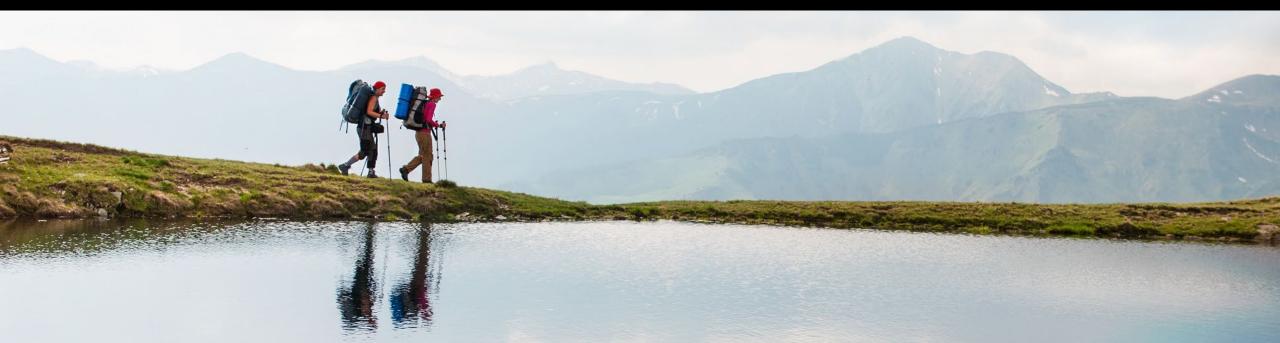


EMEA Structured Finance Chart Book

July 2024

Andrew South Casper Andersen Alastair Bigley Sandeep Chana Antonio Farina Mathias Herzog Doug Paterson

This report does not constitute a rating action



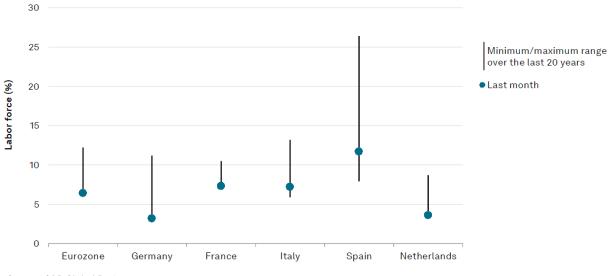
Highlights—News

- Macro. Lower energy prices and a resilient labor market (see chart) have enabled the eurozone economy to return to growth and the European Central Bank (ECB) to cut rates. We expect a return to potential growth by 2025, with inflation at 2% by mid-year. This would permit the ECB to cut rates by 25 basis points each quarter until the deposit rate bottoms out at 2.5% in the third quarter of 2025. In the U.K., the labor market is cooling quickly and consumers remain cautious, saving a greater share of their income than before. We think the Bank of England will start lowering interest rates gradually from August, with a drop of two percentage points by end-2025.
- Issuance. Investor-placed securitization issuance for June 2024 was €10.8 billion—down from the post-crisis record of May but still substantially higher than the €4.5 billion total from June 2023. Following strong activity over the past several months, overall issuance in

the first half of the year was more than \in 75 billion, comfortably exceeding the previous post-crisis record of \in 56 billion in 2018. European benchmark covered bond issuance was strong earlier in the year but stalled significantly in June due to wider market volatility around the snap election called in France. Benchmark issuance in June was only \in 4.4 billion—at least a 10-year low for the month. Cumulative issuance reached \in 107 billion in the first half of 2024.

• Rating actions. In June 2024, we raised 26 of our ratings on European securitization tranches in some leveraged loan CLOs and a few southern European ABS and RMBS. There were also nine downgrades, mostly in the Elizabeth Finance 2018 U.K. CMBS transaction, where all tranches are now likely to default.

Unemployment rate ranges



Source: S&P Global Ratings.

Highlights—Aging Populations Could Drive Reverse Mortgage Demand



Comparison between traditional and reverse mortgage

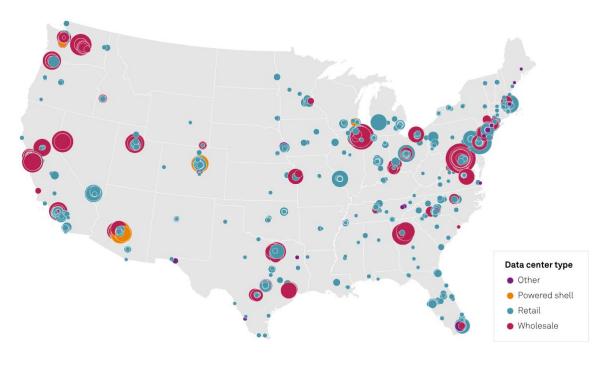
Source: S&P Global Ratings. For more details, see "<u>ABS Frontiers: Aging Populations Could Drive Demand For Reverse</u> <u>Mortgages</u>," published July 12, 2024.

- For at least four decades, many countries have seen an upward drift in the proportion of their populations that are aged over 60 years and nearing or in retirement.
- If the trend continues, demand for reverse mortgages could increase in the future, particularly because many seniors are asset rich and cash poor.
- The reverse mortgage can be a useful financial product that allows elderly homeowners to stay in their dwellings while they tap the equity that they built up through the years.
- With reverse mortgages, different paths of interest rates and home price appreciation can lead to varying rates of home equity erosion, posing risks to both the lender and borrower.
- We have established criteria for rating new securitizations backed by reverse mortgages in the U.K., and we would likely borrow these to rate similar transactions in other countries. This would involve a consideration of regional variation in housing finance and regulations along with key risks.

Highlights—The Four Main Approaches For Rating Data Center Financings

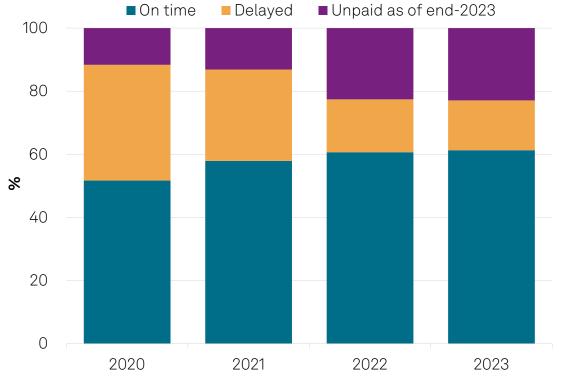
- Data centers have taken center stage in commercial real estate markets worldwide due to the exponential growth of data generation and the broad migration to cloud computing, remote work, and artificial intelligence (AI).
- When rating transactions or companies backed by data center assets, we use one of four main analytical approaches: ABS, CMBS, corporate/REIT, or project finance.
- When a data center operator issues the debt, we apply our corporate ratings criteria. A CMBS or ABS analysis is suitable when conditions such as legal risk are consistent with a structured finance rating, including a bankruptcy-remote special-purpose entity (SPE).
- We could also use our project finance approach to rate a secured data center financing issued by a limited-purpose entity or its holding company. Factors leading us to take this approach include unmitigated construction risk, conditions (e.g., legal risk) that are inconsistent with a structured finance rating approach, and significant exposure to operational risk.

Operational data centers in the contiguous U.S.



As of fourth-quarter 2023. Circles size based on kW of UPS power utilization. Source: S&P Global Market Intelligence 451 Research. For more details, see "<u>The Four Main Approaches For Rating Data Center Financings</u>," published June 13, 2024.

Highlights—39% Of Interest-Only Borrowers In U.K. RMBS Miss Final Payment



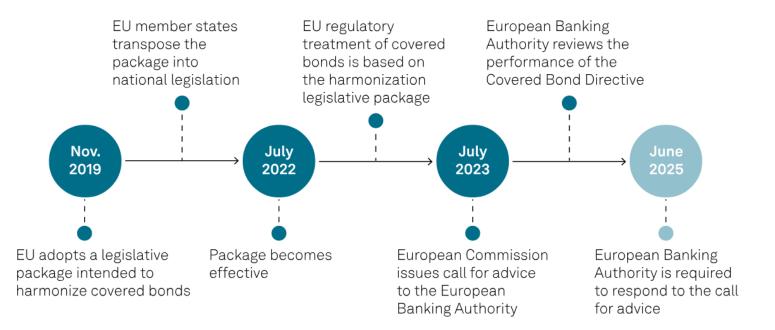
Interest-only repayment performance, by maturity year

Source: S&P Global Ratings. For more details, see "<u>Over One-Third Of U.K. Interest-Only RMBS Borrowers Miss Maturity</u> <u>Payments</u>," published June 17, 2024.

- Our analysis of interest-only mortgage loans in 80 collateral pools backing legacy U.K. nonconforming and buy-to-let (BTL) RMBS shows that 39% of borrowers failed to make their final "bullet" mortgage payment at maturity between June 2020 and December 2023.
- However, many borrowers were able to redeem their mortgage at a later date, and only 18% of borrowers from this cohort still had outstanding mortgage payments as of December 2023.
- Borrowers who have taken out interest-only loans are expected to either refinance them or use a repayment vehicle to pay them off at maturity.
- Exit routes for interest-only borrowers have curtailed. Although we expect interest rates to fall in the medium term, the weak outlook for house price growth means certain borrowers may struggle to repay their mortgages at maturity.

Highlights—EU Covered Bond Harmonization: Next Steps

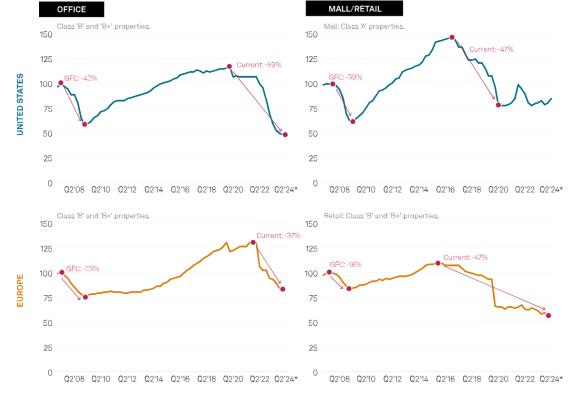
- Two years after the EU's Covered Bond Directive became effective, the sector is readying itself for proposals which may emerge from the European Commission's assessment of the implementation process.
- Unconventional monetary policy has made it more difficult to isolate the market impact of the new framework, but we consider that it has been broadly credit positive.
- Potential developments could include a third-country equivalence regime, or a new type of covered bond backed by loans to small and midsize enterprises .
- We see limited scope for further harmonization, although there are still discrepancies in how local covered bond markets treat extendible note features.



Timeline for harmonization of EU covered bond regulation

Source: S&P Global Ratings. For more details, see "EU Covered Bond Harmonization: Next Steps," published June 26, 2024.

Highlights—Commercial Real Estate Stress Reflected In CMBS Downgrades



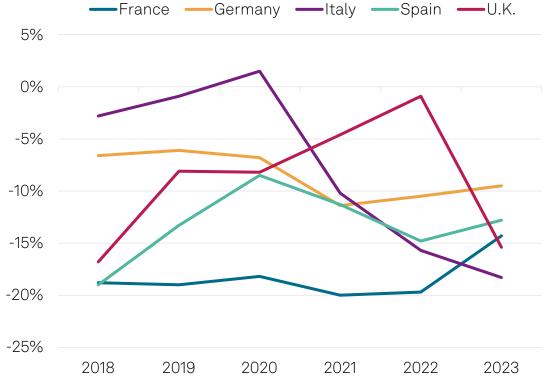
Commercial real estate value indices, by subsector

* Europe as of Q1 2024, U.S. Q2 2024. GFC—Global financial crisis. Source: Green Street, S&P Global Ratings. For more details, see "<u>U.S. And European Commercial Real Estate Market Stress Reflected In CMBS Downgrades</u>," published July 9, 2024.

- Higher interest rates, e-commerce, and the jump in popularity of remote working have produced unprecedented levels of stress in commercial real estate (CRE).
- Some segments are now facing market value declines that are greater than during the global financial crisis (GFC). In particular, the market value of office and retail properties has declined significantly over several years in both the U.S. and Europe.
- CMBS transactions have seen a corresponding rise in credit risk. Given the persistent and severe deterioration in underlying CRE markets, we have lowered 732 (26.2%) of the 2,799 CMBS ratings that were outstanding at the beginning of 2020. Of these, 134 tranches have defaulted (i.e., a 4.8% default rate).
- Higher interest rates continue to increase the challenge of refinancing commercial mortgage loans, and more defaults could follow, particularly for loans secured on lower-quality office properties in secondary locations. This could put further pressure on CMBS ratings.

Highlights—Electric Shock: How Engine Technology Affects Auto ABS Risk

- Vehicle electrification is here to stay. As the market for used battery electric vehicles (BEVs) and plug-in hybrid vehicles (PHEVs) matures, more residual value data for these transmission types is becoming available.
- Used BEVs generally depreciate more than PHEV vehicles while internal combustion engine (ICE) residual values generally outperform both BEVs and PHEVs. Hybrid electric vehicles also generally perform at least as well as ICE vehicles.
- In auto ABS pools secured by a significant proportion of BEVs and PHEVs, we generally factor the used vehicle price uncertainty in our rating analysis and have recently updated our approach based on used car price depreciation for these engine types.
- Previously, we considered PHEV and BEV vehicle types in the same combined EV excess concentration limit. To reflect residual value data trends, we have adjusted our analytical approach and split PHEVs and BEVs into two separate categories and updated our concentration limits.



BEV--Battery electric vehicle. ICE--Internal combustion engine. Source: S&P Global Ratings. For more details, see "<u>Electric Shock: How Engine Technology Affects Auto ABS Risk</u>," published July 10, 2024.

Residual value annual difference, BEV vs. ICE

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Credit Performance	13
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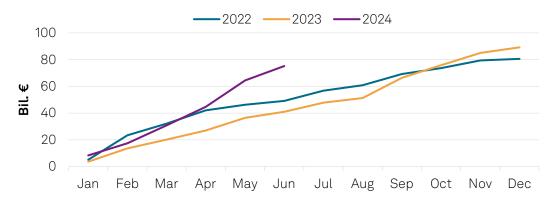


Issuance—Securitizations

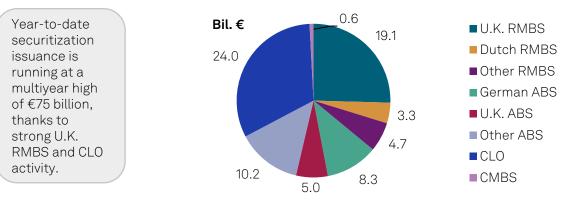
1. Investor-placed securitization issuance



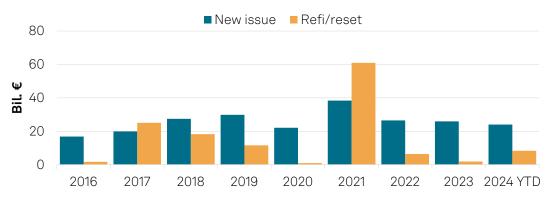
3. Cumulative investor-placed securitization issuance



2. 2024 YTD investor-placed securitization issuance, by sector



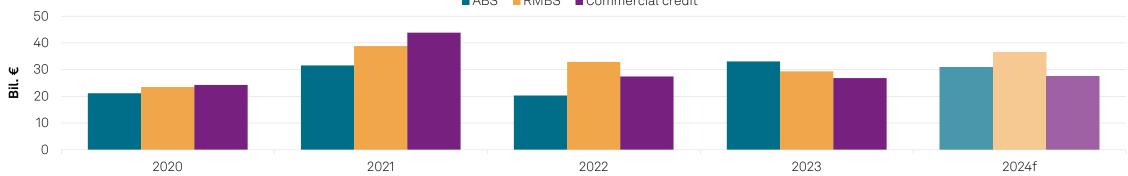
4. CLO refinancing and reset issuance



1-3. Year-to-date (YTD) figures as of end-June each year. Excludes CLO refinancings and resets. Source: S&P Global Ratings. 4. Source: S&P Global Ratings, Pitchbook LCD.

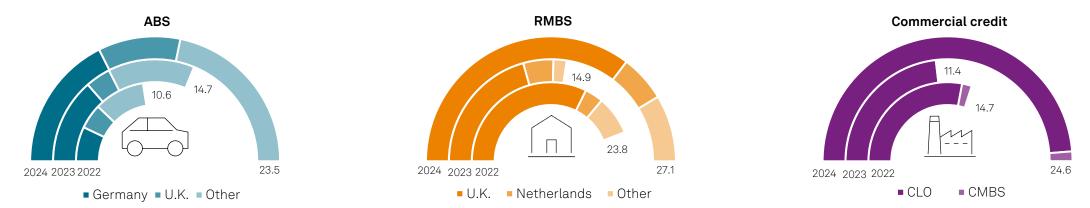
Issuance—Securitizations

Annual investor-placed securitization issuance



■ ABS ■ RMBS ■ Commercial credit

YTD investor-placed securitization issuance, by subsector (bil. \bigcirc)



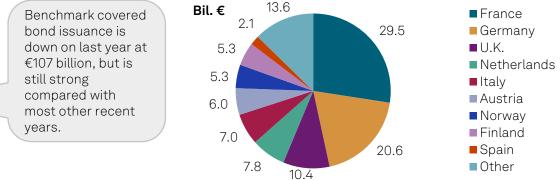
f--Forecast. Year-to-date (YTD) figures as of end-June each year. Commercial credit includes CLOs and CMBS. Excludes CLO refinancings and resets. Source: S&P Global Ratings.

Issuance—Covered Bonds

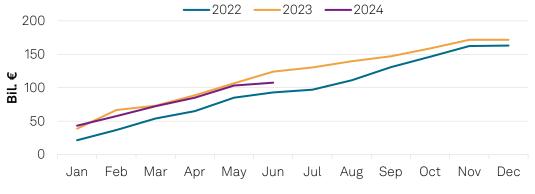
1. Benchmark covered bond issuance



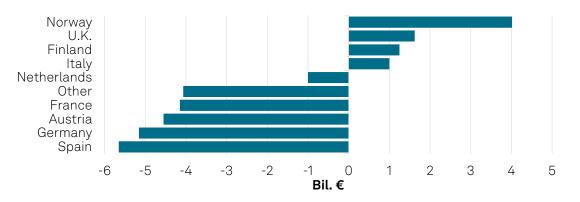
2. 2023 YTD benchmark covered bond issuance, by country



3. Cumulative benchmark covered bond issuance



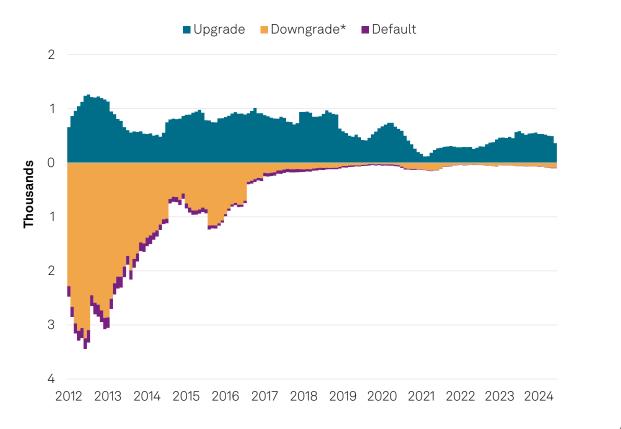
4. Change in YTD issuance, 2024 vs. 2023, by country



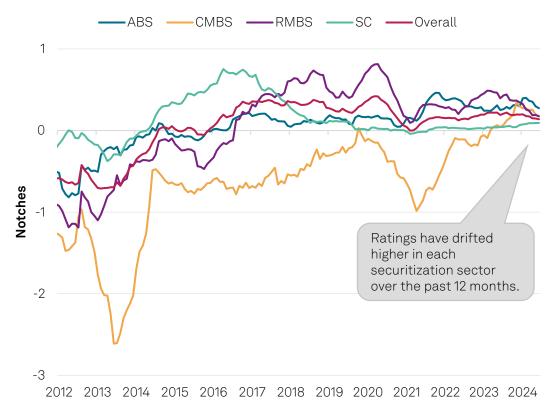
^{1-4.} Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings.

Credit Performance—Long-Term Ratings Drift

Rating action count, 12-month rolling



12-month trailing average change in credit quality



As of end-May 2024 SC--Structured credit. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Ratings.

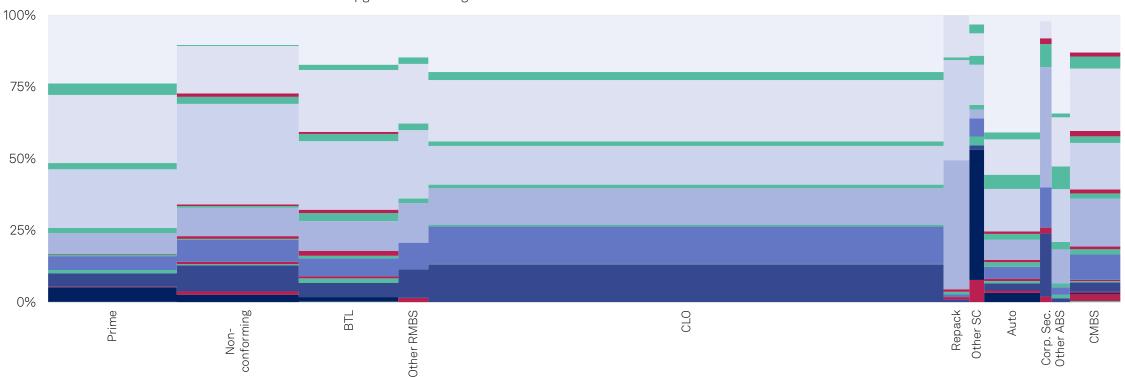
*Excluding defaults. Excludes covered bonds. Source: S&P Global Ratings.

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Ratings

Credit Performance—Ratings Heatmap

Distribution of ratings and 12-month transitions



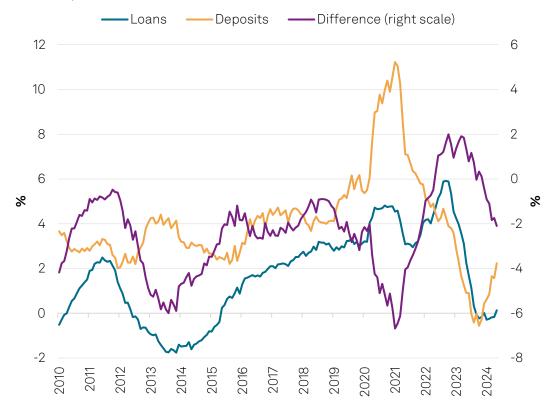
■Upgrades ■Downgrades ■CCC/CC ■B ■BB ■BB ■A ■AA ■AAA

BTL--Buy-to-let. SC--Structured credit. Based on rating transitions over the previous 12 months as of end-June 2024. Excludes confidential ratings and covered bonds. Source: S&P Global Ratings.



Fundamentals—Issuance Drivers

12-month lending and deposit growth, eurozone real economy



Difference is loan book growth minus deposit growth. Real economy includes households and non-financial corporates. Source: European Central Bank.

Eurozone credit institutions' use of central bank funding



LTRO--Long-term refinancing operations. MRO--Main refinancing operations. Source: European Central Bank.

RMBS



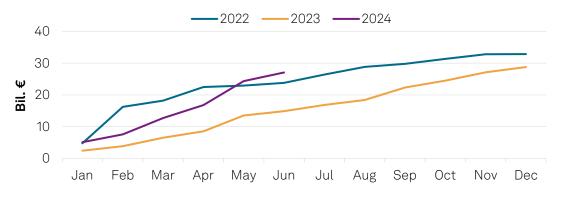
Alastair Bigley Managing Director +44 20 7176 3245 alastair.bigley@spglobal.com



Investor-placed RMBS issuance

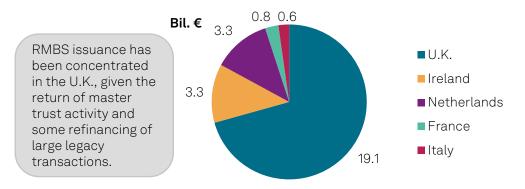


Cumulative investor-placed RMBS issuance

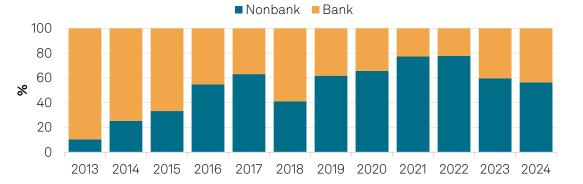


Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings.

2024 YTD investor-placed RMBS issuance, by country



RMBS issuance mix, by originator type

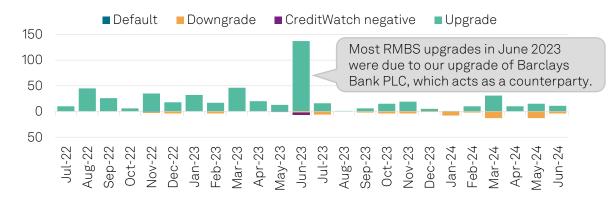


S&P Global

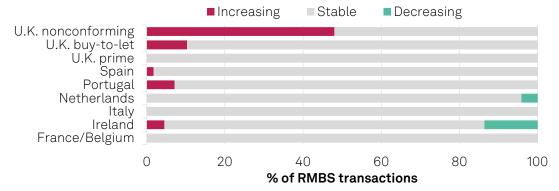
Ratings

RMBS—Rating Actions And Performance Metrics

1. Monthly rating actions count, last 24 months



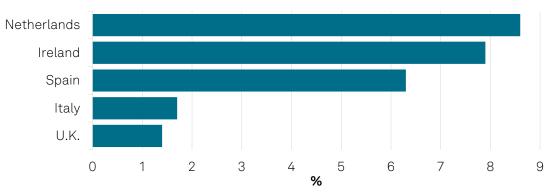
3. Prevalence of increasing/decreasing total arrears rate



2. Cumulative rating actions count, last 12 months

	Prime	Nonconforming	BTL	Other RMBS
Upgrade	61	22	49	8
CreditWatch neg.	0	0	0	0
Downgrade	5	24	24	4
Default	0	0	0	0

4. Latest annualized house price growth



1. Excludes confidential ratings. Source: S&P Global Ratings. 2. BTL--Buy-to-let. Excludes confidential ratings. Source: S&P Global Ratings. 3. Transaction arrears classified as increasing/decreasing if quarter-on-quarter change in total arrears rate is greater than/less than two percentage points. Source: S&P Global Ratings. 4. Latest data available between April and June 2024. Source: National statistical offices, Nationwide (U.K.).

ABS

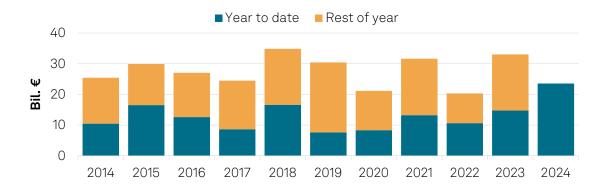


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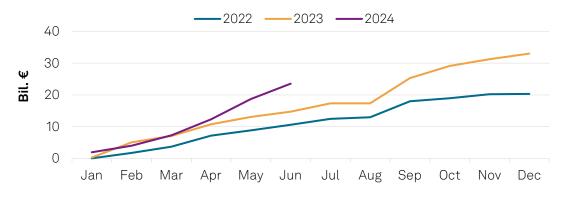




Investor-placed ABS issuance

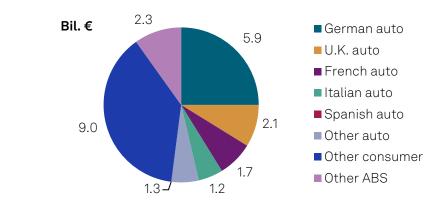


Cumulative investor-placed ABS issuance

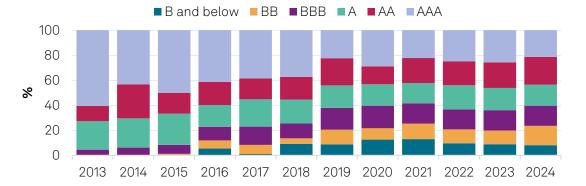


Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings.

2024 YTD investor-placed ABS issuance, by subsector

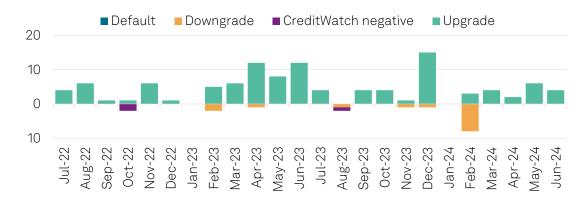


ABS issuance mix, by tranche rating category count

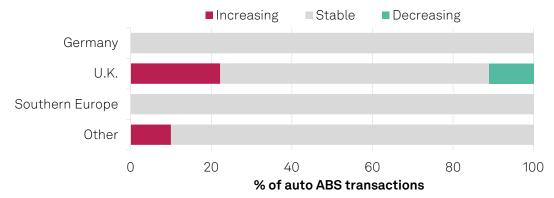


ABS—Rating Actions And Performance Metrics

1. Monthly rating actions count, last 24 months



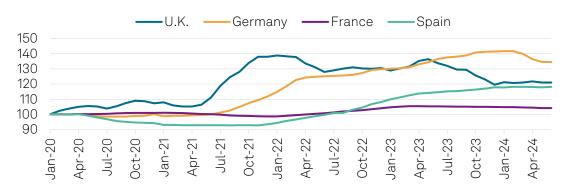
3. Prevalence of increasing/decreasing 30+ day arrears rate



2. Cumulative rating actions count, last 12 months

	Auto/ consumer	Credit cards	Corp. sec.	Other ABS
Upgrade	31	0	6	10
CreditWatch neg.	0	0	1	0
Downgrade	8	0	3	0
Default	0	0	0	0

4. Used car price index



1. Excludes confidential ratings. Source: S&P Global Ratings. 2. Excludes confidential ratings. Source: S&P Global Ratings. 3. Transaction arrears classified as increasing/decreasing if month-on-month change in 30+ day arrears rate is greater than/less than 50 basis points. Source: S&P Global Ratings. 4. Source: National statistical offices.

Structured Credit



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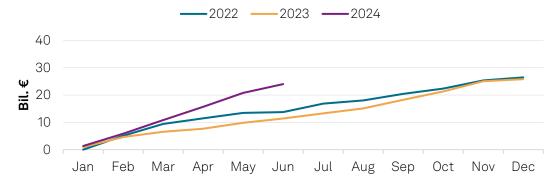


CLO—New Issuance

1. Investor-placed CLO new issuance



3. Cumulative investor-placed CLO new issuance

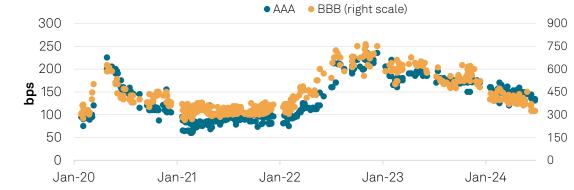




originations have 30 recovered, consistent with strong CLO issuance. 20 Bil. € \cap 2019 2020 2021 2022 2023 2024

2. Monthly European leveraged finance origination volumes

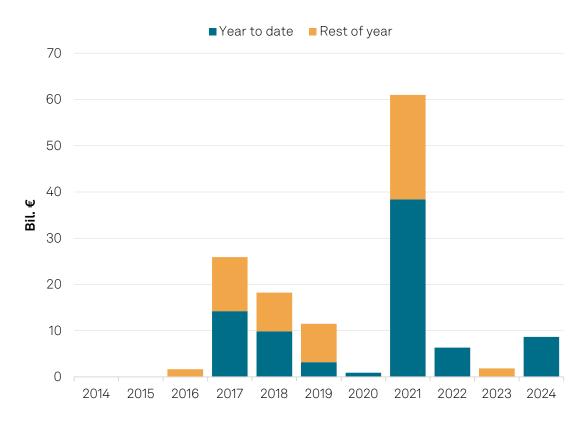
4. European new issue CLO tranche discount margins



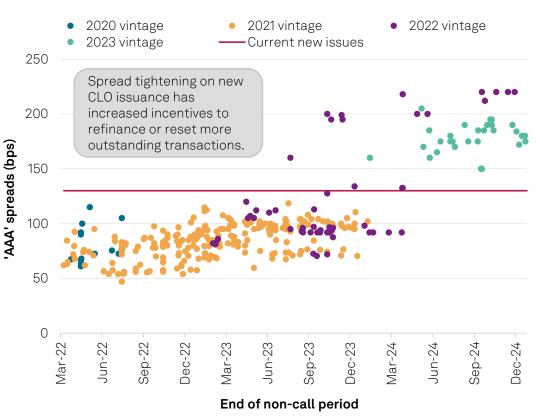
1. Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings. 2. Three-month rolling average. Loan figures are institutional only. Source: Pitchbook LCD, S&P Global Ratings. 3. Source: S&P Global Ratings. 4. Bps--Basis points. Pitchbook LCD.

CLO—Refi/Reset Issuance

Investor-placed CLO refi/reset issuance



CLO refi/reset candidates: existing vs. current 'AAA' spreads



bps--Basis points. Source: Pitchbook LCD, S&P Global Ratings.

Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings, Pitchbook LCD.

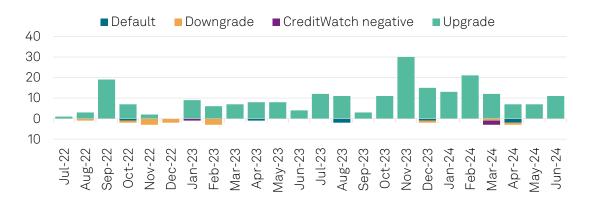
S&P Global

Ratings

24

CLO & Structured Credit—Rating Actions And Performance Metrics

1. Monthly rating actions count, last 24 months

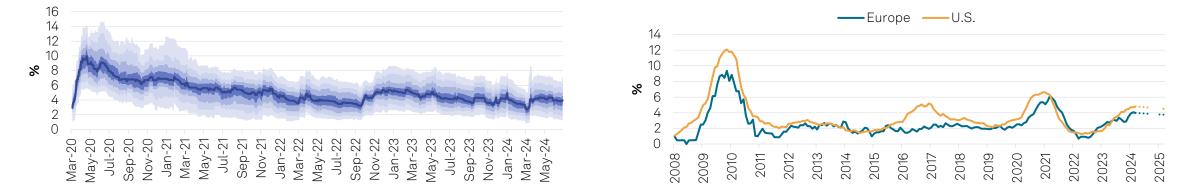


3. European CLO exposure to 'CCC' category corporate obligors

2. Cumulative rating actions count, last 12 months

	CLO	SME	Repack	Other SC
Upgrade	141	5	2	5
CreditWatch neg.	0	0	2	0
Downgrade	1	0	2	0
Default	0	1	0	4

4. Speculative-grade corporate default rate



1. Excludes confidential ratings. Source: S&P Global Ratings. 2. SME—Small and midsize enterprises. SC—Structured credit. Excludes confidential ratings. Source: S&P Global Ratings. 3. Solid line is the median, with each band representing a decile, from 10th to 90th percentiles. Estimates based on portfolios from latest available trustee reports, with ratings updated. Source: S&P Global Ratings. 4. Dashed lines represent forecasts. Source: S&P Global Ratings.

CMBS



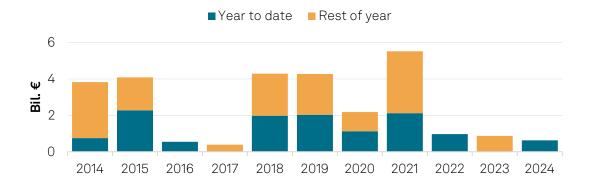
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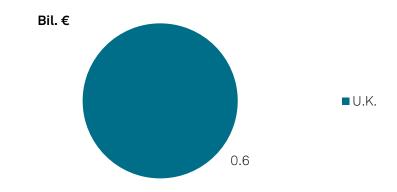




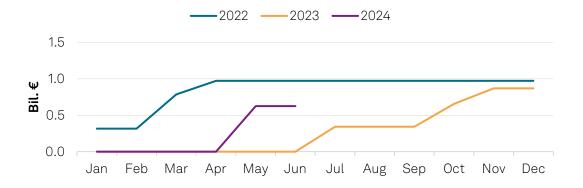
Investor-placed CMBS issuance



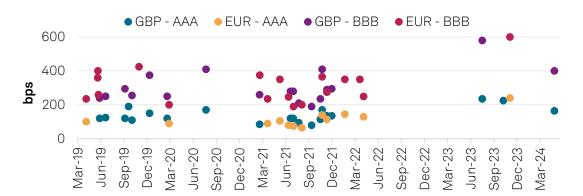
2024 YTD investor-placed CMBS issuance, by country



Cumulative investor-placed CMBS issuance



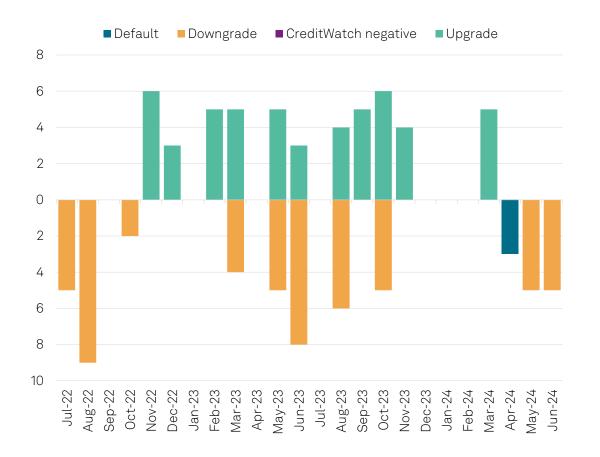
Primary spreads on European CMBS issuance



Year-to-date (YTD) figures as of end-June each year. Sterling spreads are over three-month LIBOR before 2020 and subsequently over Sterling Overnight Index Average (SONIA). Source: S&P Global Ratings.

CMBS—Rating Actions

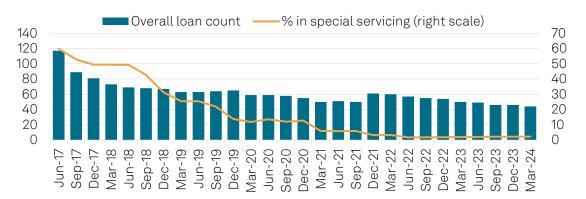
1. Monthly rating actions count, last 24 months



2. Cumulative rating actions count, last 12 months

	Hotel	Retail	Mixed	Other CMBS
Upgrade	0	0	15	9
CreditWatch neg.	0	0	0	0
Downgrade	0	1	14	6
Default	0	3	0	0

3. European CMBS loans in special servicing



1. Excludes confidential ratings. Source: S&P Global Ratings. 2. Excludes confidential ratings. Source: S&P Global Ratings. 3. Based on loans backing European CMBS rated by S&P Global Ratings. Source: S&P Global Ratings.



Covered Bonds



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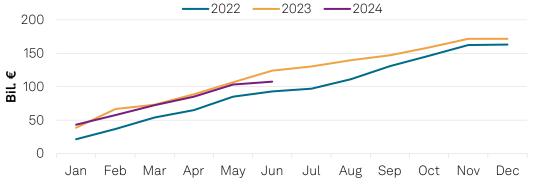


Covered Bonds—Issuance

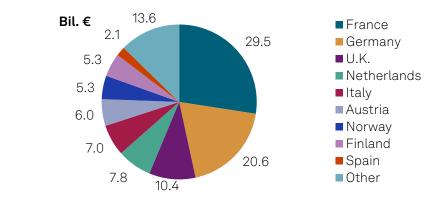
Benchmark covered bond issuance



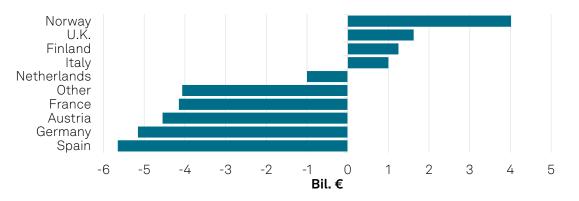
Cumulative benchmark covered bond issuance



2024 YTD benchmark covered bond issuance, by country



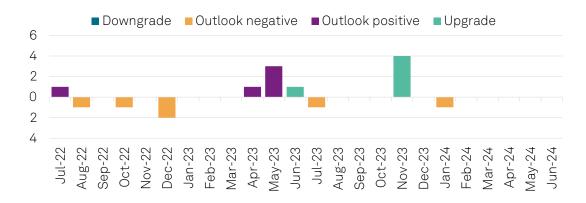
Change in YTD issuance, 2024 vs. 2023, by country



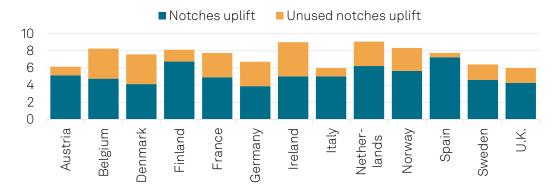
Year-to-date (YTD) figures as of end-June each year. Source: S&P Global Ratings.

Covered Bonds—Rating Actions And Performance Metrics

1. Monthly rating actions count, last 24 months



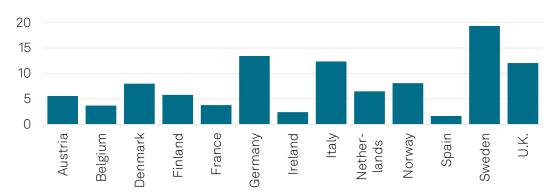
3. Average notches of uplift



2. Cumulative rating actions count, last 12 months

	Northern Europe	Southern Europe	Central & Eastern Europe	Other CB
Upgrade	4	0	0	0
Outlook positive	0	0	0	0
Outlook negative	1	0	0	0
Downgrade	0	0	0	0

4. Average overcollateralization multiple



1. & 2. Based on count of issuers with covered bond rating actions in the time period. Excludes confidential ratings and Spanish multi-cedulas. CB—Covered Bonds. Source: S&P Global Ratings. 3. As of Q3 2024. Source: S&P Global Ratings. 4. Multiple of credit enhancement available over that required for the current rating. As of Q3 2024. Excludes programs with available overcollateralization exceeding 100%. Source: S&P Global Ratings.

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- Your Three Minutes In European CLOs: Altice France Isn't A Big Problem For Now, March 27, 2024
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