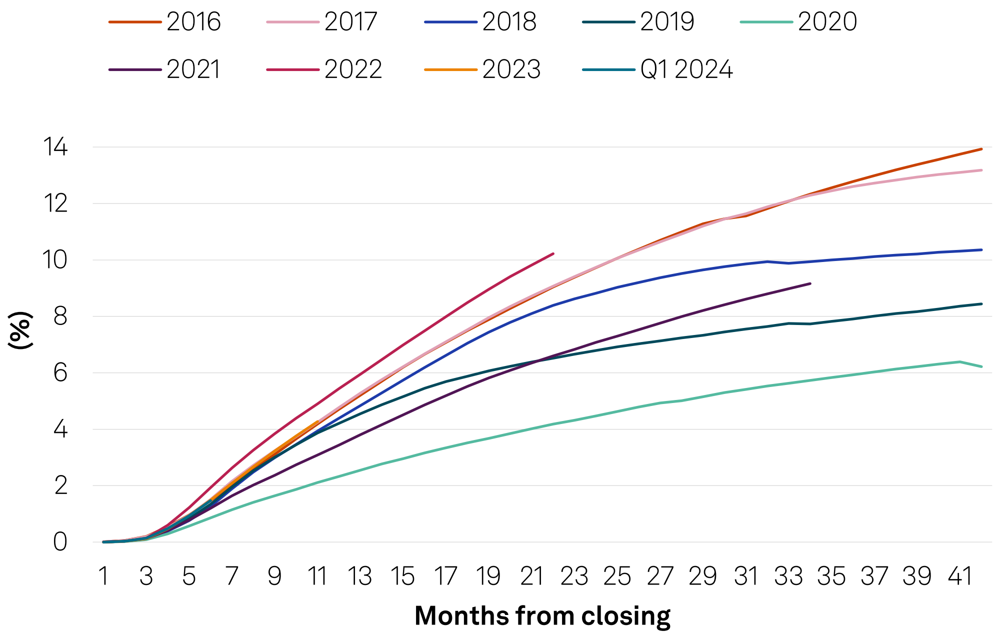
- We have revised our ECNLs for most of the transactions that are performing worse than expected, and downgrades have been confined to the 2022 vintages and mostly on non-investment-grade (non-IG) classes.
- We expect upgrades to continue to surpass downgrades due to the strength of deleveraging and the high percentage of classes rated below 'AAA' (approximately 58% by dollar amount).
- Non-IG classes continue to remain vulnerable to downgrades if performance is worse than our expectations. These represent only about 8% of outstanding ratings.

After declining in 2023, subprime originations grew 8% for the first nine months of 2024 relative to 2023 (NY Fed Consumer Credit Panel). While lower vehicle prices likely contributed to sales and financing growth, lenders' expectations of a "soft landing" may also have accelerated loan origination growth.

Subprime Auto Loan ABS | Recent Vintages Performing Better Than 2022

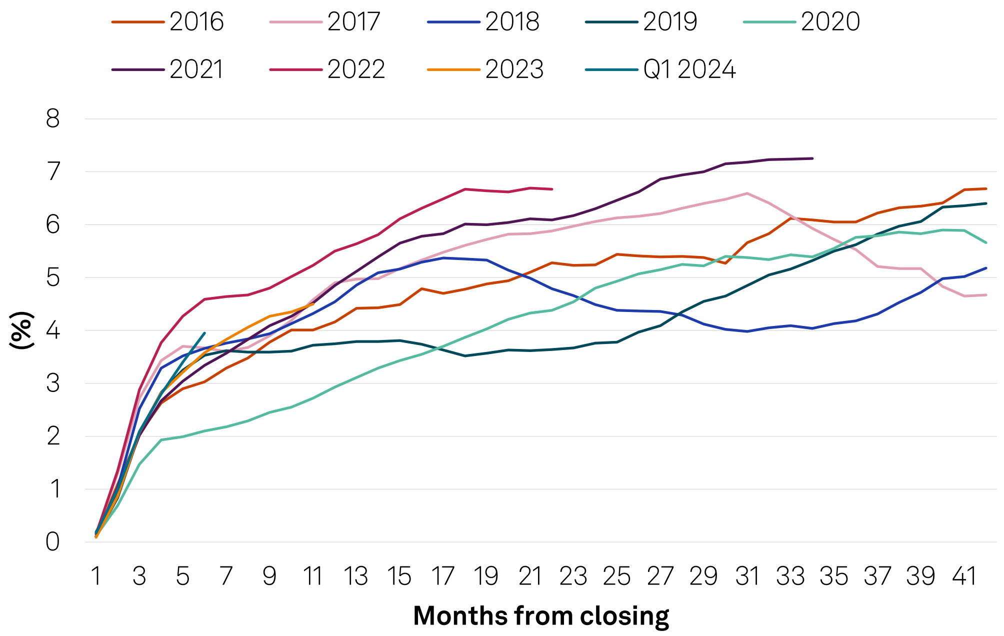
- Most lenders tightened their credit standards during the second half of 2022 and through 2023.
- Affordability issues, which continue to impact this obligor base, and lower used vehicle values will remain headwinds in 2025.

Subprime CNL by vintage



Source: S&P Global Ratings.

Subprime 60+ Day DQ



Source: S&P Global Ratings.

Auto Lease ABS

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Auto Lease ABS | Stable Ratings Despite Declining Vehicle Values

We expect collateral performance in 2025 to remain stable.

- Residual performance on auto lease ABS will continue to normalize from the unusually high gains experienced in 2021-2022.
- Incentives and vehicle return rates are likely to increase and normalize from the 2022-2023 historically low levels as supply-demand imbalances continue to ease.
- Captive auto finance companies generally underwrite to higher FICO score borrowers, which helps to minimize defaults.

We expect rating performance in 2025 to be generally stable.

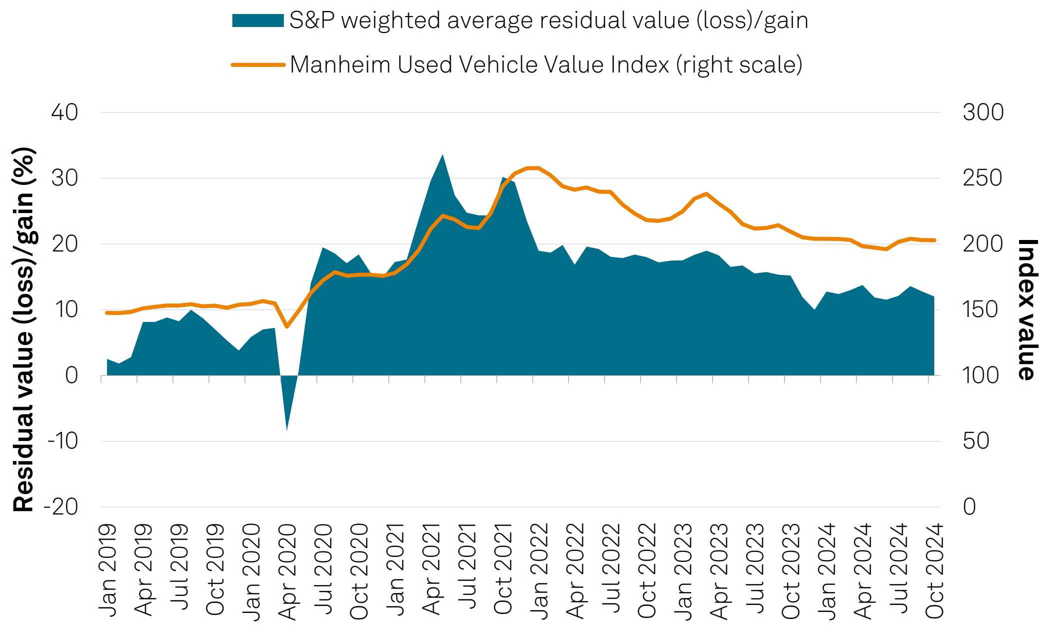
- Continued prudent residual value setting by the third-party forecaster in these ABS transactions partially mitigates residual value losses on returned vehicles.
- The transactions' deleveraging structures provide increasing credit enhancement that could be available to cover for unexpected or back-end risk.

We expect U.S. auto lease ABS volume in 2025 to increase slightly to $32 billion, up from 2024's estimated $31 billion, driven by forecasted higher new vehicle sales, increased incentives, and higher off-lease vehicle turn-ins, which could lead to higher leasing volume. Potential policy changes under the incoming Trump administration, including under the Inflation Reduction Act, and new tariffs could negatively impact vehicle sales. In addition, likely shifts in fiscal and trade policy under the administration could affect both the strength of the economy and the outlook for interest rates.

Auto Lease ABS | Residual Performance

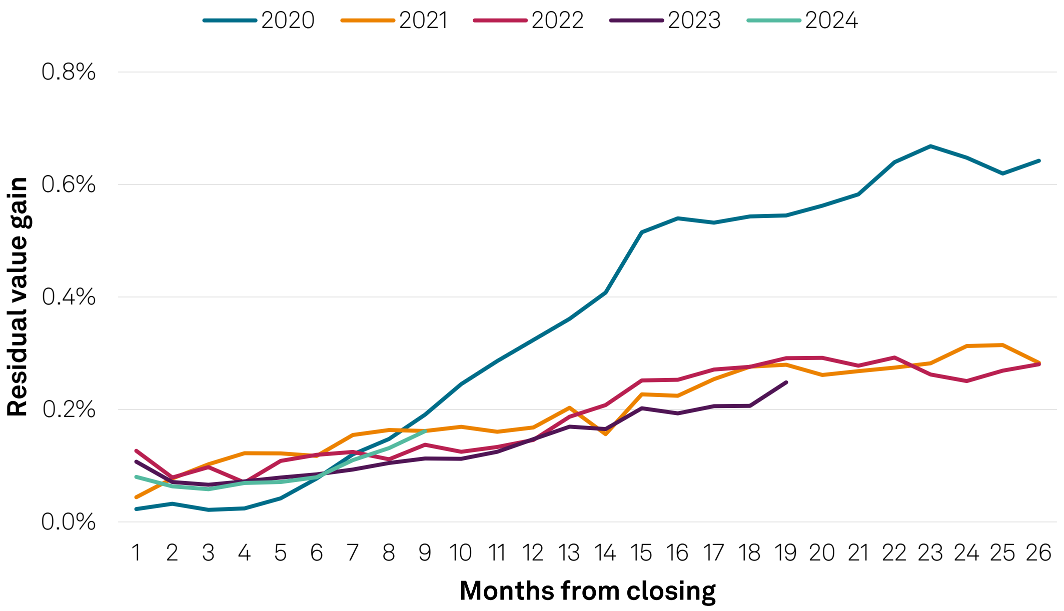
- Auto lease ABS rated by S&P Global Ratings continue to experience positive, albeit declining, residual value realization as used vehicle values normalize and decline year-to-year from 2021's historic peak.

Auto lease ABS residual performance



Source: S&P Global Ratings, Manheim Index by Cox Automotive.

Residual performance by vintage



Source: S&P Global Ratings

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Commercial ABS | Stable Performance Set To Continue

- **2025 collateral performance outlook:**
  - Losses in agricultural ABS collateral pools will continue to normalize from significantly low levels in 2022 and 2021. Losses for the 2024 and 2023 securitization vintages remain at or slightly below pre-pandemic levels. In 2024, lower crop prices were the primary driver to lower cash receipts according to the USDA. While we expect losses to increase in 2025, the trends will remain in a normalized range.
  - We expect loss performance in the transportation sector in 2025 to mirror the better performance in 2024. Loans originated in 2021 and 2022 experienced elevated losses driven by the steep decrease in freight rates post-pandemic, excess capacity, and high interest rates, fuel costs, and vehicle prices. These trends began to reverse in 2023 resulting in lower losses for 2024 vintage loans.
  - As in 2024, defaults and overall losses on construction equipment are likely to remain muted in 2025. We anticipate residential construction to increase slightly and infrastructure construction to continue to benefit from recent legislation. In rated construction ABS transactions, solid equity positions in the equipment coupled with stable secondary market values will continue to support strong recovery rates.
- **2025 ratings performance outlook:**
  - Since commercial asset performance tends to track the overall general economy, and given our views on collateral performance next year, we expect ratings to remain stable.

Commercial ABS | Modest Increase In Issuance

- We expect issuance volume to increase only modestly to $48 billion in 2025 given the significant growth in originations from $35 billion in 2023 to about $46 billion in 2024.
- We view broad based economic risks such as tariffs, higher interest rates, weak housing starts, and a reduction in infrastructure spending as the main risks to future credit performance.

2024 rating actions (no.)

Prior rating	Upgrades	Downgrades
AAA	N/A	N/A
AA	15	N/A
A	8	N/A
BBB	1	N/A
BB	N/A	N/A
B	N/A	N/A
CCC	N/A	N/A
CC/C	N/A	N/A

Source: S&P Global Ratings.

Rating distribution (% of current balance)

Source: S&P Global Ratings.

Student Loan ABS

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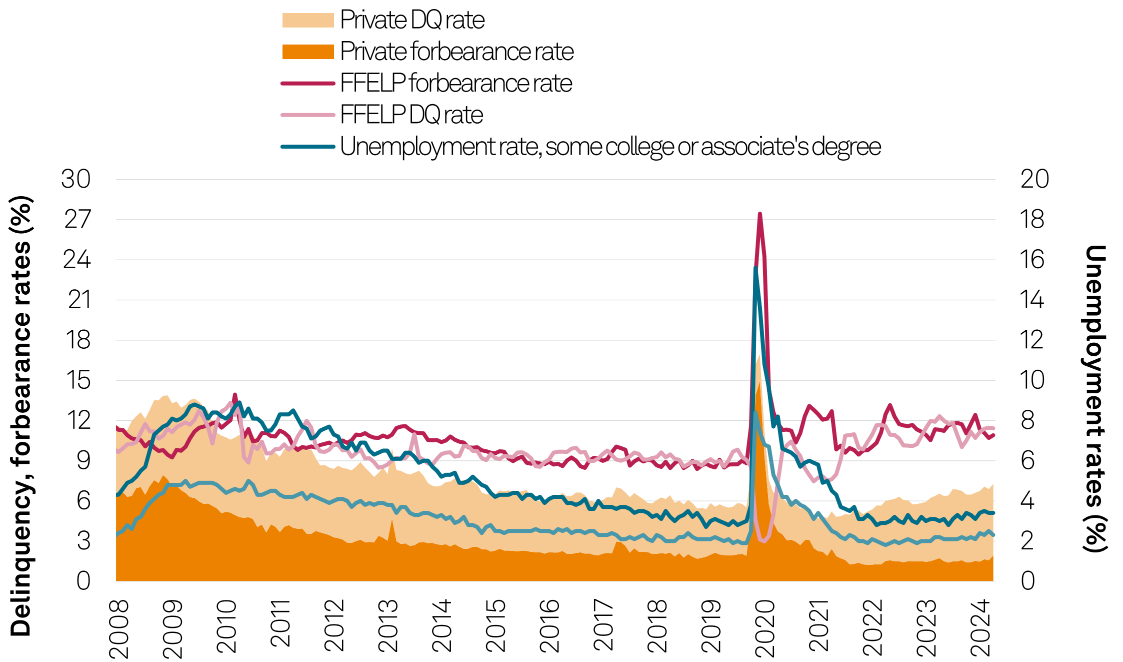
Student Loan ABS | Performance Expected To Weaken But Ratings To Remain Stable

- We expect private student loan collateral pool losses to increase slightly, continuing to move towards our base-case default levels for rated transactions.
- Consistent with the normalization of loss levels over the last several years, we expect delinquencies on private student loans to increase slightly in 2025 due to persistent inflation.
- We expect FFELP student loan transactions to experience lower prepayment rates as fewer obligors take advantage of federal and private loan consolidation alternatives. It remains unclear whether prepayments will slow because of fewer income driven repayment (IDR) options available to obligors.
- We expect a small number of FFELP transactions to experience liquidity pressures as legal final maturity dates set many years prior to the recent uptick in IDR utilization approach.
- Most FFELP ratings will likely remain stable due to the 97% government reinsurance of defaults.
- Most legacy and post-financial crisis private student loan transaction ratings should remain stable.
- We expect private student loan issuance levels will be comparable to 2024 levels.

Student Loan ABS | Delinquencies Generally Stable While Private Student Loan Defaults Up Slightly

Unemployment by education vs. delinquency, forbearance rates*

FFELP student loan delinquency and forbearance rates have settled above pre-pandemic levels.



*Data as of September 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.

Private student loan cumulative default rates by vintage

Recent private student loan vintage defaults appear to be more frontloaded.

Source: S&P Global Ratings.

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Personal Loan ABS

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Personal Loan ABS | Continued Growth In Loan Origination And Stable Ratings

We expect moderate growth in loan origination volume for 2025 fueled by:

- Stabilization in loan performance, tempered by a cautious outlook from lenders as they continue to monitor economic conditions and borrower creditworthiness.
- Stable or declining interest rates that may fuel additional consumer spending as well as debt consolidation and refinance activity.
- Emerging consumer loan segments (i.e., home improvement loans) and continued market penetration from the fintech sector.

We expect ratings to be stable or to rise depending on the stage in the transaction's life.

- For transactions in revolving periods, we expect stable ratings as current loan performance trends are reflected in our base case annualized loss assumptions for the worst-case pool.
- For transactions that have exited their revolving periods, or non-revolving fully amortizing structures, we expect stable-to-positive ratings performance due to deleveraging as the transactions amortize.

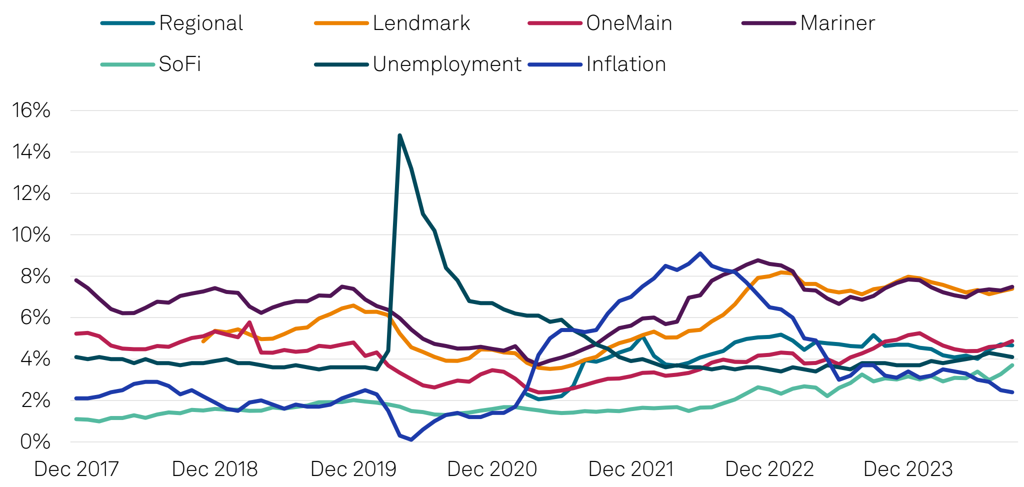
Expect ABS issuance volume to be comparable to 2024 with pockets of growth:

- Branch based lenders ABS volume likely stable with 2024 levels unless interest rates move materially lower.
- Home improvement ABS volume expected to be higher as elevated mortgage rates keep consumers in existing homes for longer and investor demand supports issuance.
- Fintech lender ABS issuance will continue to grow its share of market issuance.

Personal Loan ABS | Tighter Underwriting Resulting In Stabilization of Loan Performance Metrics

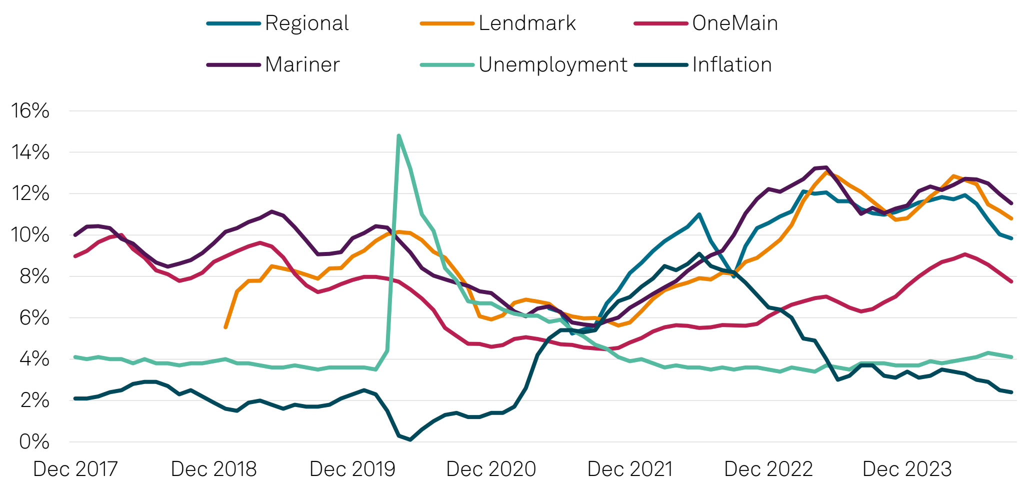
- Delinquencies from the 2021 and 2022 vintages are rising as stimulus funds were depleted and household budgets were impacted by inflation.
- Lender underwriting standards tightened in response to weaker loan performance. Loan origination composition is generally more conservative with respect to risk tiers (i.e., fewer originations to lower credit segments).
- Delinquency and annualized loss rates have stabilized in response to stricter underwriting standards. They peaked in late 2022/early 2023 at levels slightly higher than observed prior to the pandemic but have since trended lower.

Average 30+ day delinquency



Data as of September 2024. Annualized monthly gross loss rates exclude deals that are amortizing. Delinquency and annualized loss rates derived only from transactions rated by S&P Global Ratings. Sources: Federal Reserve Economic Data and S&P Global Ratings.

Annualized monthly gross loss rate



Data as of September 2024. Annualized monthly gross loss rates exclude deals that are amortizing. Delinquency and annualized loss rates derived only from transactions rated by S&P Global Ratings. Sources: Federal Reserve Economic Data and S&P Global Ratings.

Credit Card ABS

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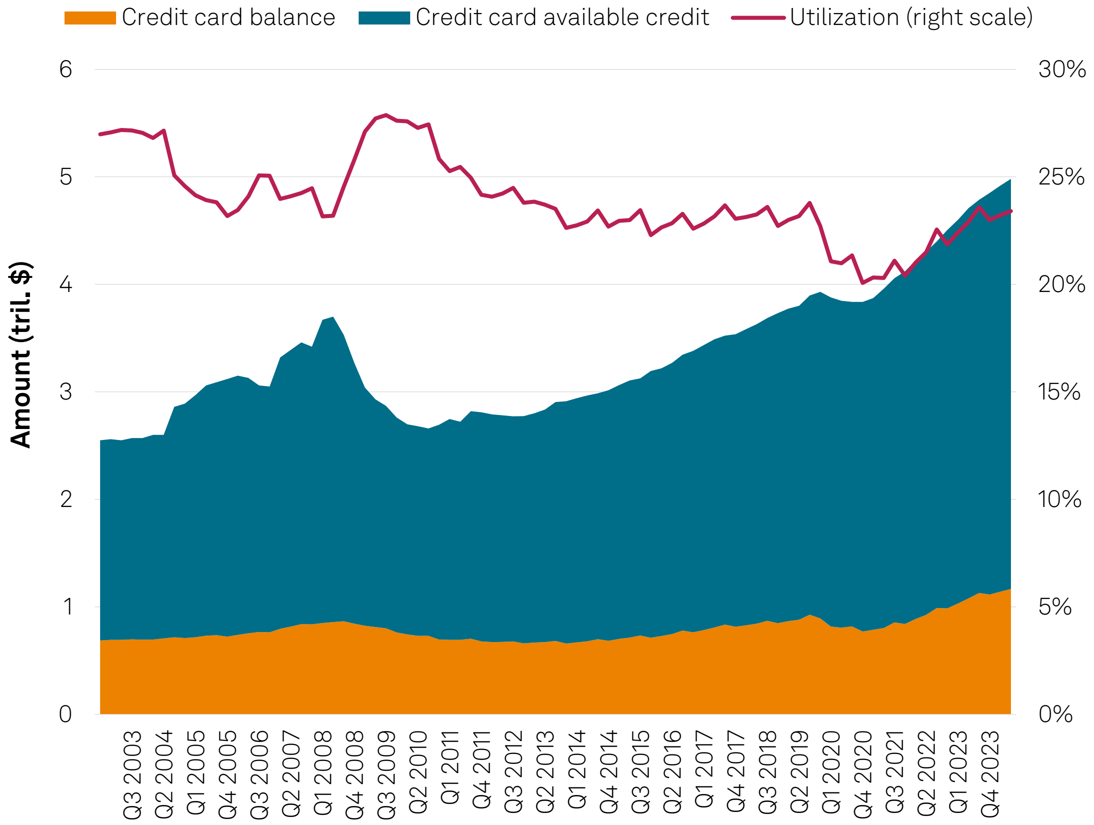
Credit Cards | Resilience Amid Economic Pressures

- We expect credit card ABS issuance of about $33 billion in 2025 (up from about $20 billion in 2024), with expected maturities of $30 billion. We expect somewhat weaker credit card collateral performance and stable rating trends over the next 12 months for the U.S. trusts we rate.
- Elevated interest rates and inflation continue to impact consumers' purchasing power and contribute to lower savings rates. Revolving consumer credit outstanding continues to hover over $1.3 trillion. The aggregate outstanding balance of U.S. credit card accounts increased 8% year over year at the end of third-quarter 2024, corresponding to a 2% increase in the credit card utilization rate (the balance divided by the limit), which stands at about 23% (see the Credit card utilization chart on the following slide).
- Credit card ABS generally remain a stable asset class. Delinquencies and charge-offs, though up from historically low pandemic-era levels, have normalized to pre-pandemic levels. Credit card issuers have managed risks with tighter underwriting and higher credit standards.
- Receivables for the credit card trusts we rate (tracked in our U.S. Bankcard Credit Card Quality Index [CCQI]) are generally of a higher credit quality than the broader U.S. credit card market due to higher seasoning and higher FICO scores. Trust receivable performance has been strong since the COVID-19 pandemic, with record low losses in 2021. Annualized net loss rates have increased to an average of 2.3% for the first nine months of 2024 from an average of 1.8% in 2023.

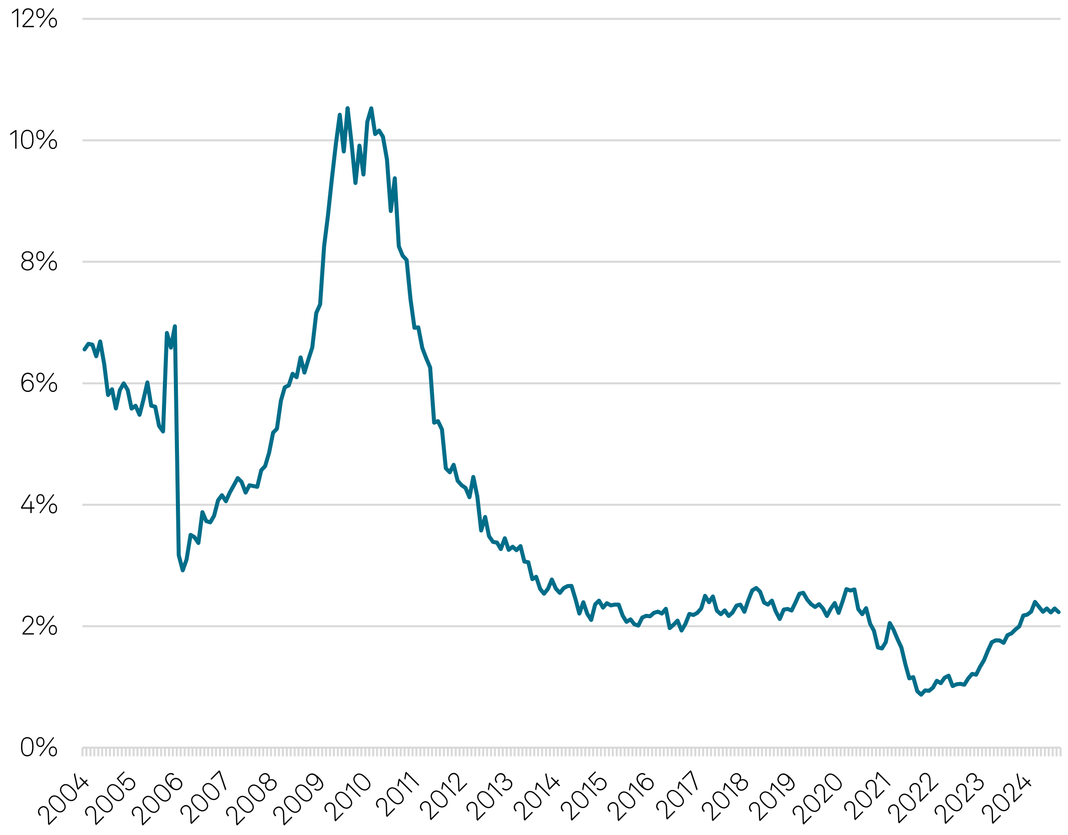
Credit Cards | Resilience Amid Economic Pressures

Credit card utilization



Sources: Federal Reserve Bank of St. Louis, New York Federal Reserve Consumer Credit Panel.

U.S. Bankcard CCQI: annualized net loss rate



CCQI—Credit Card Quality Index. Source: S&P Global Ratings.

Wireless Device Payment Plan ABS

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Wireless Device Payment Plan ABS | Loss Performance And Ratings Expected To Remain Stable

- Verizon has issued 24 note series out of the Verizon Master Trust established in 2021, including eight transactions in 2024 totaling $7.2 billion. We project Verizon's annual issuance volume for 2025 to be about $7 billion.
- Eligibility criteria for the 17 series rated by S&P Global Ratings are similar and are based on pools assumed to have a worse-case composition entering amortization; our cumulative expected net loss rate is approximately 4%.
- We expect the collateral performance of these Verizon wireless device payment plan transactions to be relatively stable in 2025. Thus, we expect Verizon's series' ratings to remain stable.

Esoteric ABS

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Esoteric ABS | What To Watch In 2025

- **Corporate securitization.** We expect 2025 issuance to be strong from existing issuers as anticipated repayment dates (ARDs) approach, while new issuer entries to the market will probably be minimal. Performance should be stable in 2025 with some contraction expected in quick-service restaurants. The big story for 2024 was TGI Fridays -- while we believe a payment default in the next 12 months is a virtual certainty as the manager's bankruptcy continues to progress, the securitization structure has thus far provided protection and oversight on the assets.
- **Data center.** Demand for data center capacity is accelerating, and we expect it to remain strong for the foreseeable future as computing needs continue to increase, especially for AI deployments. A record number of new leases for data center capacity were signed in 2024, with the bulk of the demand in the U.S. New data center development is somewhat limited in certain markets due to site availability and power constraints, which will support lease rates, occupancy levels, and valuations. We expect 2025 issuances to surpass 2024 levels as new issuers access the ABS market.
- **Small business.** Demand for Small Business Administration (SBA) loans is expected to remain strong due to continued tight lending standards at banks, which is likely to bring repeat issuers back to the ABS market and possibly attract new issuers as well. SBA loan deals have seen increased delinquencies due to inflation, higher interest rates, and higher operating costs. SBA loans are floating-rate and have seen increased volume over the past few years in line with the Fed's rate increases. Even though rates have dropped some recently, many of these borrowers are still paying interest rates well above those at origination. Ratings are expected to remain stable due to the strength of the transaction structures, which build overcollateralization by amortizing note principal faster than the collateral pays down.
- **Solar.** Growth in solar generation capacity is expected to continue in 2025. The impact on ABS issuance will depend on types of financing chosen by homeowners and the funding needs of lenders/lessors. Performance of existing securitizations will continue to be affected by household financial strength (driving delinquencies/defaults) and the interest rate environment and housing market dynamics (driving prepayments).

Esoteric ABS | What To Watch In 2025 (continued)

- **Timeshare.** Delinquencies have exceeded pre-pandemic levels as consumer savings erode. Issuance volume should remain steady as timeshare products attract new owners because of higher hotel costs. Inflation uncertainty and weaker consumer balance sheets present risks to timeshare sales.
- **Transportation.** We expect issuance to remain strong for aircraft and to soften for container and railcar. Collateral fundamentals have been strong in all three transportation sub-sectors, exhibiting stable asset utilization and lease rates. Supply-demand imbalance in 2024, due either to delays in new aircraft deliveries or to increased shipping times (caused by events in the Red Sea) supported pricing for older, in-use assets. As a result, we upgraded a total of 25 ratings across the three sub-sectors in 2024. However, container leasing may face headwinds in 2025 with the potential for higher tariffs and lower global trade volume.
- **Triple-net lease.** Certain retail-oriented portfolios saw an uptick in tenant bankruptcies, delinquencies, and vacancies in 2024 as retail sales continued to decline, which contributed to lower collections. We expect the weaker performance trend to continue into 2025. Cap rates may widen more for assets with weaker growth prospects. However, properties with long-term leases are less exposed to mark-to-market risk. Notes with upcoming ARDs may face tougher refinancing conditions if higher interest rates persist.
- **Utility-related securitization.** Issuance in 2025 is poised for growth as utilities finance clean energy and infrastructure modernization projects and recover costs from climate-related disasters. Historically, performance has been stable due to the strength of the true-up mechanism.

Esoteric ABS | Performance Outlook

12-month outlook as of December 2024

	Collateral performance	Rating trends
Corporate securitization	Somewhat weaker	Stable
Data center	Somewhat stronger	Stable
Small business	Somewhat weaker	Stable
Solar	Somewhat weaker	Stable to negative
Timeshares	Somewhat weaker	Stable
Transportation - aircraft	Somewhat stronger	Stable to positive
Transportation - container	Stable	Stable to positive
Transportation - railcar	Stable	Stable to positive
Triple-net lease	Stable	Stable
Tobacco settlement	Somewhat weaker	Stable to negative
Utility-related securitization	Stable	Stable

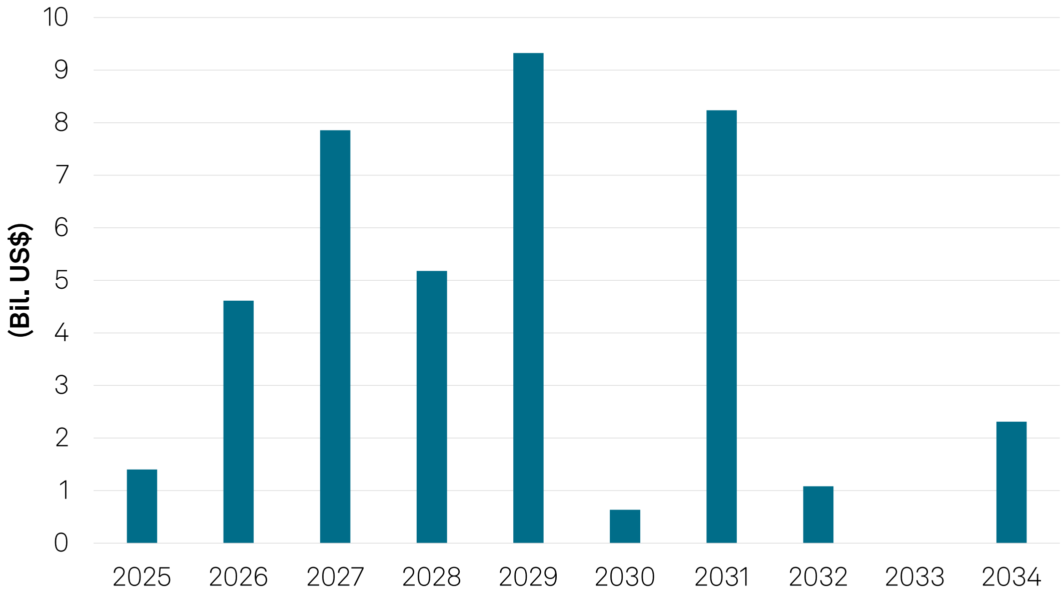
Source: S&P Global Ratings.

- Most esoteric ABS sectors continue to show stable to somewhat weaker collateral performance, as the underlying obligors are impacted by weaker consumer discretionary spending. However, most portfolios benefit from asset and obligor diversification.
- Rating trends are mostly stable, or stable-to-positive except for solar and tobacco, which are performing slightly weaker than initial expectations.
- Transportation sectors are supported by stable asset utilization, lease rates, and residual values. We upgraded 22 ratings in 2024.
- Small business deals have exhibited increased delinquencies due to inflation, higher interest rates, and higher operating costs.
- We expect data center ratings to be stable despite the strong AI-driven growth as leverage continues to keep up with asset expansions.

Esoteric ABS | Strong Issuance Expected In 2025

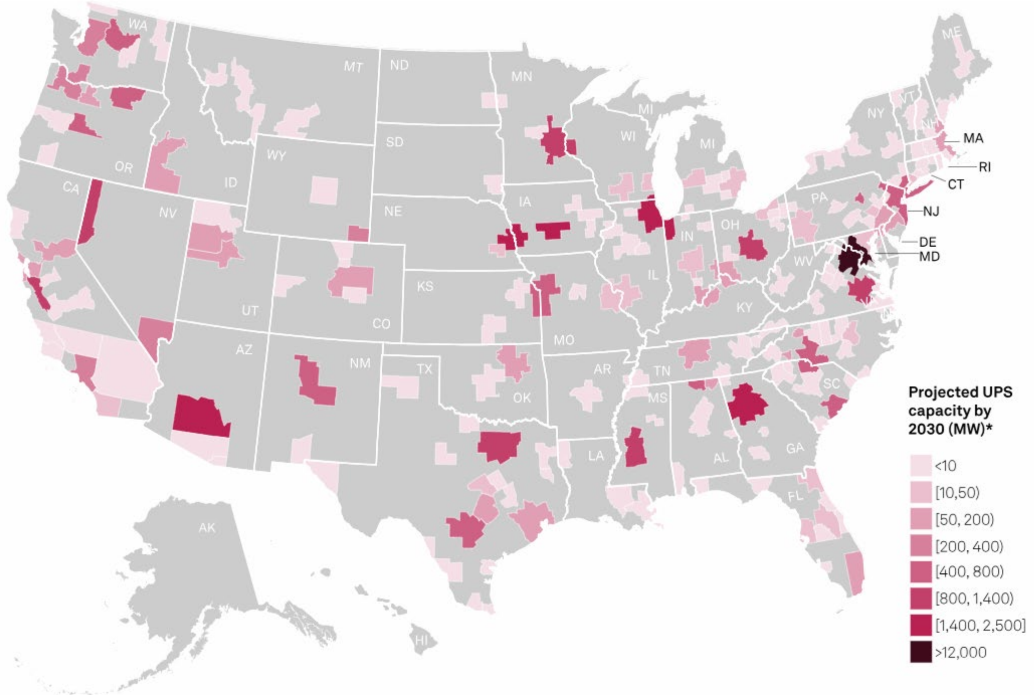
- We expect strong issuance volume to continue for corporate securitizations as ARDs approach for existing issuers.
- Data center demand is accelerating as computing needs continue to increase with AI deployments.

Corporate securitizations: anticipated repayment dates by balance



Source: S&P Global Ratings.

Data centers: significant expansion of power capacity

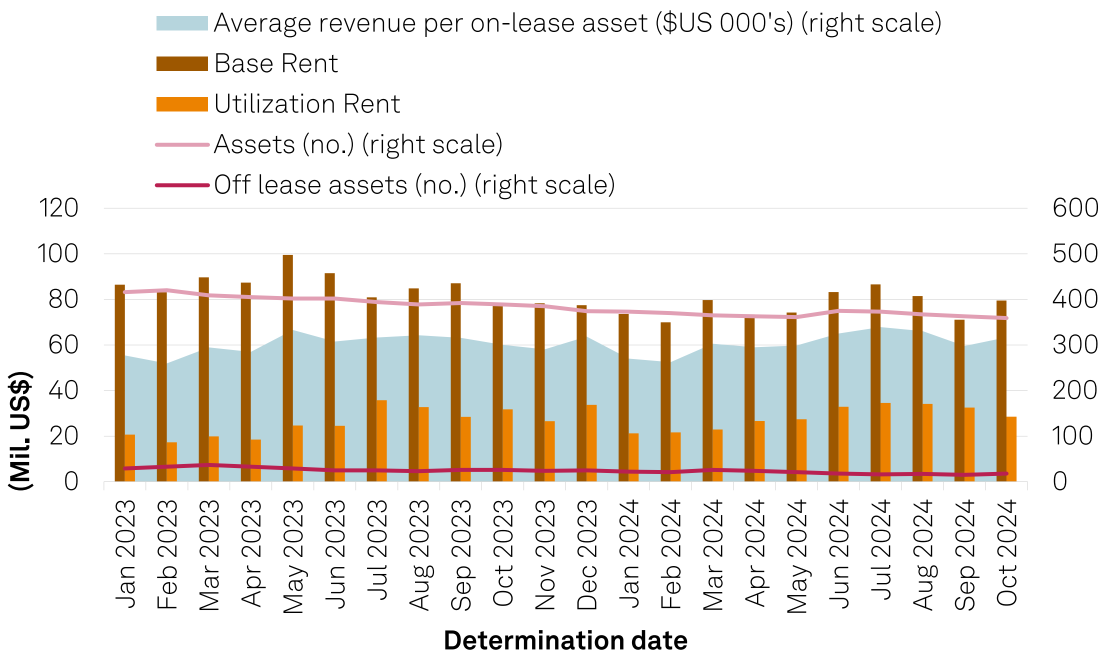


Data as of first-quarter 2024. 41 data centers could not be mapped to an MSA -- about 350 MW of projected UPS capacity were not assigned to an MSA. *Projected UPS capacity is the sum of current operating UPS capacity, planned expansion to operating UPS capacity, and the estimated UPS capacity of data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

Esoteric ABS | Performance Trends In Aircraft And Solar

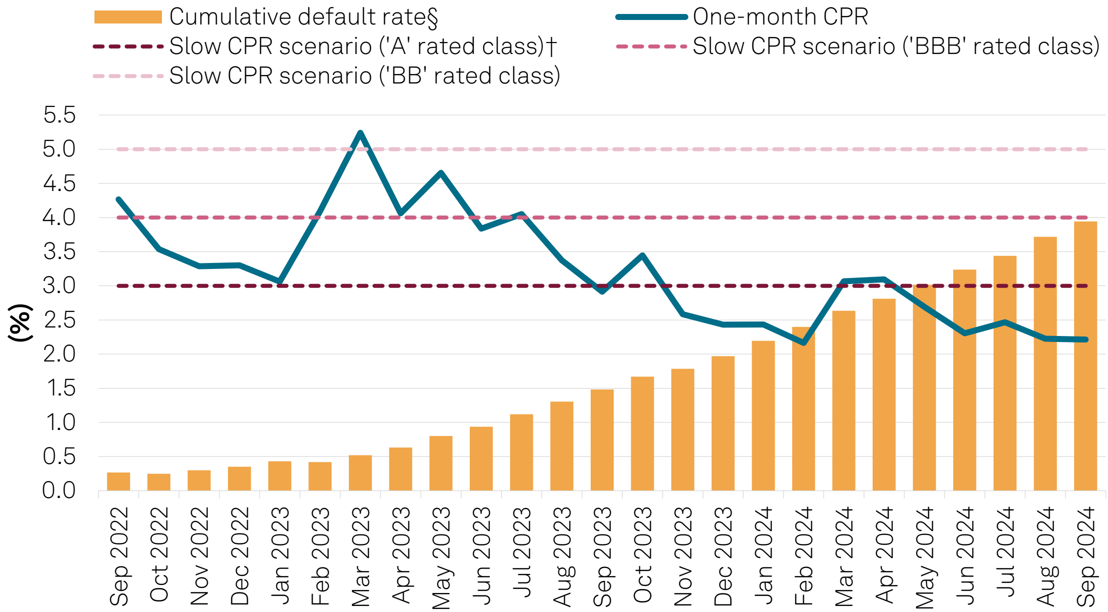
- Aircraft base and utilization rent collection remain stable, and the number of off-lease aircraft declined given strong demand.
- Solar loan default rates have accelerated, and prepayment rates have been slower than expected.

Aircraft: monthly payment trend



Source: S&P Global Ratings.

Solar: 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.

S&P Global Ratings

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ABCP | Stability Expected Despite Recent Bank Rating Volatility

We expect ABCP collateral performance in 2025 to be stable despite growing risks among certain asset types.

- Although some asset types show signs of weakness as debt levels remain elevated and financing costs rise, overall assets financed in partially supported ABCP conduits benefit from strong performance as evidenced by actual credit enhancement to loss horizon losses of 435x. In addition, credit enhancement in these transactions is commensurate with high investment grade ratings of 'A-1' or higher.
- Growth in unemployment and affordability issues remain headwinds to overall consumer demand heading into 2025.

We expect rating performance in 2025 to be stable as banks remain well positioned to weather potential risks around commercial real estate, high corporate and government-sector leverage, and evolving risks.

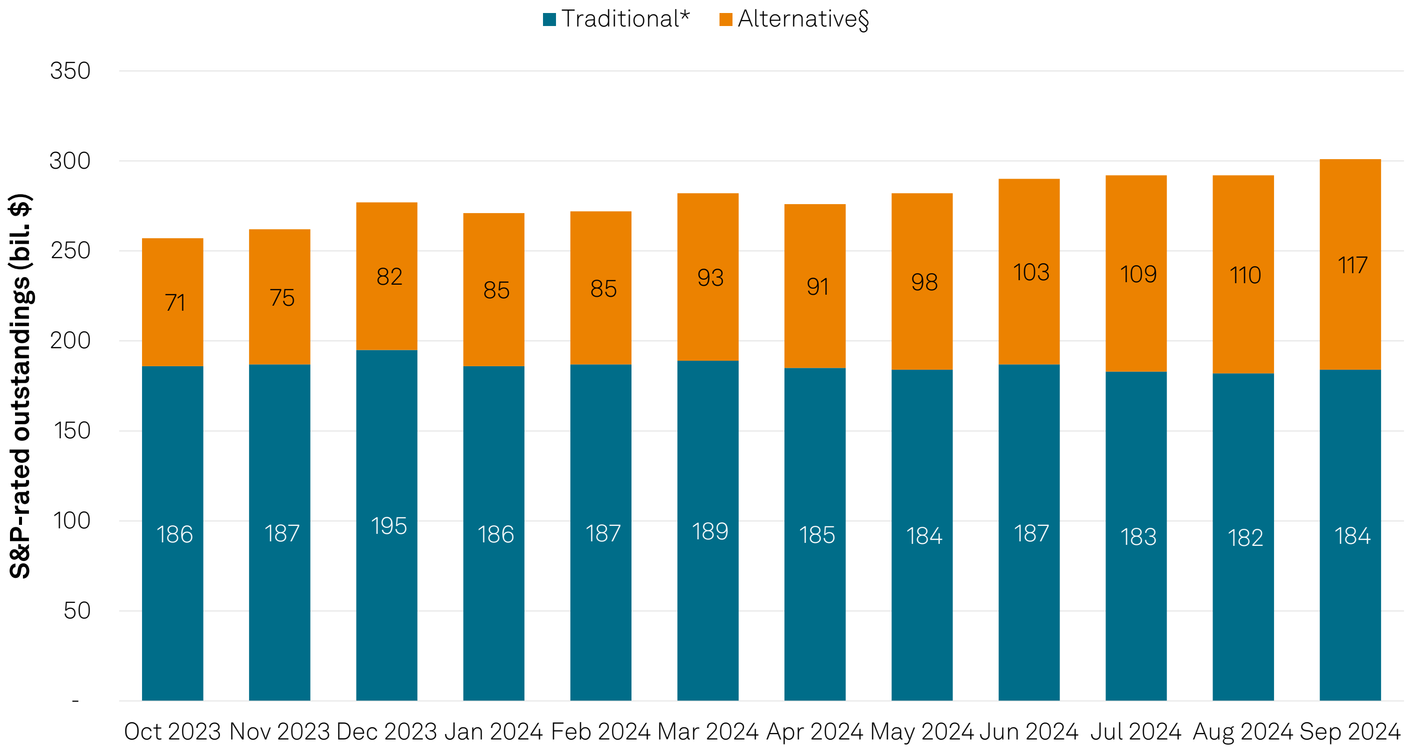
- As interest rate cuts continue, a key risk is that rates settle at higher levels than currently predicted, leading to market volatility and maintaining elevated borrowing costs.
- Evolving risks, including new technologies (such as AI), climate change, and cyber attacks, could widen credit differentiation among bank ratings.

Outstanding balances among alternative derivative-backed conduits, particularly among non-bank sponsors, grew 37% year-to-date to $117 billion in September 2024, while traditional multi-seller conduits remained flat over the same period. This reflects the growing use of ABCP to satisfy regulatory relief demand from global systemically important banks (GSIBs).

We expect ABCP outstandings to steadily increase in 2025 primarily fueled by alternative program issuances.

ABCP | Rated Outstandings Break $300 Billion For The First Time Since 2010

Growth in derivative-backed ABCP outstandings are expected to continue as GSIB demand for regulatory capital relief continues into 2025

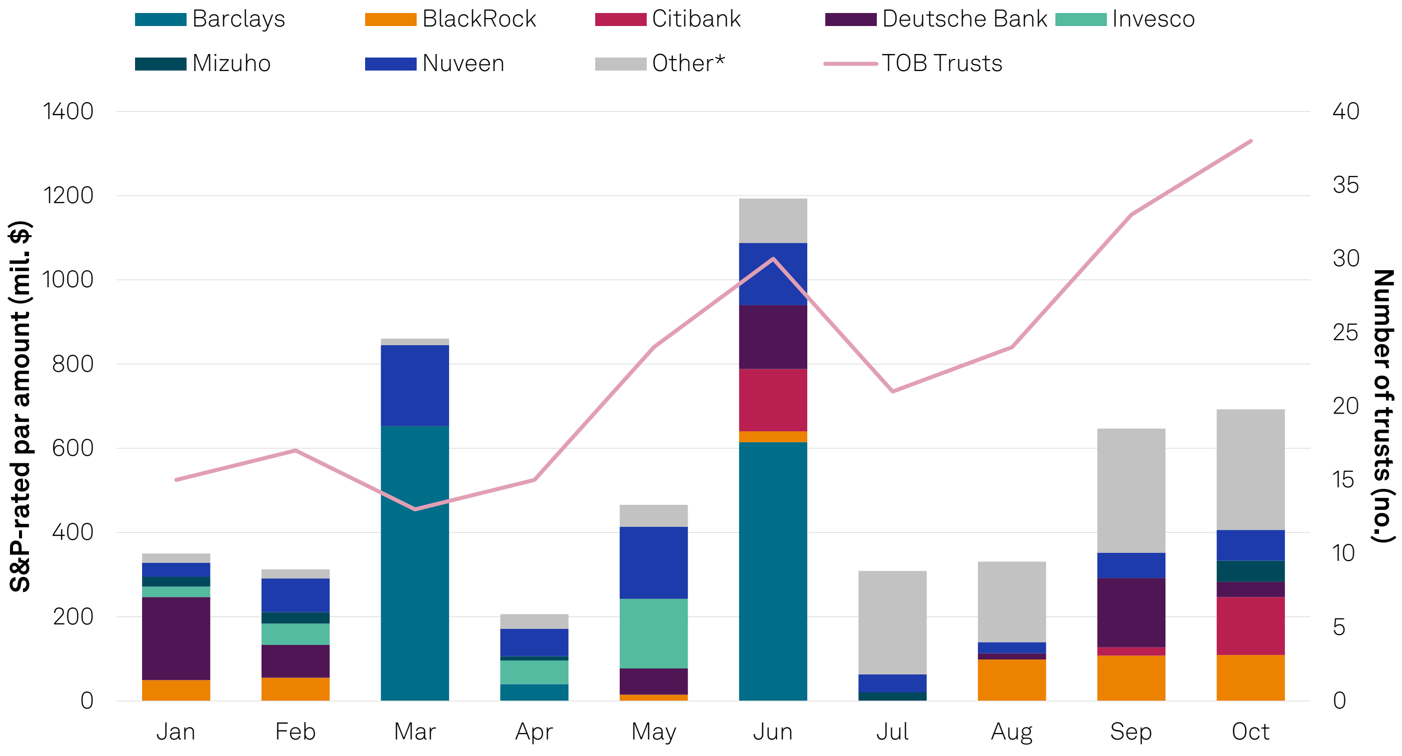


*Includes multi-seller conduits. §Includes derivative-backed conduits. Source: S&P Global Ratings.

- ABCP outstandings have steadily risen in 2024 primarily due to the rise in alternative derivative-backed conduits, which provide GSIBs with regulatory capital relief.
- We rated 10 new conduits in 2024 – bringing the total to 66 – which we expect to continue to drive up rated outstandings in 2025.
- In the fourth quarter, we took six rating actions on ABCP conduits following rating actions on Toronto Dominion Bank N.A. (three conduits downgraded to A-1 from A-1+) and JPMorgan Chase Bank N.A (three conduits upgraded to A-1+ from A-1).
- ABCP outstanding totaled $349.4 billion in October 2024 as reported by the Federal Reserve.

Tender Option Bonds | Issuance Expected To Increase As Spreads Widen

Issuance is expected to rise in 2025 as interest rates fall and spreads between short- and long-term yields rise.



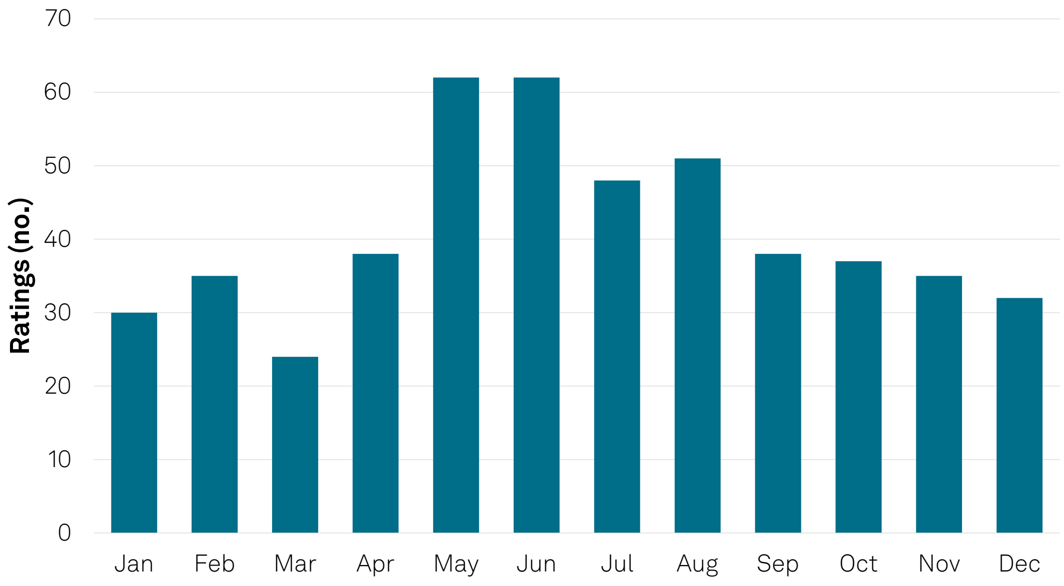
*Includes private funds. Source: S&P Global Ratings.

- We expect tender option bond (TOB) issuance to increase into 2025 as interest rates continue to fall.
- Citibank's new bank-sponsored program, from which we rated nine TOB trusts in second-half 2024, is expected to expand in 2025.
- Year-to-date TOB issuance totaled $5.3 bil. as of Oct. 2024, compared to $10.0 bil. over the same period in 2023 when refinancing activity surged.
- Issuance remained muted in 2024 as the effects of elevated interest rates and an inverted yield curve reduced the spread between short- and long-term yields for fund sponsors.
- A quarter of our $29 bil. rated issuance is securitized with tax-secured municipal debt, which may be impacted following immigration reform under the incoming administration.

Variable-Rate Demand Obligations | Rating Stability Amid Limited Supply

- Elevated rates will continue to dampen supply of variable-rate demand obligations (VRDOs) in 2025 and, in turn, contribute to further rate volatility in short-term tax-exempt markets.
- Despite some bank rating actions in 2024, all banks among rated VRDOs currently hold stable outlooks.

Support agreement expiration dates heading into 2025



Source: S&P Global Ratings.

Stability across banks supporting rated VRDOs

Credit/Liquidity provider	Par amount ($ mil.)	Rating	Outlook
Toronto Dominion Bank N.A.	25,445	A+/A-1	Stable
Bank of America N.A.	21,968	A+/A-1	Stable
JPMorgan Chase Bank N.A.	17,035	AA-/A-1+	Stable
Barclays Bank PLC	12,587	A+/A-1	Stable
U.S. Bank N.A.	9,478	A+/A-1	Stable
Sumitomo Mitsui Banking Corp.	8,803	A/A-1	Stable
Fannie Mae*	7,979	AA+/A-1+	Stable
PNC Bank N.A.	7,444	A/A-1	Stable
Truist Bank	5,186	A/A-1	Stable
Royal Bank of Canada	4,876	AA-/A-1+	Stable
State Street Bank and Trust Co.	4,782	AA-/A-1+	Stable

*Rating linked to sovereign rating of United States. Source: S&P Global Ratings.

Canadian Structured Finance

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Canadian SF | Performance To Normalize But Remain Weak; Ratings Expected To Remain Stable

Our 2025 outlook for Canadian ABS is for somewhat weaker collateral performance.

- Consumer affordability stress should ease due to the significant decline in CPI inflation, back to the 2% target, and 175-basis point reduction in interest rates. Inflation in shelter costs, however, remain elevated, which, along with high unemployment, gradual GDP growth, and elevated debt service ratios--particularly mortgage debt service ratios--remain headwinds in 2025. Lower interest rates and increased savings rates, together with the prime nature of collateral pools, are counterpoints to support normalizing but somewhat weaker consumer-related collateral performance in 2025.

We expect ratings to remain stable in 2025.

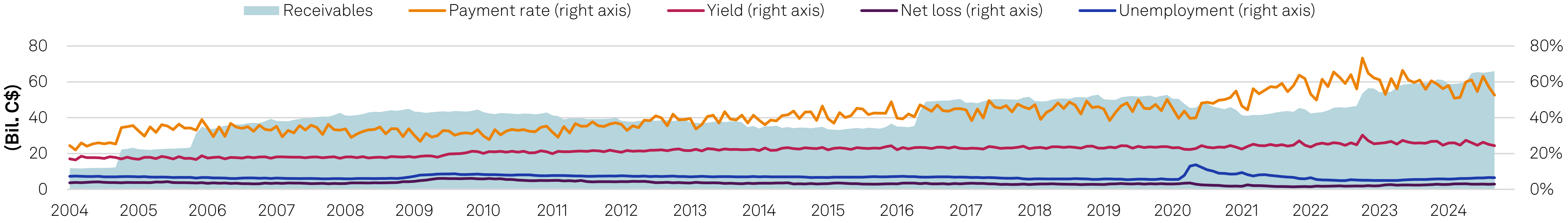
- In 2024, notwithstanding the stressed economic environment, we revised downward our ECNLs, which, together with deleveraging, led to us raising or affirming our ratings for auto ABS. We expect ratings to remain stable given our expectation for collateral performance.
- Receivables for the credit card trusts we rate and track in our Canada Bankcard CCQI are generally of a higher credit quality than the broader Canadian credit cards market. Given that our base-case and stress assumptions are calibrated against major economic downturns, performance and ratings were not under pressure in 2024 and should remain stable in 2025.

Declining inflation and lower interest rates are positive trends for issuance in 2025.

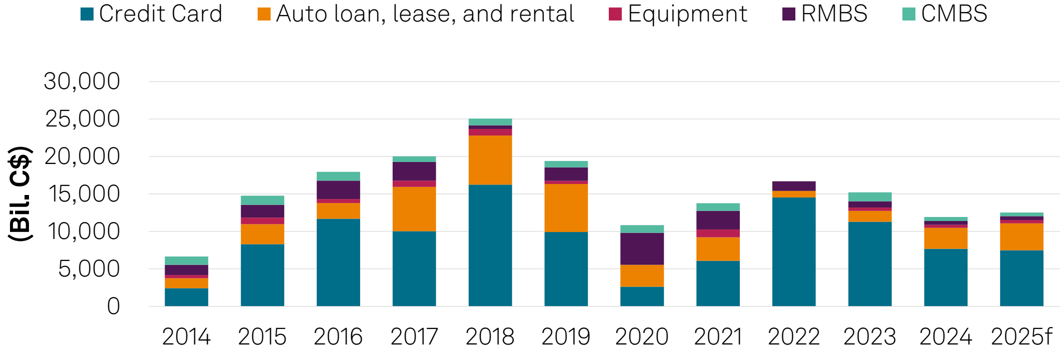
- We expect Canadian public term ABS volume to exceed C$12.0 billion in 2025, driven by an estimated C$7.5 billion in credit card ABS, 25%-30% of which is expected to be cross-border transactions in the U.S. market. Auto-related ABS issuance is expected to be C$3.6 billion, with a greater proportion in auto lease ABS as originators and consumers manage affordability and higher vehicle prices.
- We expect commercial farm equipment ABS volume of C$0.5 billion and a similar amount for both non-insured RMBS and CMBS. There is potential for higher RMBS volumes from non-covered bonds issuers as lower interest rates could increase demand for residential mortgages, but this is counterbalanced by elevated housing prices. Independent of ABS, we expect covered bonds issuance of approximately C$50.0 billion, reflecting an expected increase in residential mortgage credit, maturities, and funding needs.

Canadian SF | Declining Inflation And Lower Interest Rate Augur Well For Issuance

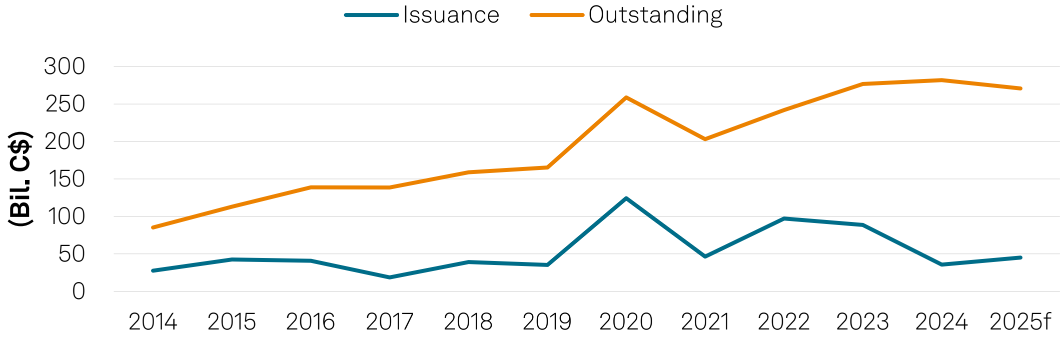
Canadian CCQI: Stable performance; base-case and stress assumptions are calibrated against major economic downturns



Canadian term ABS public issuance will improve marginally



Canadian Covered Bonds issuance expected to increase in view of mortgage credit growth



f--Forecast. Source: S&P Global Ratings.

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