S&P Global Ratings

EMEA Structured Finance Chart Book

October 2023

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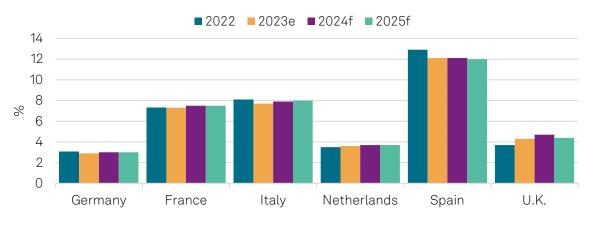
This report does not constitute a rating action



Highlights—News

- Macro. According to our latest macroeconomic forecasts, the resilience of European labor markets will be decisive for 2024. With eurozone inflation set to continue moderating, accelerating wages will lift real disposable income, easing constraints for households and supporting consumption. But any pronounced downturn in the labor market could push the eurozone economy into a recession. In the U.K., we expect the economy to continue its path of muted growth, close to stagnation, into 2024. However, real wage growth has turned positive and--together with a firm labor market--this should mitigate an otherwise constrained growth environment. Our base-case forecast suggests that unemployment rates across major securitization markets will remain broadly stable.
- **Issuance.** Investor-placed securitization issuance for September 2023 was €14.9 billion--up more than 75% on the same month in 2022 and one of the largest monthly totals since the financial crisis. Overall year-to-date issuance of €66 billion was still down at end-
 - September, but now by less than 5%. European benchmark covered bond issuance has been robust throughout the year, reaching €147 billion year-to-date by the end of September 2023. However, momentum is now slowing in the face of tougher market conditions for issuers, partly due to the European Central Bank's withdrawal as a large buyer. Benchmark issuance in September was €7.4 billion--down more than 60% on volumes in September 2022.
- **Rating actions.** In September 2023, we raised 18 of our ratings on European securitization tranches across a wide mix of sectors, including auto ABS, RMBS, CMBS, and SME CLOs. There were only two downgrades in a single U.K. buy-to-let RMBS transaction.

Unemployment rate forecasts

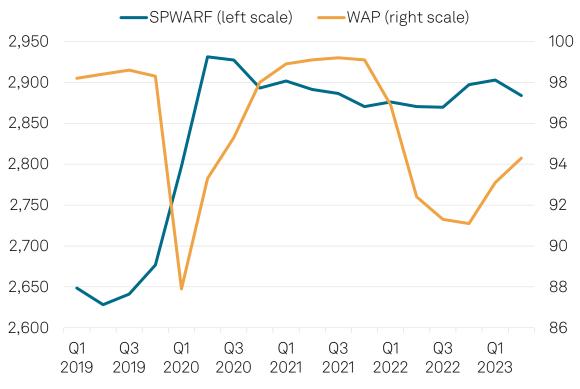


e--Estimate. f--Forecast. Annual average figures. For more details, see "<u>Economic Outlook Eurozone Q4 2023: Slower Growth, Faster Tightening</u>," published Sept. 25, 2023. Source: S&P Global Ratings.

Highlights—The 'Snooze Drag' Takes Hold In European CLOs

- Maturity extensions on underlying loans increase a CLO's weighted-average life, which can ultimately delay amortization of the notes.
- For CLO managers, a maturity extension offers benefits of loan margin pick-up and continued exposure to a credit.
- In most CLOs, the manager is not required to vote against a maturity extension and can therefore abstain. A so-called "snooze drag" refers to a workaround CLO managers can use when they want to vote in favor of an amendment, but are unable to do so due to failing tests, for example.
- The "snooze you lose" clause, found in the amendments and waivers section of the senior facilities agreement, permits the borrower to disregard lenders that fail to respond to a consent request (i.e., abstain), allowing rescue packages to be implemented quickly.
- This opens the possibility of dragging CLO managers into loan extensions that the CLO investors may prefer them to exit.

SPWARF and WAP in European CLO portfolios

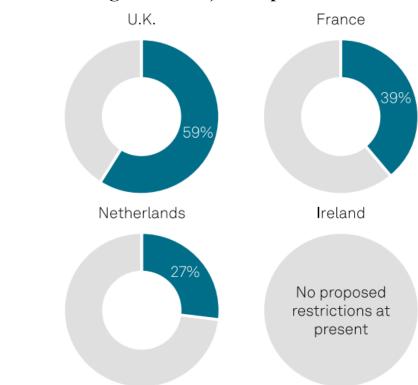


SPWARF--S&P Global Ratings' weighted-average rating factor. WAP--Weighted-average price. Source: S&P Global Ratings. For more details, see "CLO Pulse Q2 2023: The 'Snooze Drag' Takes Hold In Europe," published Sept. 28, 2023.

Highlights—Building Energy Regulations And The Potential Impact On European RMBS

- Changing energy-efficiency regulations currently have a limited impact on European RMBS, due to uncertainties on the timing and extent of sale or rental restrictions, financing available for renovations, supply and demand in housing markets, and structural protections in RMBS transactions.
- Nevertheless, studies show there is a valuation discount for properties with low energy performance certificate (EPC) classes. If this discount increases over time, it may eventually affect our credit analysis for loan pools backing RMBS.
- Our scenario analysis shows a low potential impact on our modelled loss severity assumptions. Our weighted-average loss severity increases 2.5 percentage points (pp) at the 'AAA' rating level and 2.8pp at the 'B' rating level, albeit we acknowledge that our assumptions are very conservative.
- Foreclosure frequencies may increase over time due to higher leverage. Property owners may incur higher debt to carry out renovations if countries start requiring improvement in energy efficiency, especially if subsidies are insufficient to cover costs.

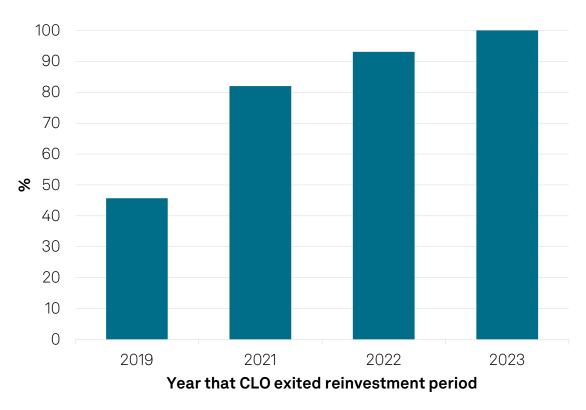
Share of housing stock subject to potential future rental bans



Based on energy performance certificate (EPC) class. Source: U.K. (England and Wales)--U.K. government; France--fidéli, SDES; Netherlands--CFP Green buildings; S&P Global Ratings. For more details, see "Building Energy Regulations And The Potential Impact On European RMBS," published Sept. 6, 2023.

Highlights—European CLOs: The Long Road To Amortization

Notes factors for outstanding 'AAA' European CLO tranches



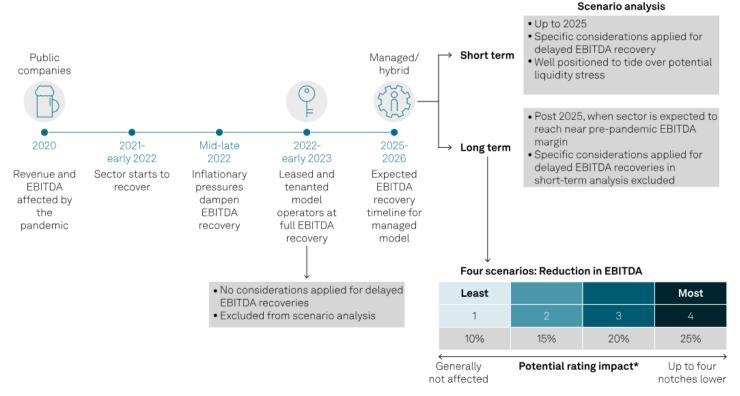
Source: S&P Global Ratings. For more details, see "European CLOs: The Long Road To Amortization," published Sept. 6, 2023.

- Following strong European CLO refinancing and reset activity in 2021 and first-quarter 2022, fewer transactions had started to amortize.
- Fast forward to today, with refinancing and reset activity drying up from the second quarter of 2022 onward, almost 20% of our rated CLOs are now amortizing. Of these, one-third of 'AAA' rated notes have lower credit enhancement than at closing, with several holding more 'CCC' and defaulted assets and some holding negative cash.
- The structural fundamentals of the amortizing CLOs remain positive, such as a lower weighted-average life, and an increasing weighted-average spread on the new assets in the pools.
- We believe recently falling note margins on new issue CLOs will support refinancing and reset activity, with potentially 10 CLOs set to reset this year and over 30 next year, further delaying the amortization phase for CLOs that reset their liabilities.



Highlights—Will Lower EBITDA Recovery Leave U.K. Pub Corporate Securitizations In The Cellar?

Summary of scenario analysis for U.K. pub corporate securitizations



^{*} Prior to incorporating modifier and comparable ratings analysis. Source: S&P Global Ratings. For more details, see "Scenario Analysis: Will Lower EBITDA Recovery Leave U.K. Pub Corporate Securitizations In The Cellar?," published Sept. 18, 2023.

- The U.K. pub sector faced unprecedented stress during the pandemic, then a sharp increase in labor, energy, and food costs.
- The EBITDA margins of leased and tenanted operating models have rapidly recovered to pre-pandemic levels, while fully managed or hybrid models will recover more slowly.
- Our scenario analysis indicates that strong liquidity support in the U.K. pub corporate securitizations that we rate will cushion any potential reductions in EBITDA until the industry recovers to near pre-pandemic levels by 2025-2026, in our view.
- A 10% decline in our long-term forecasted EBITDA for managed and hybrid pub-backed transactions would generally not affect our current ratings and a 25% decline could result in up to a four-notch downgrade.

Highlights—A Primer On France's RMBS Market

- The underwriting of French residential loans is based on a robust assessment of affordability and the loan-to-value ratio has less importance. Consequently, home loan performance is less linked to house prices than in the U.S. or U.K.
- A French home loan is generally at a fixed rate for life, which protects borrowers from payment shocks in times of rate rises.
- France has a strong social benefit support system, which means that home loan performance tends to be less cyclical. In addition, products tend to be standard across the industry, and while buy-to-let home loans exist, the nonconforming home loan segment is nonexistent in France.
- Most French home loans are guaranteed by an industrywide guarantee provided by Crédit Logement. French banks can draw on the guarantee generally as soon as there is a failure to pay, and the guarantor will reimburse the bank with all the guaranteed amounts. This is a unique feature of the French market.

French RMBS market overview



€129.4 billion outstanding French RMBS as of August 2023



5% share of French RMBS issuance of total European RMBS investor placed over the last 10 years



Around 60% of the outstanding home loans benefit from a guarantee rather than a traditional mortgage



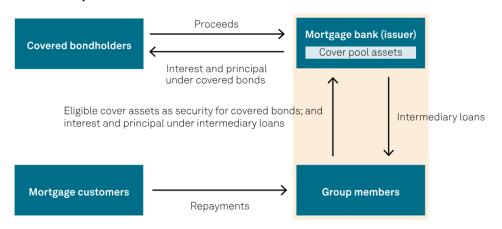
No more than 0.9% delinquent observed over the last 10 years

Source: S&P Global Ratings. For more details, see "A Primer On France's RMBS Market," published Sept. 13, 2023.

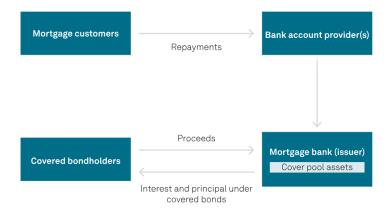
Highlights—A Closer Look At Finland's Covered Bond Framework

- Finland transposed the EU Covered Bonds Directive through the adoption of a new law--the Finnish Act on Mortgage Banks and Covered Bonds (151/2022) (CBA)--which has applied since July 8, 2022, and repealed the Finnish Act on Mortgage Credit Bank Activity (688/2010) (MCBA).
- We believe the CBA addresses the main aspects that we assess when analyzing a covered bond legislation, allowing Finnish covered bond programs to be rated higher than the issuer.
- The implementation of the EU Covered Bonds Directive into Finnish covered bond legislation enhances the previous framework and does not materially affect our analysis.

Intermediary loan structure



Nonintermediary loan structure



Source: S&P Global Ratings. For more details, see "A Closer Look At Finland's Covered Bond Framework," published Sept. 27, 2023.



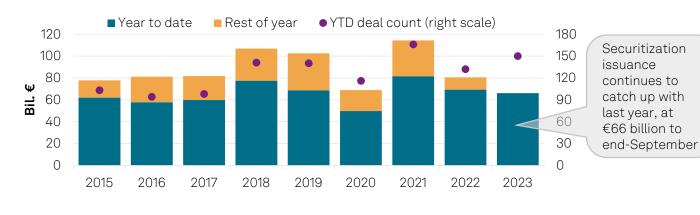
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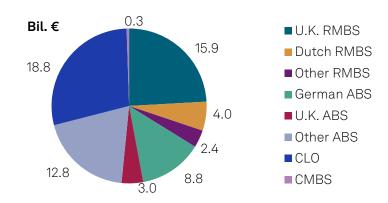


Issuance—Securitizations

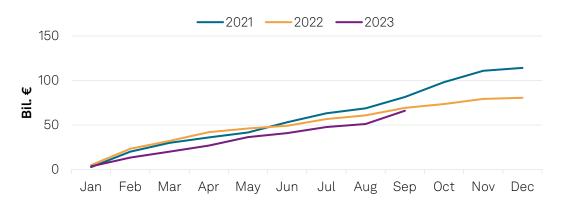
1. Investor-placed securitization issuance



2. 2023 YTD investor-placed securitization issuance, by sector



3. Cumulative investor-placed securitization issuance



4. CLO refinancing and reset issuance

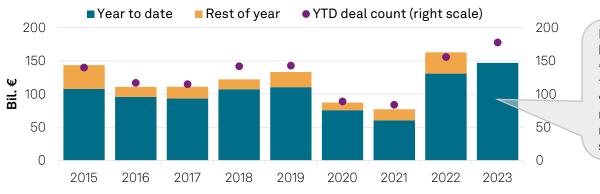


1-3. Year-to-date (YTD) figures as of end-September each year. Excludes CLO refinancings and resets. Source: S&P Global Ratings. 4. Source: S&P Global Ratings, Pitchbook LCD.

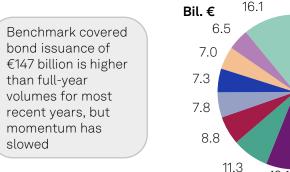


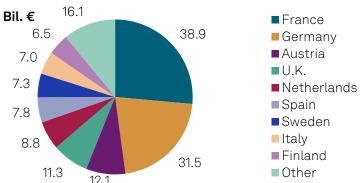
Issuance—Covered Bonds

1. Benchmark covered bond issuance

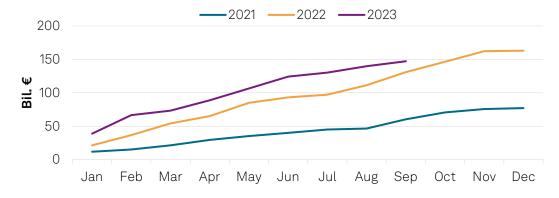


2. 2023 YTD benchmark covered bond issuance, by country



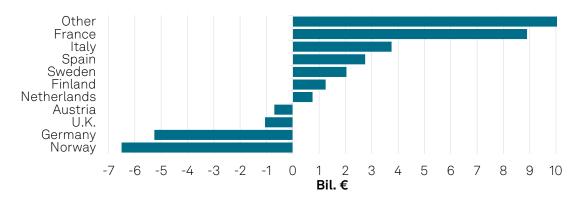


3. Cumulative benchmark covered bond issuance



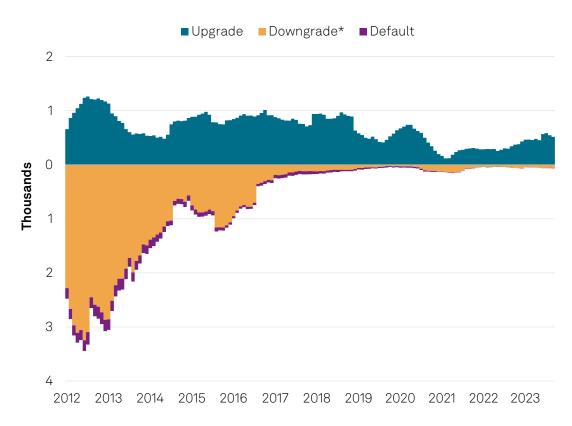
1-4. Year-to-date (YTD) figures as of end-September each year. Source: S&P Global Ratings.

4. Change in YTD issuance, 2023 vs. 2022, by country



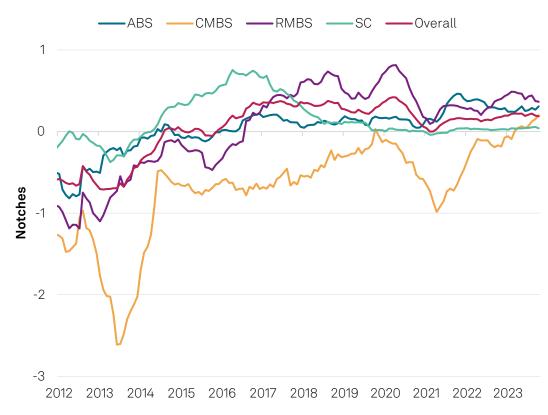
Credit Performance—Long-Term Ratings Drift

Rating action count, 12-month rolling



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

12-month trailing average change in credit quality

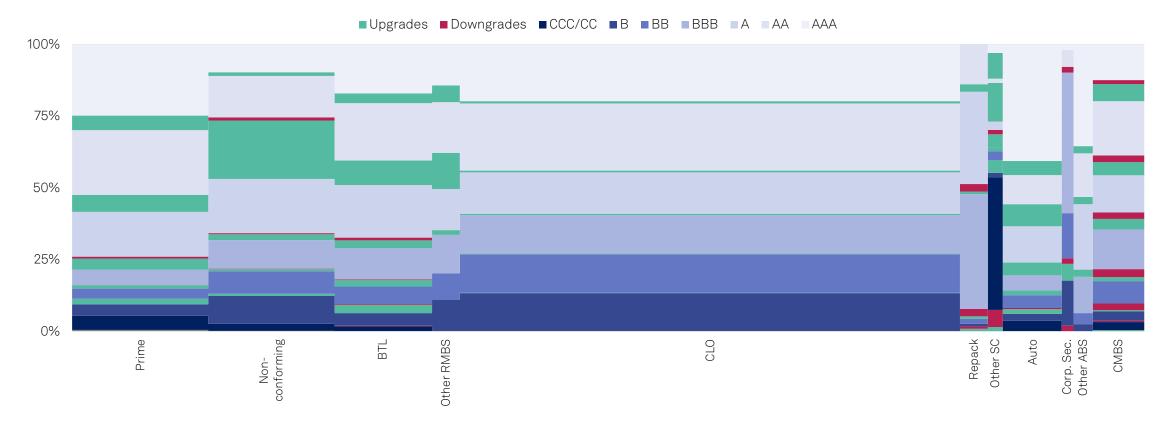


As of end-September 2023. SC--Structured credit. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Ratings.



Credit Performance—Ratings Heatmap

Distribution of ratings and 12-month transitions

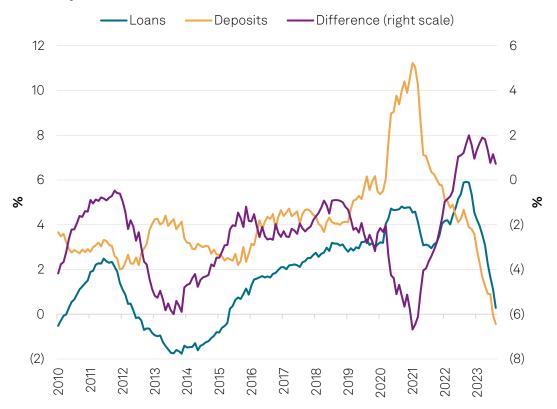


BTL--Buy-to-let. SC--Structured credit. Based on rating transitions over the previous 12 months as of end-September 2023. Excludes confidential ratings and covered bonds. Source: S&P Global Ratings.



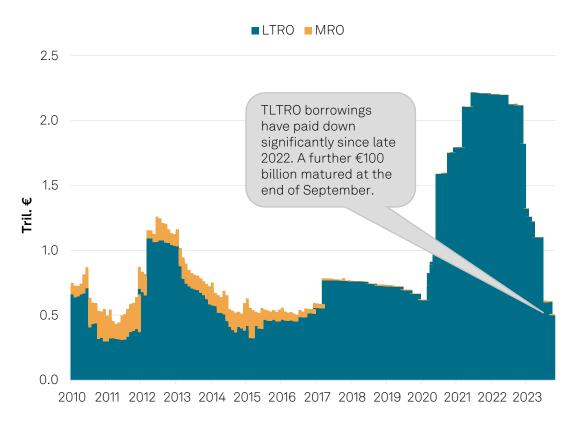
Fundamentals—Issuance Drivers

12-month lending and deposit growth, eurozone real economy



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

Eurozone credit institutions' use of central bank funding



(T)LTRO--Targeted long-term refinancing operations. MRO--Main refinancing operations. Source: European Central Bank.



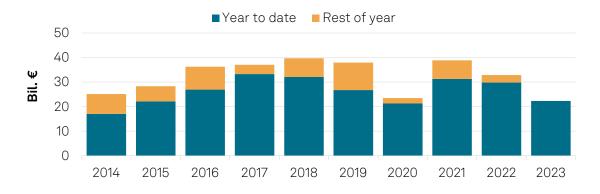
RMBS



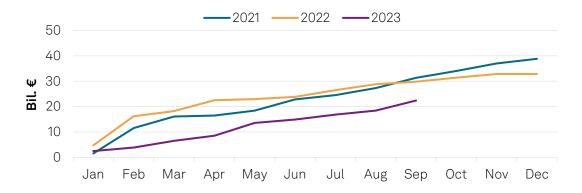
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RMBS—Issuance

Investor-placed RMBS issuance

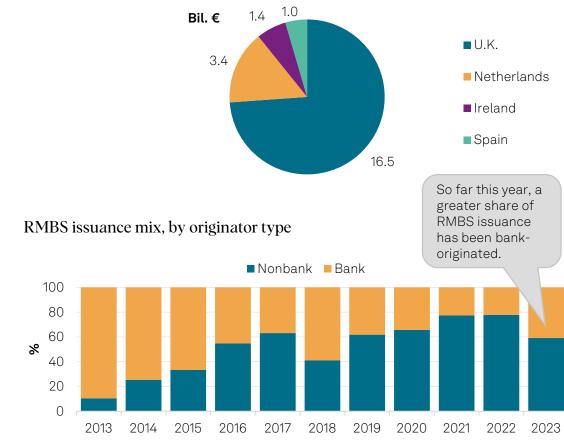


Cumulative investor-placed RMBS issuance



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

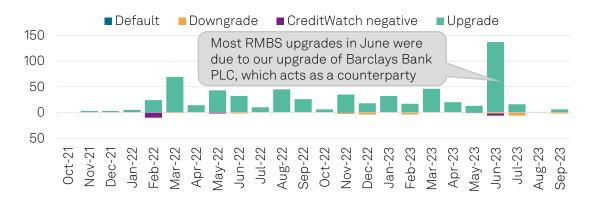
2023 YTD investor-placed RMBS issuance, by country





RMBS—Rating Actions And Performance Metrics

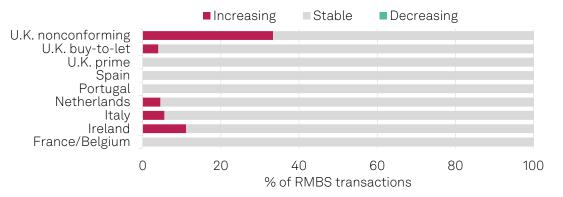
1. Monthly rating actions count, last 24 months



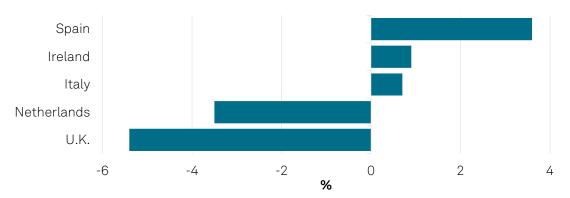
2. Cumulative rating actions count, last 12 months

	Prime	Nonconforming	BTL	Other RMBS
Upgrade	105	137	81	24
CreditWatch neg.	0	0	4	0
Downgrade	4	9	7	0
Default	1	1	0	0

3. Prevalence of increasing/decreasing total arrears rate



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 June and September 2023. Source: National statistical offices, Nationwide (U.K.).



ABS



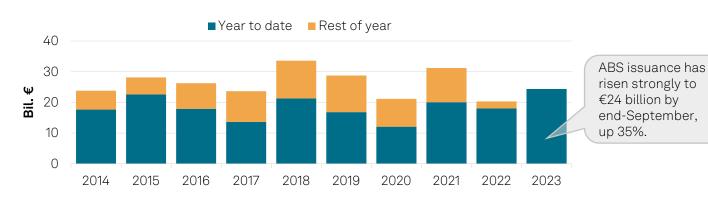
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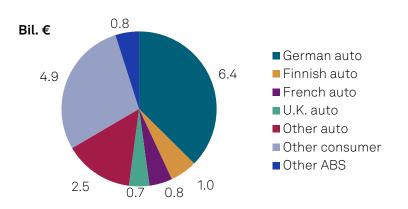
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ABS—Issuance

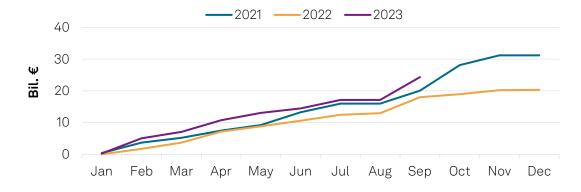
Investor-placed ABS issuance



2023 YTD investor-placed ABS issuance, by subsector

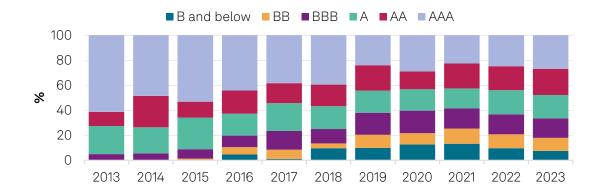


Cumulative investor-placed ABS issuance



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

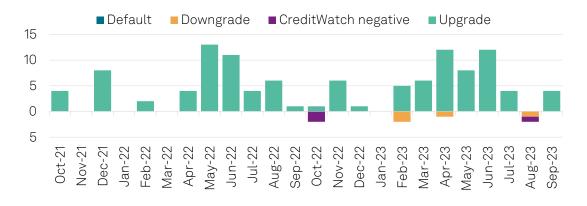
ABS issuance mix, by tranche rating category count





ABS—Rating Actions And Performance Metrics

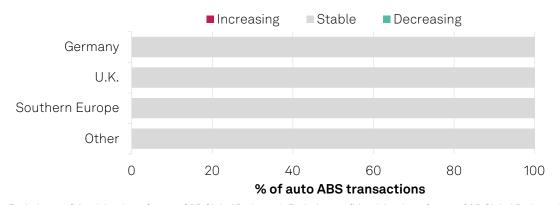
1. Monthly rating actions count, last 24 months



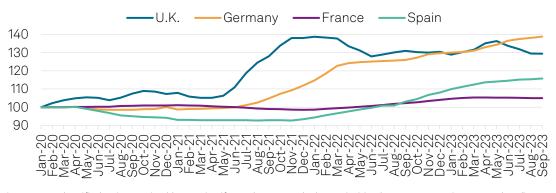
$2. \ Cumulative \ rating \ actions \ count, last \ 12 \ months$

	Auto/ consumer	Credit cards	Corp. sec.	Other ABS
Upgrade	53	0	3	3
CreditWatch neg.	0	0	3	0
Downgrade	1	0	3	0
Default	0	0	0	0

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



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—Issuance

1. Investor-placed CLO new issuance



2018

2019

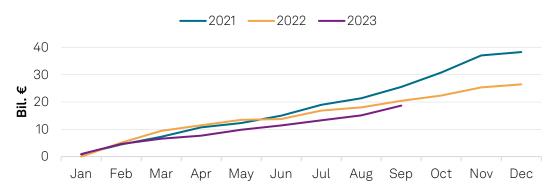
2020

2021

2022

2023

3. Cumulative investor-placed CLO new issuance



4. Monthly European leveraged finance origination volumes

2017

2016

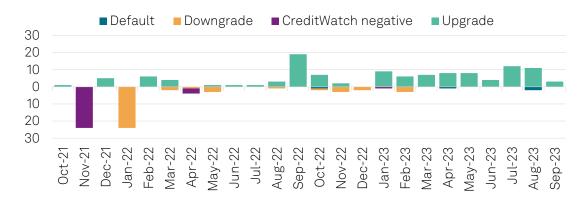
2015



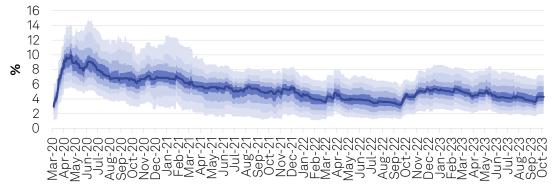
^{1.} Year-to-date (YTD) figures as of end-September each year. Source: S&P Global Ratings. 2. Source: Pitchbook LCD. 3. Source: S&P Global Ratings. 4. Three-month rolling average. Loan figures are institutional only. Source: Pitchbook LCD, S&P Global Ratings.

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

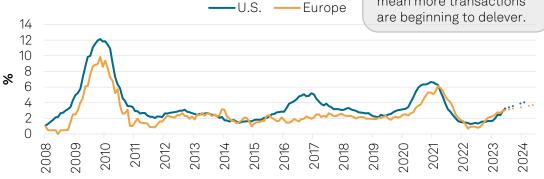


2. Cumulative rating actions count, last 12 months

	CLO	SME	Repack	Other SC
Upgrade	44	19	8	1
CreditWatch neg.	0	0	0	1
Downgrade	0	0	8	1
Default	0	0	0	4

4. Speculative-grade corporate default rate

CLO upgrades have been picking up, as low refi/reset incentives mean more transactions are beginning to delever.



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.

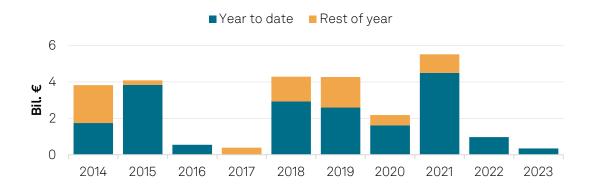
CMBS



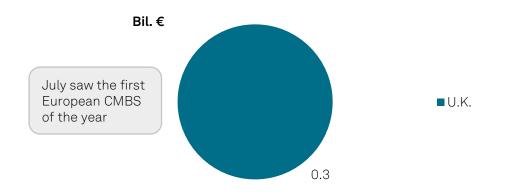
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CMBS—Issuance

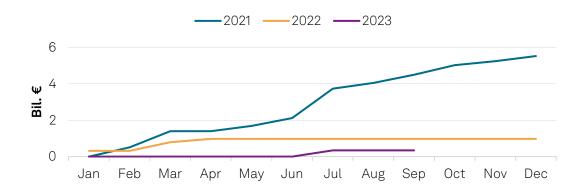
Investor-placed CMBS issuance



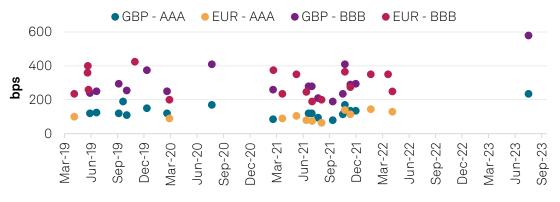
2023 investor-placed CMBS issuance, by country



Cumulative investor-placed CMBS issuance



Primary spreads on European CMBS issuance

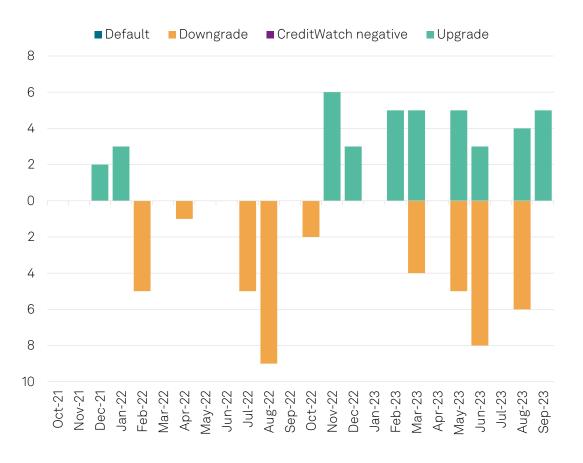


Year-to-date (YTD) figures as of end-September each year. Sterling spreads are over three-month LIBOR before 2020 and subsequently over Sterling Overnight Index Average (SONIA). Source: S&P Global Ratings.



CMBS—Rating Actions

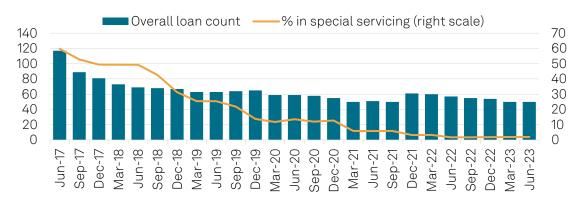
1. Monthly rating actions count, last 24 months



2. Cumulative rating actions count, last 12 months

	Hotel	Retail	Mixed	Other CMBS
Upgrade	3	3	17	13
CreditWatch neg.	0	0	0	0
Downgrade	0	1	12	12
Default	0	0	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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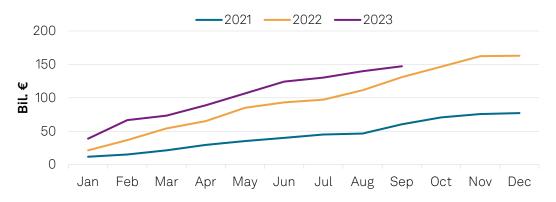
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Covered Bonds—Issuance

Benchmark covered bond issuance

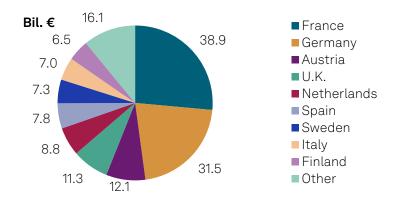


Cumulative benchmark covered bond issuance

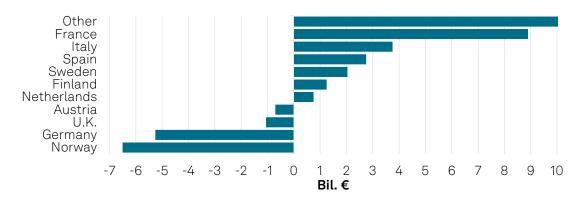


Year-to-date (YTD) figures as of end-September each year. Source: S&P Global Ratings.

2023 YTD benchmark covered bond issuance, by country

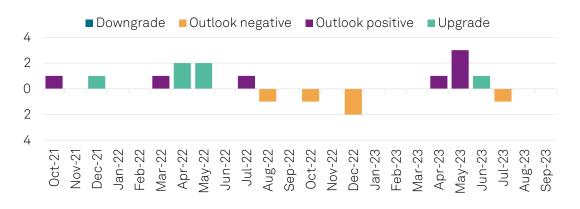


Change in YTD issuance, 2023 vs. 2022, by country



Covered Bonds—Rating Actions And Performance Metrics

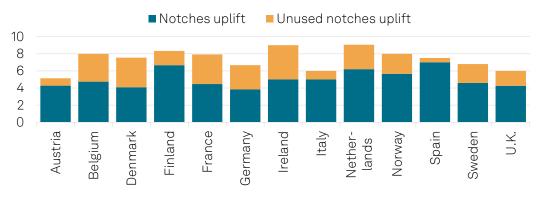
1. Monthly rating actions count, last 24 months



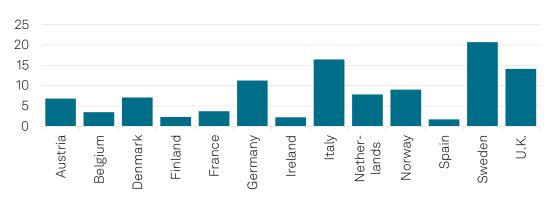
2. Cumulative rating actions count, last 12 months

	Northern Europe	Southern Europe	Central & Eastern Europe	Other CB
Upgrade	0	1	0	0
Outlook positive	3	0	1	0
Outlook negative	4	0	0	0
Downgrade	0	0	0	0

3. Average notches of uplift



4. Average overcollateralization multiple



1. & 2. Based on count of issuers with covered bond rating actions in the time period. Excludes confidential ratings. CB—Covered Bonds. Source: S&P Global Ratings. 3. As of Q4 2023. Source: S&P Global Ratings. 4. Multiple of credit enhancement available over that required for the current rating. As of Q4 2023. Excludes programs with available overcollateralization exceeding 100%. Source: S&P Global Ratings.

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