

European Structured Finance Weathers All The Storms

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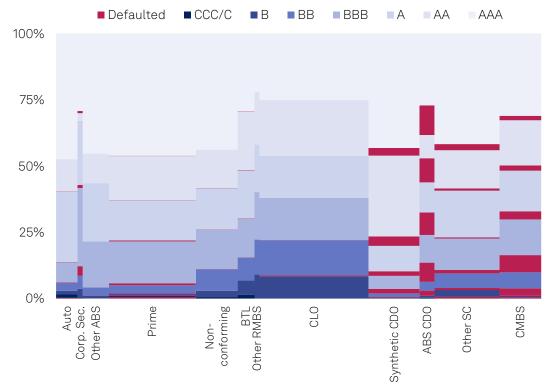


Key Takeaways

- European securitizations have overwhelmingly proven resilient to several periods of credit stress throughout their multi-decade history, building the track record of a technology that can help fund economic growth and manage risk.
- Only 5.3% of the 22,000 European securitization tranches that we have rated—starting in the 1980s—have ever defaulted, while almost three-quarters have repaid in full, with the remainder still outstanding.
- Most of the defaults occurred in subsectors of structured credit that are no longer active, while the more traditional European asset-backed securities (ABS), residential mortgage-backed securities (RMBS), and leveraged loan collateralized loan obligation (CLO) sectors have each seen lifetime default rates of no more than 1.5%.
- For European securitizations issued since the 2007-2008 financial crisis, the lifetime default rate has been only 0.2% across about 7,500 tranches, and strongly-performing sectors, such as CLOs and auto ABS, now make up a larger share of the rated universe than in pre-crisis vintages.
- Based on historically-observed average default rates—especially for those sectors that have remained active since the financial crisis—our ratings on European securitizations should effectively rank-order default risk going forward.
- Although other credit factors have also played a role, macroeconomic stresses have historically been linked with securitization rating actions.
- In general, rating movements have been most correlated with changes in unemployment. This bodes well for the ratings outlook on securitizations, as we expect European unemployment to remain stable through the end of 2025.

Only About 5% Of European Securitization Tranches Have Ever Defaulted

European securitization lifetime defaults, by sector



Corp. Sec.--Corporate securitization. BTL--Buy-to-let. SC--Structured credit. Rating categories refer to original ratings at issuance. Source: S&P Global Market Intelligence CreditPro.

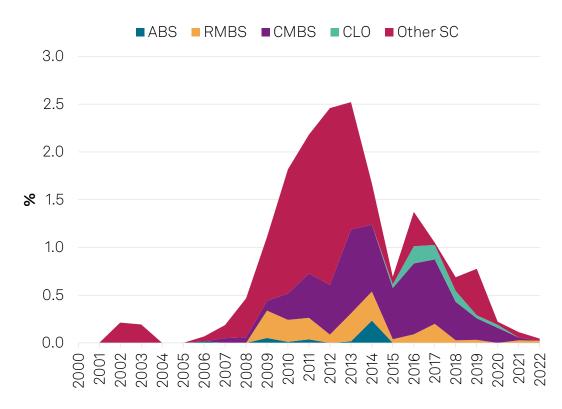
- By the end of March 2023, we had rated about 22,000 European securitization tranches, beginning in the 1980s.
- Over the same period, only 5.3% of these tranches defaulted at some point during their lifetime.
- By contrast, almost three-quarters of the tranches initially rated have repaid in full, with the remainder still outstanding.
- Most of the defaults occurred in certain subsectors of structured credit, notably collateralized debt obligations (CDOs) backed by other securitizations—predominantly the U.S. residential mortgage-backed securities (RMBS) that suffered from severe credit distress during the 2007-2008 financial crisis.
- The more traditional European asset-backed securities (ABS), RMBS, and leveraged loan collateralized loan obligation (CLO) sectors have seen lifetime default rates of only 1.0%, 1.5%, and 0.5%, respectively.



The Annual Default Rate Peaked In 2013, But Has Since Fallen Close To Zero

- Most defaults of European securitization tranches occurred in the years following the 2007-2008 financial crisis.
- The annual default rate peaked at about 2.5% in 2013. By contrast, the annual default rate for U.S. securitizations peaked at more than 10%.
- Between 2008 and 2013, certain legacy structured credit subsectors contributed most to the overall European default rate, although the RMBS and commercial mortgage-backed securities (CMBS) sectors also saw some defaults.
- Since 2014, the CMBS sector has accounted for most of the defaults in the European securitization market, although the overall default rate has been gradually decreasing.
- By the end of 2022, the annual default rate for European securitizations had fallen back close to zero, at only 0.5%.

Annual default rate, European sector contributions

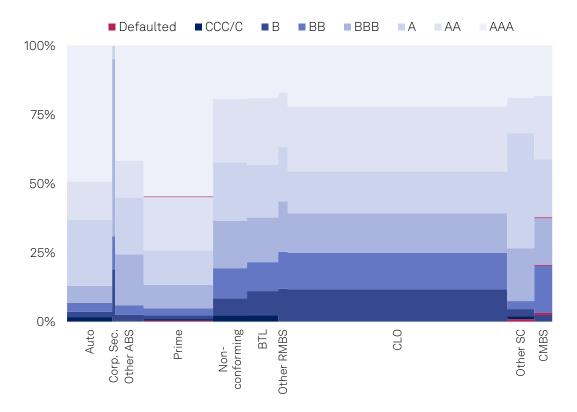


SC--Structured credit. Source: S&P Global Market Intelligence CreditPro.



The Default Rate Among Post-Crisis Transactions Has Been Only 0.2%

European post-crisis securitization lifetime defaults, by sector



Includes only transactions issued in 2009 and later. Source: S&P Global Market Intelligence CreditPro

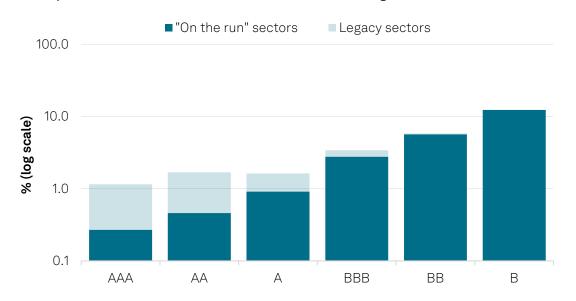
- Focusing on only the period <u>since</u> the 2007-2008 financial crisis, European securitization credit performance has been even better.
- For transactions issued since 2008, the lifetime default rate has been only 0.2% across about 7,500 tranches.
- This is despite notable periods of stress, including the sovereign debt crisis in the early 2010s, the COVID-19 pandemic starting in 2020, and the more recent sharp increase in consumer price inflation and interest rates across Europe.
- The composition of the European securitization market has shifted since 2008, with leveraged loan CLOs accounting for a far greater share of ratings and no new ratings issued in the previously underperforming synthetic and ABS CDO sectors.
- European and U.S. securitization performance has also been more comparable for transactions issued since 2008. In the U.S., the lifetime default rate for these transactions has been only 0.9% across about 40,000 tranches.



Ratings Have Ranked Default Risk; Broadly Comparable Across Sectors

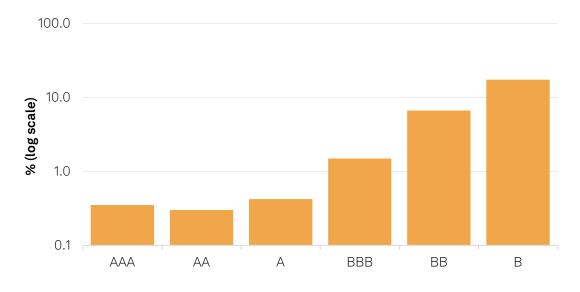
- Based on historically-observed average default rates—especially for those sectors that have remained active since the 2007-2008 financial crisis—our ratings on European securitizations should effectively rank-order default risk going forward.
- Default rates per rating category have resembled those for global corporates, although factors such as differing correlation between securities/issuers and a limited history of economic cycles complicate these comparisons.

Five-year cumulative default rates, European securitizations



Based on 1983-2022 period. Legacy sectors are structured credit outside CLOs, e.g. ABS CDOs, single-tranche synthetic CDOs, etc. Source: S&P Global Market Intelligence CreditPro.

Five-year cumulative default rates, global corporates



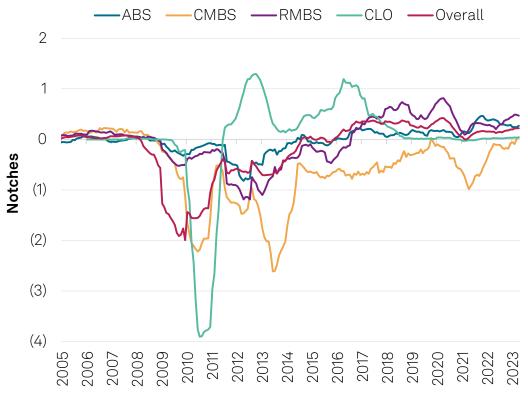
Based on 1981-2022 period. Source: S&P Global Market Intelligence CreditPro.



Relative To The Financial Crisis, Ratings Have Been Stable For Several Years

- Defaults aside, credit performance is also reflected in rating movements.
- European securitization ratings saw the greatest downward migration shortly after the 2007-2008 financial crisis, with the average 12-month decline peaking at two notches in late 2009.
- The ABS and RMBS sectors have generally seen the least volatility, partly due to these securities' short lives and the gradual deleveraging inherent in sequential pay structures.
- Rating movements can be linked to credit deterioration in underlying collateral pools but also our changing assessment of these and other credit risks, which can sometimes lead to methodology changes and related rating actions.
- For the past six years or so, ratings in most European securitization sectors have gradually risen, on average. The CMBS sector is the exception, partly due to longer-term secular trends in retail and structural features such as pro rata amortization. We expect CMBS ratings to remain under pressure, given some stress in the office sector, for example.

12-month trailing average change in credit quality

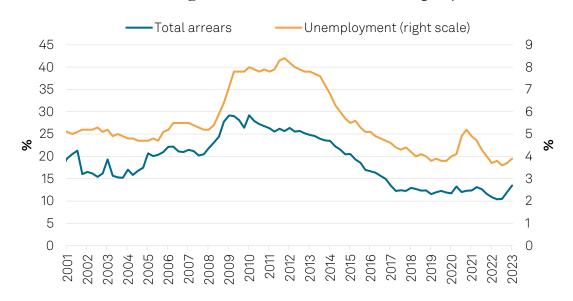


Change in credit quality is 12-month rolling average notch movement in ratings. Securities whose ratings migrated to 'NR' over the period are classified based on their prior rating. Source: S&P Global Market Intelligence CreditPro.

Macro Stress Links To Collateral Performance And Sometimes Rating Actions

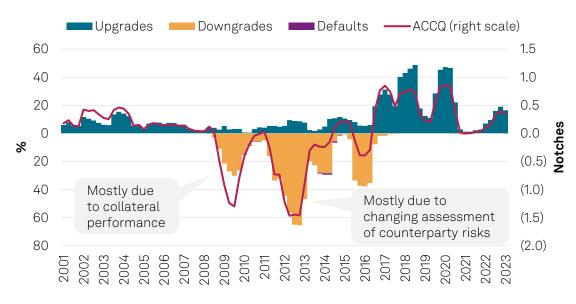
- For example, the U.K. nonconforming RMBS sector has historically been a strong link between the arrears levels in transactions' underlying mortgage pools and the U.K. unemployment rate.
- However, only during the 2007-2008 financial crisis period was this sufficient to lead to widespread nonconforming RMBS downgrades. Other periods of downgrades were related to our re-assessment of other risk factors, such as counterparty risk.

U.K. nonconforming RMBS arrears vs. unemployment rate



Source: ONS, S&P Global Ratings.

U.K. nonconforming RMBS rating transitions



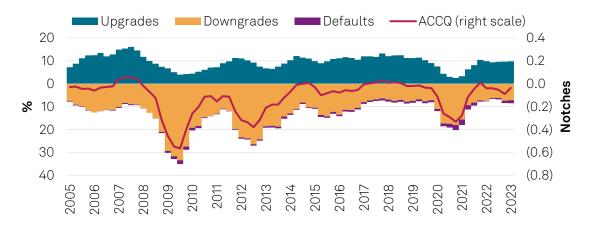
ACCQ--Average change in credit quality. Based on trailing four quarters. Securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Market Intelligence CreditPro.



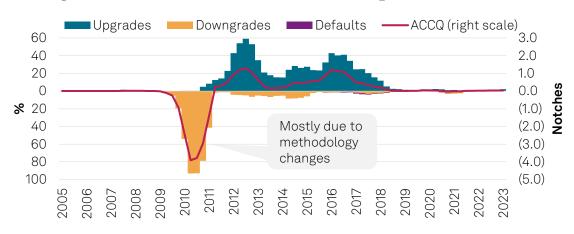
Other Factors Also Affect Ratings, Including Methodology Changes

- Taking the European CLO sector as another example, underlying corporate issuers have seen periods of elevated downgrades and fewer upgrades during the 2007-2008 financial crisis, the eurozone sovereign debt crisis, and the COVID-19 pandemic.
- These have generally not translated into significant downgrades for European CLOs. The only period of widespread downgrades was due to a change in our CLO rating methodology in 2009.
- CLO upgrades typically only occur when transactions reach their amortization periods. The upgrade rate therefore partly depends on whether outstanding transactions are doing so or are instead being refinanced or reset at an earlier point in their lives, which in turn depends on evolving market spreads and transaction economics. Recent years have seen few CLO upgrades or downgrades.

Rating transition and default rates, European corporates



Rating transition and default rates, European CLOs



ACCQ--Average change in credit quality. Based on trailing four quarters. Issuers or securities whose ratings migrated to 'NR' over the period are classified based on their rating prior to 'NR'. Source: S&P Global Market Intelligence CreditPro.



Inflation Moves Have Historically Not Been Linked With Rating Changes

Ratings vs. inflation



Change in credit quality is 12-month rolling average notch movement in all European securitization ratings. Inflation metric is the year-over-year percentage change in eurozone harmonized index of consumer prices. Dotted line indicates forecast. Sources: Bloomberg, Eurostat, S&P Global Ratings, S&P Global Market Intelligence CreditPro.

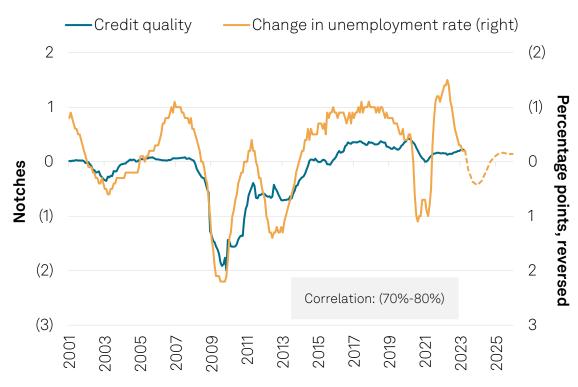
- Looking ahead, macroeconomic pressures in the near term are clearly focused on the recent surge in consumer prices and the corresponding reaction from monetary policy authorities, leading to a higher cost of credit for many of the borrowers that back European securitizations.
- Although inflation has begun to subside, concerns prevail that the rate of price rises could remain higher for longer than many market observers initially expected.
- We currently expect eurozone inflation will fall back below 2% by end-2025.
- While the speed and scale of the recent inflation spike is without precedent in recent decades, European securitization investors may take some comfort from the fact that ratings have not historically strongly correlated with inflation movements.



Unemployment Has Been Linked With Ratings, But Should Remain Stable

- By contrast, European securitization ratings and changes in the unemployment rate are, historically, more strongly correlated.
- This likely makes the unemployment outlook a more useful yardstick for potential future rating actions.
- Despite ongoing pressures associated with high inflation and a return to higher interest rates and more conventional monetary policy, our current base case macroeconomic forecast suggests that the eurozone unemployment rate should remain broadly stable through the end of 2025.
- If history is anything to go by, this potentially bodes well for the ongoing stability of European securitization ratings.

Ratings vs. unemployment



Change in credit quality is 12-month rolling average notch movement in all European securitization ratings. Unemployment metric is the year-over-year change in the eurozone unemployment rate. Dotted line indicates forecast. Sources: Bloomberg, Eurostat, S&P Global Ratings, S&P Global Market Intelligence CreditPro.

Recent Research

- Scenario Analysis: How Much Shock Can European RMBS Take?, June 8, 2023
- Scenario Analysis: European Office CMBS Withstands Vacancy Stress, May 23, 2023
- European Auto ABS Index Report Q1 2023, May 22, 2023
- European And U.K. Credit Card ABS Index Report Q1 2023, May 22, 2023
- The European CLO Market: Is The Par Back?, May 18, 2023
- EMEA Structured Finance Chart Book: May 2023, May 16, 2023
- European RMBS Index Report Q1 2023, May 15, 2023
- Irish Court Ruling Leaves Third-Party Servicers Facing Uncertainty On Rate Setting, May 11, 2023
- Landlord Exodus Sustains Higher Irish RMBS Prepayments, April 27, 2023
- <u>U.K. Residential Mortgage Servicing Flexibility Could Ease Arrears Pain</u>, April 26, 2023
- European CMBS Monitor Q1 2023, April 25, 2023
- 2022 Annual Global Structured Finance Default And Rating Transition Study, April 20, 2023
- <u>Dutch Buy-To-Let RMBS: Down But Not Out</u>, April 19, 2023
- Toward Net Zero: Shining A Light On European Solar ABS, April 12, 2023
- EMEA ABS And RMBS Counterparty Monitor Q1 2023, March 22, 2023
- Scenario Analysis: How Much Shock Can U.K. RMBS Take?, March 1, 2023

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