

EUROPEAN DATAWAREHOUSE

DATA AVAILABILITY REPORT

Q1 - 2019

DATA AVAILABILITY REPORT

Our database hosts the loan level data (LLD) of public used for ECB repo collateral, as well as private securitisations. This report describes the evolution of data availability for our public active loans from Q4 2013 to Q1 2019.

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EXECUTIVE SUMMARY

Our database¹ hosts the loan-level data (LLD) of all public securitisations used for ECB repo collateral. This report describes the evolution of data availability for our active loans² from Q4 2013 to Q1 2019. It follows the publication of “ABS SME Data: The Big Picture”,³ and shows time series about all the active loans of the public deals reporting to our database, to help data users interested in time series to assess data availability. The methodology is discussed in Appendix 1.

An [Excel appendix available on our website](#) features all the exhibits of this report as well as more detailed information. In particular, it shows the time series available for all the deals included in this report; we have time series data for more than four years for 440 deals (mostly RMBS deals) and for 300 of these deals we have time series for 5 years or more.⁴

Our data shows that:

- The number of active loans reported to our database increased from 16.2 million in Q4 2013 to 35.5 million in Q1 2019, while the outstanding balance of active (outstanding) loans in our database decreased from € 1,017 billion to € 867 billion.⁵
- Mortgages represent the bulk of the amount of loans in our database (71% as of 2019-Q1), although the share of auto loans and consumer loans increased from less than 3% in 2014 to more than 7% now.
- The largest markets are Dutch RMBS accounting for €163 billion as of Q1 2019, French RMBS with € 114 billion, Spanish RMBS with € 103 billion and UK RMBS with € 74 billion.
- Some markets are more regionally diversified than others. For instance, German auto loans represent a substantial share of our securitised auto loans data whereas Italian loans dominate our leasing data.
- The number of data submissions remained relatively stable since Q4 2013 at above 1,000 uploads per quarter
- Even in large markets with a substantial number of deals, we find a noticeable market concentration where one securitisation accounts for a big share of that market.

1 We started collecting data from Q1 2013 onwards, but due to data quality and completeness issues, we decided to use the submissions from Q4 2013 onwards for this report. We found data quality to be suitable to start our time series from Q4 2013 onwards for the fields we selected. Appendix 1 provides more details regarding our methodology.

2 For the purpose of this study, “active loans” (outstanding loans) are defined as the loans with an outstanding balance exceeding zero.

3 See “[ABS SME Data: The Big Picture](#)”

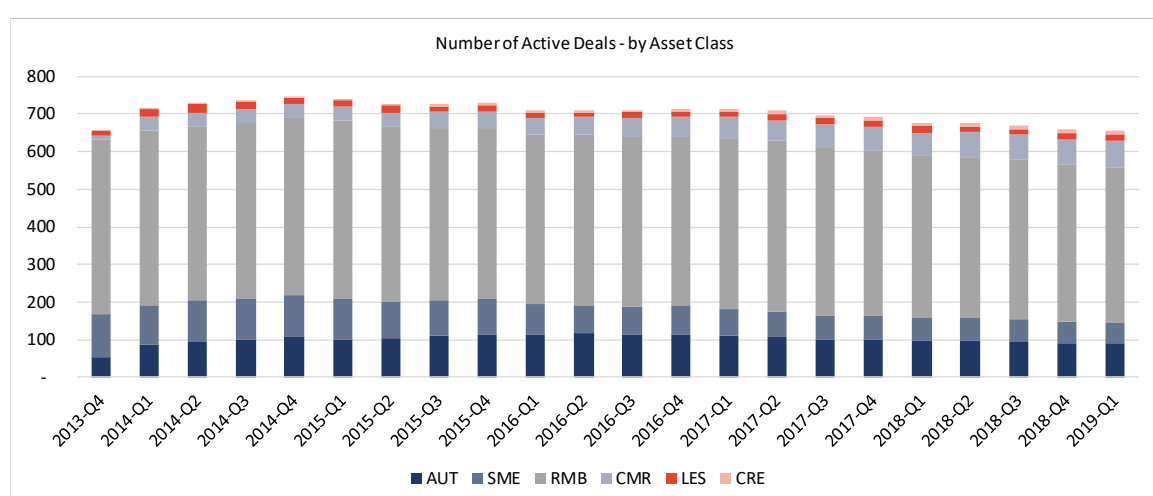
4 For some deals, longer time series could be obtained if 2012 and early 2013 data is added.

5 The amount of the outstanding loans decreased even as the number of loans increased. This is because over this period, less RMBS loans were uploaded while more (on average smaller) consumer and credit card loans were uploaded. Given that mortgage loans are larger on average than consumer or credit card loans, the net effect is a decrease in the amount of loans (from less RMBS securitisations) and an increase in the number of loans reported for credit cards and consumer loans.

AVAILABLE DEALS

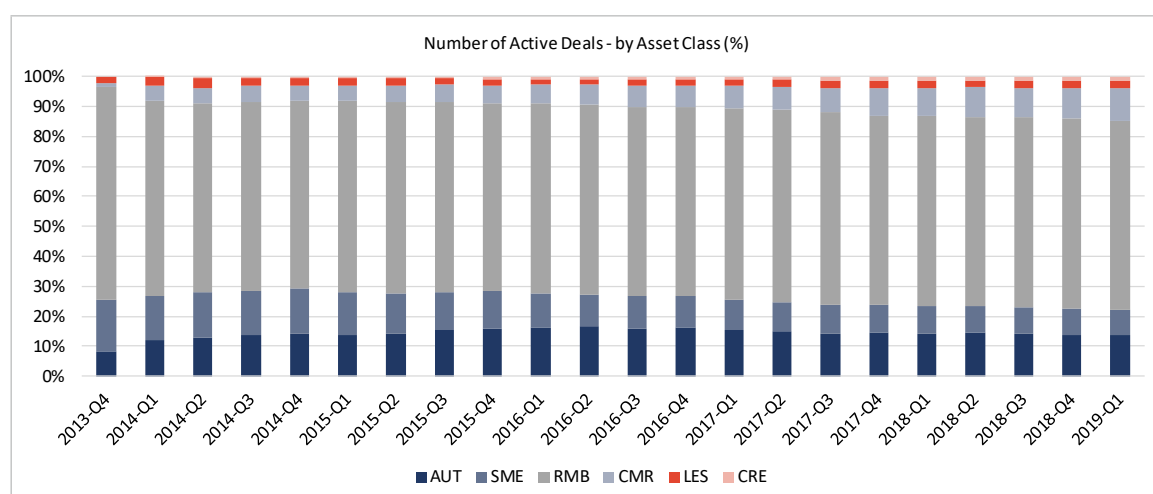
Exhibit 1a shows the evolution of the number of active (outstanding) deals in our database since Q4 2013. Overall, 1,280 deals (active and inactive) are represented in Exhibits 1a and 1b. The number of active deals stood at 656 in Q1 2019, from a maximum of 748 in Q4 2014.⁶ The composition in terms of asset classes has changed over the period Q4 2013 to Q1 2019, with more consumer deals and less RMBS and SME deals. Deal size can be extremely unequal, from less than € 100 million to more than € 50 billion for the largest deal (Dutch RMBS deal BEST 2010 B.V.); for this reason, the data in some markets can be very concentrated.⁷ Although we would expect the largest lenders in a given market to dominate the data sample, this is not always the case because not all lenders securitise loans; the market structure emerging from the securitisation data is therefore not always representative of that of the loan market as a whole.

Exhibit 1a: Number of Active Deals by Asset Class



Source: European DataWarehouse

Exhibit 1b: Number of Active Deals by Asset Class (%)



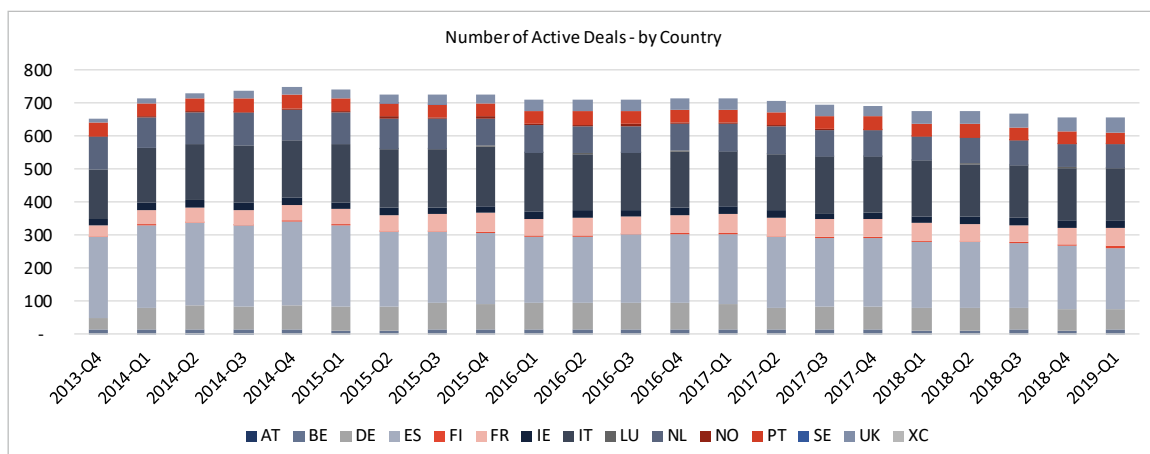
Source: European DataWarehouse

⁶ These numbers are a “net” number of deals, the total number of deals that reported data up to that point less the number of deals that had become inactive by then.

⁷ Please refer to the stacked charts in the Appendices section in “[ABS SME Data: The Big Picture](#)” showing the composition of the various European SME markets by deals and to the tab “Amounts by deal” of our Excel Appendix. This is also visible in Appendix 3 Exhibits 6g and 6h, where even for large diversified markets, it appears that there are some large deals accounting for a substantial share of the sample.

Exhibit 1c shows the number of active deals by country of origin. In terms of number of active deals, Spanish and Italian deals represent half the number of deals in our database.

Exhibit 1c: Number of Active Deals by Country



Source: European DataWarehouse

Exhibits 6a to 6f in Appendix 3 show the number of deals per country for each asset class. It shows that:

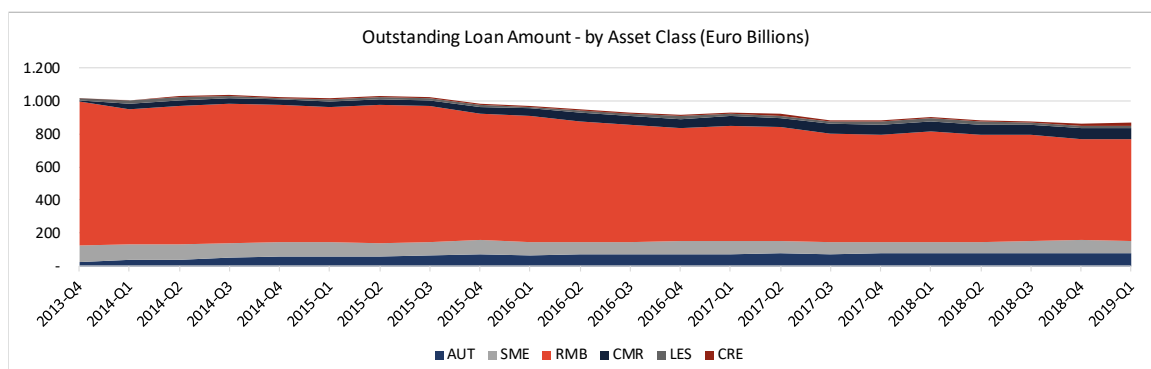
- About half the auto deals are from Germany (Exhibit 6c).
- Spain and Italy have the greatest number of RMBS and SME deals.
- Italy accounts for more than 2/3 of all leasing deals, and about half of all consumer deals.
- Almost half of all credit card deals are from France.

LOAN AMOUNTS

Exhibit 2a and 2b show the evolution of the outstanding amount of loans in our database since Q4 2013. The Euro amount has slightly decreased over the period, from € 1,016 billion in Q4 2013 down to € 867 billion⁸ in Q1 2019. The composition of the sample has changed somewhat over this period, as the amount of mortgage loans has decreased whereas the amount of loans in other asset classes has increased. Mortgages were the first asset category for which we started collecting data from Q1 2013 onwards. We started collecting data for SMEs in 2013, and for the other asset classes in 2014.

⁸ Loan amounts are uploaded in their original currency, we thus converted the GBP, SEK, NOK into EURO for this report.

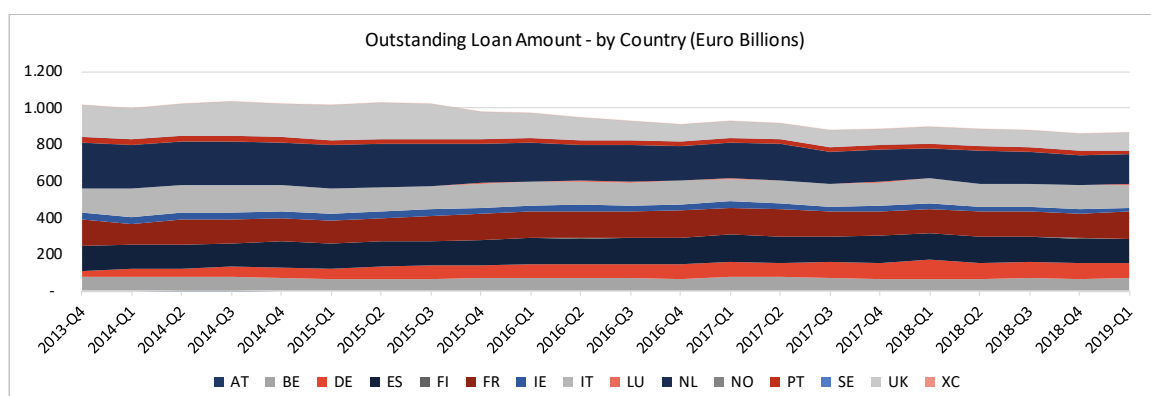
Exhibit 2a: Amount of Outstanding Active Loans, per Asset Class (Euro Millions)



Source: European DataWarehouse

Exhibit 2b shows which European countries are represented in our database and shows that the share of a given country in the database does not necessarily match the size of its economy. This is because securitisation is not used to the same extent in all countries and for all asset classes. The Netherlands are thus overrepresented overall, but we will see that some asset classes are highly concentrated in specific countries.

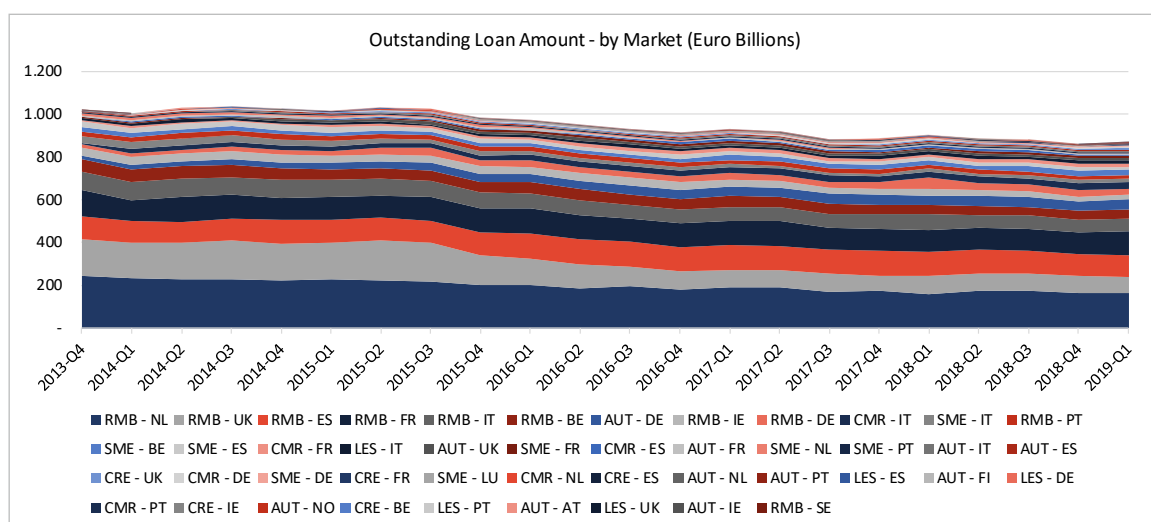
Exhibit 2b: Amount of Outstanding Active Loans, per Country (Euro Millions)



Source: European DataWarehouse

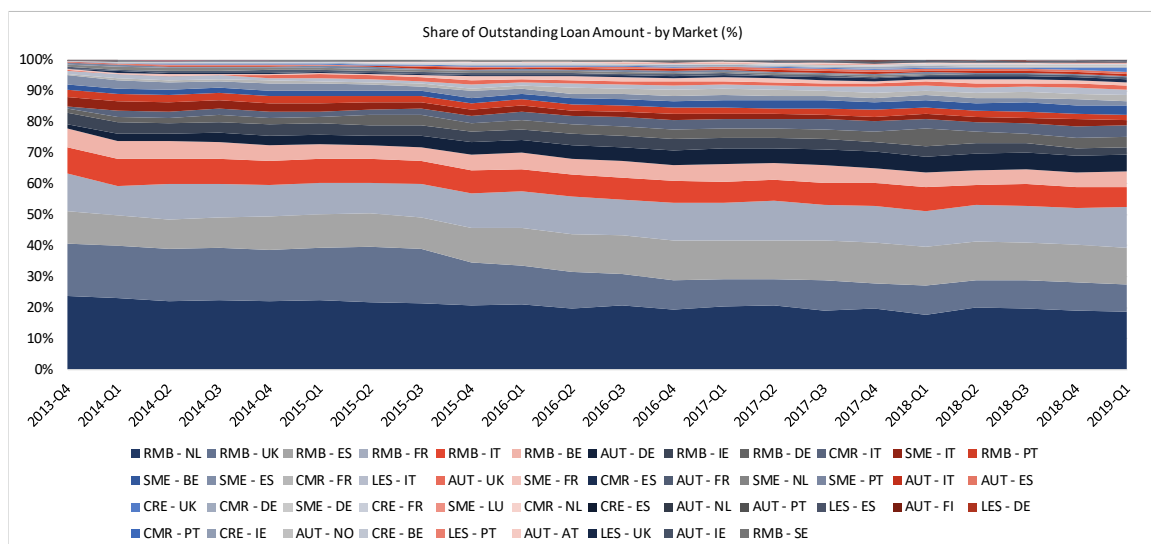
Exhibits 2c and 2d use the same data as Exhibits 2a and 2b, showing the evolution of the total outstanding loan amount per market (combination country and asset class). The five main markets in our database are RMBS markets, followed by the German auto segment accounting for € 43 billion as of Q1 2019. The rank ordering has changed somewhat since 2013, with Dutch and UK RMBS decreasing in absolute and relative terms since Q4 2013, from € 243 billion and € 171 billion respectively down to € 163 billion and € 74 billion. The Dutch RMBS market remains the largest market in terms of outstanding loan amount as of Q1 2019, and the French RMBS market is now second largest with € 114 billion.

Exhibit 2c: Evolution of the Outstanding Loan Amount for the Main Markets (Euro Billions)



Source: European DataWarehouse

Exhibit 2d: Evolution of the Outstanding Loan Amount for the Main Markets (%)

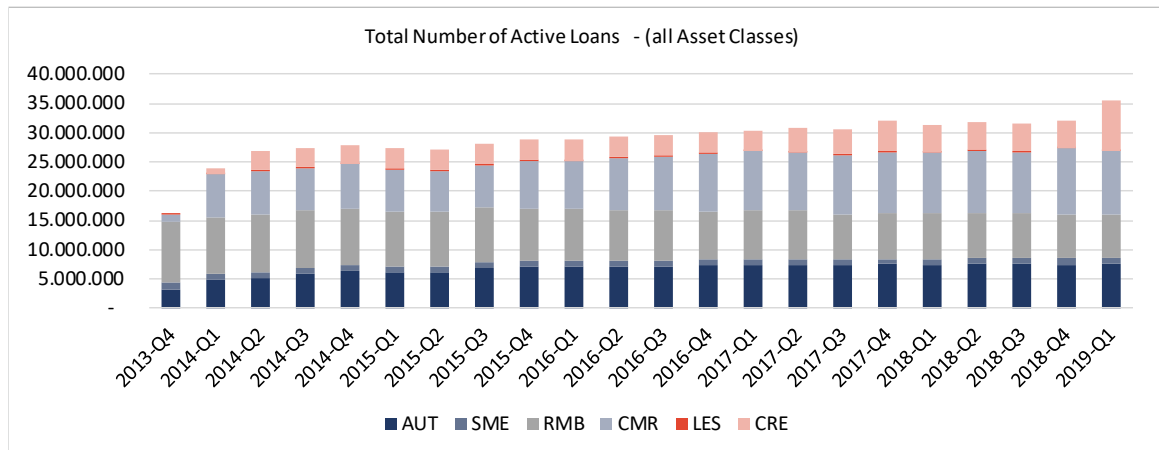


Source: European DataWarehouse

NUMBER OF LOANS AND BORROWERS

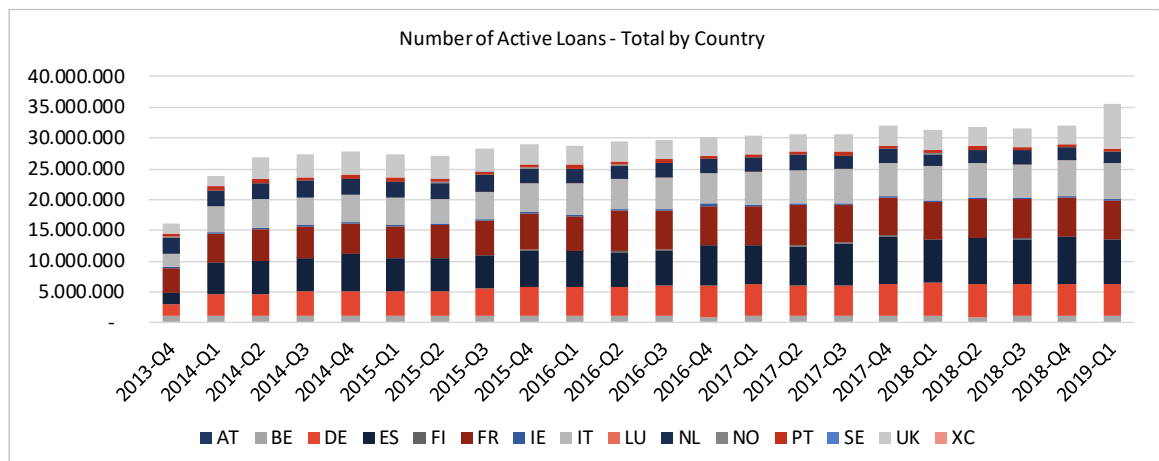
Exhibits 3a and 3b show the number of loans per asset class and per country, and mirror exhibits 4a and 4b respectively showing the number of borrowers instead. The values in Exhibit 4 are lower, as there can be several loans per borrowers in a given deal. The loan and borrower identifiers are encrypted for privacy reason, so that it is not possible to recoup our data with other sources, or even look for a given borrower across the various deals in the database. Although some borrowers have multiple loans within a securitisation, most borrowers have typically one loan in a securitisation only. The key exception is the Netherlands, where mortgages are typically financed with several “loan parts” (typically one amortising and one interest only part), so that in a Dutch securitisation, there are typically several loans linked to the same property and borrowers.

Exhibit 3a: Number of Active Loans per Asset Class



Source: European DataWarehouse

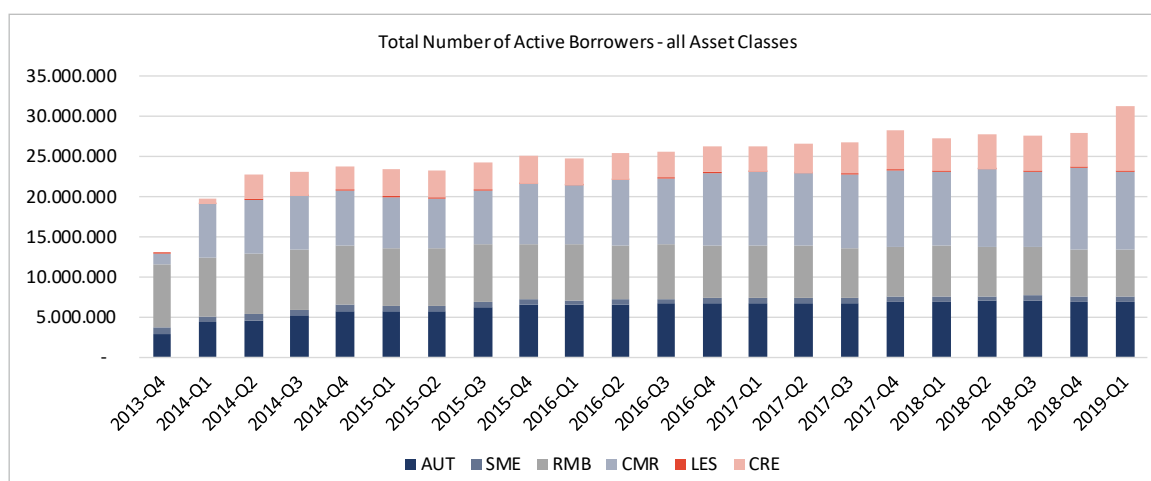
Exhibit 3b: Number of Active Loans per Country



Source: European DataWarehouse

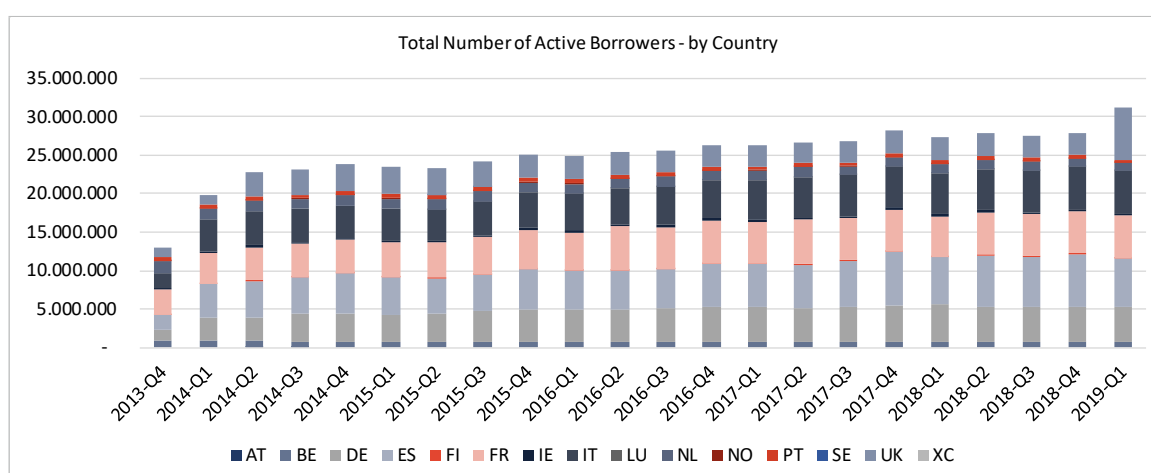
Exhibits 4a and 4b show the number of borrowers, by asset class and country. The figures and stratification shown in these charts look very similar to exhibits 3a and 3b with somewhat lower figures as there can be several loans for one borrower, as is generally the case in the Netherlands.

Exhibit 4a: Number of Active Borrowers by Asset Class



Source: European DataWarehouse; An active borrower is a borrower having at least one loan with current balance >0

Exhibit 4b: Number of Active Borrowers by Country



Source: European DataWarehouse; An active borrower is a borrower having at least one loan with current balance >0

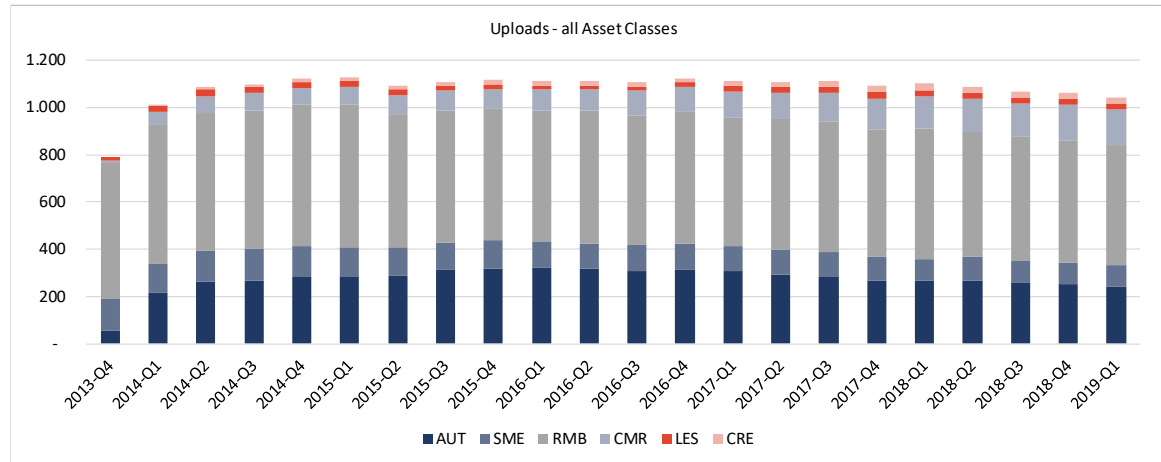
REPORTING FREQUENCY

Exhibit 5 shows the number of LLD uploads per quarter, given that deals must upload LLD quarterly at least. The greater share of the auto sector in this exhibit is partly because auto deals tend to report more frequently (monthly) than RMBS deals (that tend to report quarterly). For the deals that report monthly (this is the case for the deals with monthly IPDs), we select the last LLD available as of end of March, June, September or December. We thus avoid triple counting the data for the loans reporting monthly. Submissions can also be late, for technical reasons, hence we do have some occasional gaps in the reporting for some deals, which we have not sought to rectify for this study.⁹ There is also a delay between the pool cut-off date of the LLD and the upload date, given that data providers should upload a data tape in the month following the interest payment date.

⁹ Possible fixes include linear interpolation or using the LLD with the nearest submission date.

The data for a deal is typically shown as of the end of the collection period, with an IPD in the following month. The data provider has a month from the IPD to upload the data to our database. It is therefore possible that data as of 31 January may be submitted to our database on 15 March.

Exhibit 5: Number of Loan-Level Data Uploads per Quarter



Source: European DataWarehouse

APPENDIX 1: DATA SELECTION AND ADJUSTMENTS

DATA SELECTION

We selected data for the public deals of the main asset classes (auto, RMBS, SME, consumer, leasing, credit card), including master trusts. Private deals are therefore not included in our data selection, neither are covered bonds, ACC and CMBS deals. Data is uploaded to our database monthly or quarterly. In order not to triple count the observations for the deals reporting monthly, we selected the last submission of the natural quarter (March, June, September, December) since Q4 2013 for all deals. Starting in Q4 2013, the number of data adjustments needed is minimised, given that at that stage, data quality had substantially improved compared with early 2013 submissions.

DATA ADJUSTMENTS

For this report, we adjusted some of the loan balances when this was necessary and feasible. We translated to Euro the amounts obviously reported in Cents and we converted the few loan balances systematically reported as a negative number to a positive number.¹⁰ Loan amounts from the UK, Norway and Sweden, were converted to Euro using the appropriate exchange rate. We believe that the values thus obtained provide an overall fairer picture of the available data. Please note in particular:

- Data providers occasionally used dummy values such as “9999999999.99”; “99.99”; “4040404040”; “9.99” to avoid reporting “NA” for some of the loan amounts. We excluded these values from our queries for this report.
- A decimal point issue where a loan amount is reported in Cents rather than Euro is easily rectified when it affects all the loans for a given LLD and a given period.

Our data sample excluded cases where the current balance was either 0, or a dummy variable. Floorplan deals (securitisations of loans to car dealers) were this time included in the SME statistics.

¹⁰ In some deals, when a few loans with a loan balance smaller than 0, this typically refers to an overpayment. When all the loans in a pool are reported with a balance <0, it is a data quality problem, typically resolved in subsequent uploads.

APPENDIX 2: DATA LIMITATIONS AND BIAS

Our database includes the underlying loan-level data (LLD) of the public ECB and repo eligible European securitisations. It can be used to some extent for research beyond securitisation, keeping in mind the limitations and bias stemming from the securitised nature of these loans and the fact that we started collecting data in Q1 2013 only. Securitisation affects the characteristics of the loans in that:

- Loans are securitised only if they fulfil deal-specific “eligibility criteria”,¹¹ which may make them unrepresentative of the remainder of the originator’s loan book.
- In particular, the loans included in a securitisation at the closing of a deal are typically all performing, which makes them unrepresentative of the loan books of the originator at that stage.
- Lenders are only represented in our database if one of their deals is active in our database, keeping in mind that not all lenders securitise loans to the same extent.
- Loans can be repurchased by the originator following a loan modification, potentially linked to underperformance. These underperforming loans would then go back to the books of the lender and thus leave the securitised pool.

A loan is thus available in our database from the latest of a) the date it is first securitised, and b) the date when bonds of this securitisation became eligible as ECB repo collateral. ED started collecting data for some deals sometimes as early as Q1 2013, but data quality issues mean that data became generally satisfactory from the end of 2013 onwards. This means that the data available prior to 2014 should be critically reviewed before use.¹²

When downloading SME data from our database, it is also important to pay attention to the relative importance of the various securitisations and check to what extent the sample obtained is representative for the topic to be studied. For instance, the market share of lenders may not be fully reflected in our securitisation data. This point was particularly clear in our report “ABS SME Data: The Big Picture”, where it appears that a handful of deals in some countries can disproportionately contribute to the sample. This is also applicable to other asset classes and is visible in Exhibits 6g and 6h and in other charts of our Excel Appendix.

Some deals contain very specific types of loans. This is the case of the securitisations of loans to car dealers, the floorplan deals, which are classified as SME for ED reporting purposes but are not comparable to other SME portfolios in that they contain only one type of industry (car dealers, identifiable by their NACE codes).¹³ The Geldilux deal (loans to German SMEs) is another example of an atypical deal. It includes very short-term bullet loans to SMEs that have so far performed noticeably better than typical German SME loans. These loans can therefore not be considered as representative of the German SME loan market.

11 Eligibility criteria may exclude some loans from the securitised pools such as those that are underperforming those with insufficient seasoning, or with lower internal credit ratings for instance.

12 See for instance our data quality scores, see also our data commentaries to help with data interpretation.” Becomes “ED data quality scores and data commentaries help with data interpretation. Please contact enquiries@eurodw.eu if needed.

13 NACE stands for the French “Nomenclature statistique des Activités économiques dans la Communauté Européenne” (Statistical Classification of Economic Activities in the European Community). See also the [list of NACE codes](#). The NACE code used for the loans in Floorplan deals is typically G45 for “Wholesale and retail trade and repair of motor vehicles and motorcycles”

In previous publications, we found that the regional distribution of the loans for SME and RMBS loans matched the economic importance of these regions within a given country,¹⁴ but the regional stratification of the loans for a given deal can also reflect the regional focus of the originator (for instance, when it is a regional bank).

The securitised loans in our database were sometimes originated long before they were securitised. The pool composition is thus subject to “survivor bias” because securitisation eligibility criteria typically exclude delinquent loans at deal origination. The securitised pool may thus perform better than the average loans of the same vintage and originator. This “survivor bias” can be reinforced by the loan repurchases, when a loan is repurchased by the originator from the securitisation fund. This may occur when:

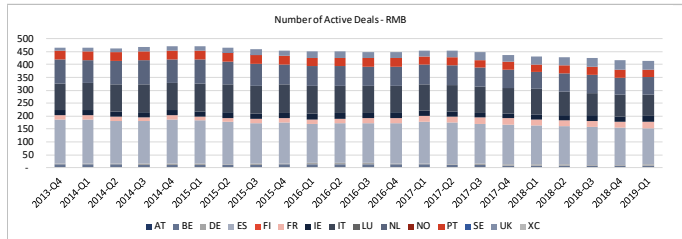
- A loan that was securitised may have to be repurchased for technical or performance reasons
- There are limits on the share of a pool that may be modified in a given securitisation (often, for instance, not more than 10% of the original amount of loans may be modified), and there are also limits to the effect the modifications may have on a pool as a whole, for instance, preventing the weighted average margin of the loans from dropping below a certain level. The originator may have to repurchase some of the loans it modifies to keep to these limits.
- When a pool has amortised to less than 10% of its original amount, the originator may repurchase it by using a “clean up-call”, which interrupts the time series for the remaining loans, even when these are still not fully repaid or when the work out process is not over.
- It is possible that before that time, no tranches from that deal remain ECB eligible and that the deal would have stopped reporting altogether.

¹⁴ See “[Standardised geographic information for European Loan-Level Data](#)”

APPENDIX 3: DEAL CONCENTRATION

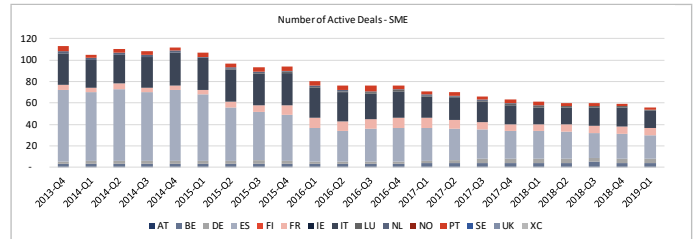
This appendix shows some of the charts from our data availability report in Excel, available on our website. Exhibits 6a to 6f show the number of outstanding (active) deals in each asset class, by country.

Exhibit 6a: Number of Outstanding (Active) RMBS Deals by Country



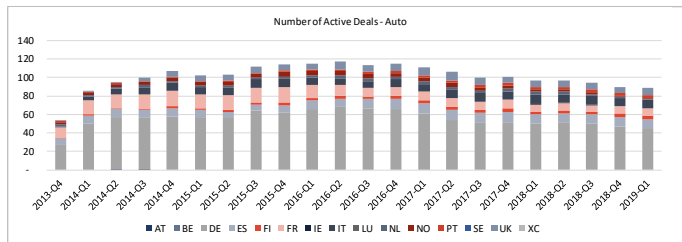
Source: European DataWarehouse

Exhibit 6b: Number of Outstanding (Active) SME Deals by Country



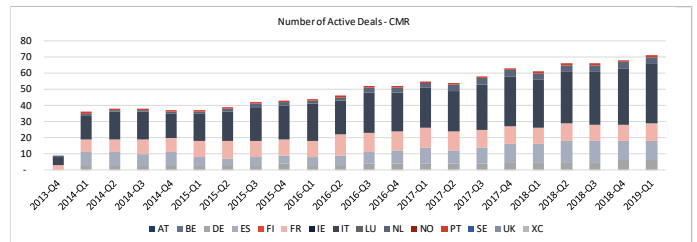
Source: European DataWarehouse

Exhibit 6c: Number of Outstanding (Active) Auto Deals by Country



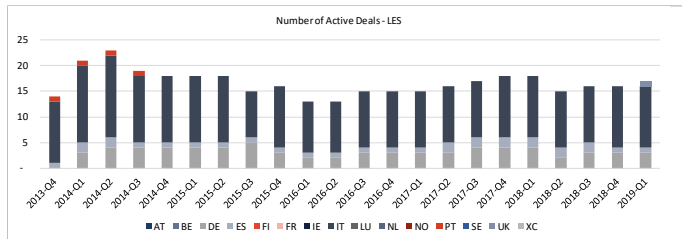
Source: European DataWarehouse

Exhibit 6d: Number of Outstanding (Active) Consumer Deals by Country



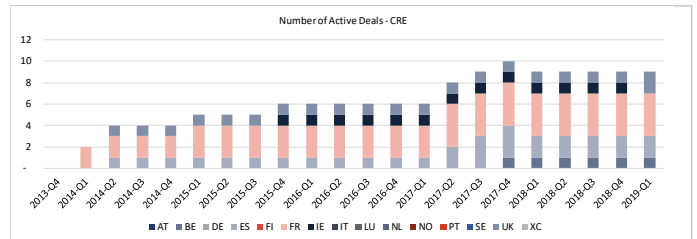
Source: European DataWarehouse

Exhibit 6e: Number of Outstanding (Active) Leasing Deals by Country



Source: European DataWarehouse

Exhibit 6f: Number of Outstanding Credit Card Deals by Country



Source: European DataWarehouse

[illegible]

ABS Auto Concentration in Germany

The chart illustrates the market share of various ABS models in Germany from 2013 Q4 to 2020 Q1. The y-axis represents the percentage of market share, ranging from 0% to 100%. The x-axis represents time, with labels for each quarter from 2013 Q4 to 2020 Q1. The chart shows a complex pattern of market share changes over time, with several models showing significant growth and others declining. The legend below the chart lists 40 different models, each represented by a unique color.

Legend:

- AUTSDE000245104020155
- AUTSDE000245104120153
- AUTSDE000245104220151
- AUTSDE000245104420157
- AUTSDE000245104520154
- AUTSDE000245104820158
- AUTSDE000245104920156
- AUTSDE000262100820132
- AUTSDE000262101220134
- AUTSDE000283100320147
- AUTSDE000115100220134
- AUTSDE000115100220124
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- AUTSDE000115100720164
- AUTSDE000115100820170
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- AUTSDE000286101420151

APPENDIX 4: LIST OF ABBREVIATIONS, ACRONYMS, INITIALS, AND SYMBOLS

ABS	Asset Backed Securities
ACC	Additional Credit Claims
AT	Austria
AUT	Auto
BE	Belgium
CMBS	Residential Mortgage Backed Securitisation
CMR	Consumer
CRE	Credit Cards
DE	Germany
ECB	European Central Bank
ED	European DataWarehouse
ES	Spain
FI	Finland
FR	France
GBP	Pound Sterling
IE	Ireland
IT	Italy
LES	Leasing
LLD	Loan-Level Data
LU	Luxembourg
NACE	Nomenclature Statistique des Activités Economiques dans la Communauté Européenne
NL	Netherlands
NO	Norway
NOK	Norwegian Krone
PT	Portugal
RMB	RMBS
RMBS	Commercial Mortgage Backed Securitisation
SE	Sweden
SEK	Swedish Krona
SME	Small and Medium Size Enterprises
UK	United Kingdom
XC	Multiple Countries

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