

European Auto ABS Keeping on Track

The European and US Markets in Comparison

Financial Research
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Management Summary

1.

In comparison with its peak level in 2009, the outstanding volume on the European securitization market has been halved. However, not all forms of securitization in Europe have been affected by this development, and the market for ABS remained largely stable in 2016. What is notable here is that the Auto ABS asset class not only plays a major role in the context of the ABS securitization market, but has continued to grow. The past two years have brought an increase in the relevance of European Auto ABS.

2.

After the annual volume of new issuances increased fivefold in the space of one decade to 30bn euros (2014), the European market for auto securitizations stabilized in the course of the last two years. After standing at 29.3bn euros in new European ABS issuances in 2015, this figure increased again in 2016 to 30bn euros. The volume of new issuances with German collateral declined during the last year; the decrease, however, was more than compensated for by the growth seen in other European markets, particularly in France, the UK, and Spain. In the period between 2000 and 2017, more than half of all new auto ABS issuances were backed by German collateral, making Germany the most important market for ABS in Europe - well ahead of UK and France.

3.

In comparing the market for auto ABS in Europe with its American counterpart, two main differences can be discerned. Firstly, the US market is at a more mature stage of development. In the period since 2000, auto ABS in the amount of 1,199.6 billion euros have been issued in the USA, a significantly higher volume than in Europe (272.8bn euros). In addition, the US market was more volatile - in contrast to the European market, which had been characterized by increasing issuance activity since 2000. In 2016, the issuance volume stood at 72.2bn euros, slightly above the volume of the previous year (80.6bn euros).

4.

The largest share of auto finance in Europe is securitized by captives; despite the fact that the share of captives in the total volume of new issuances fluctuated, they have nevertheless accounted for more than half of the issuance volume since 2000. In 2016, 62.4% of auto ABS were issued by automotive banks; in contrast, captives in the USA do not dominate

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the market as do their European counterparts. Measured by issuance volume, the share of captives in the US market is structurally below that of Europe.

5.

Last year, Volkswagen securitized a lower volume of auto finance for the first time since 2009. After having grown consistently for six consecutive years, the issuance volume of auto ABS stood at 6.4bn euros in 2016. By contrast, BMW saw its volume increase for the third consecutive year in 2016. Meanwhile, Santander was able to hold its ground as the leader among non-captives last year. Measured by issuance volume since 2000, Volkswagen remains the biggest player with a market share of 30.3%, followed by Santander, whose share of the market amounts to one-fifth.

6.

In contrast to the European ABS market, the composition of the US market is significantly more heterogeneous. The broad diversity among originators in the US is primarily due to the larger number of financing companies independent of auto manufacturers. The carmaker Ford is the single largest player in the US market (14.4% of the total market volume), followed by Ally Financial and Nissan. Notably, there is no other US carmaker among the captives aside from Ford with comparable issuance volume. It is interesting to note the development of the Asian captives such as Nissan, Honda, and Toyota, who have significantly increased their participation in the US market in recent years.

7.

Rating profiles, as well as market-based risk indicators such as issuance spreads, indicate that auto ABS can arguably be regarded as a safe haven. Measured by issuance volume, the vast majority of the auto ABS notes evaluated in 2016 received an initial rating of AAA (77.8%), as seen in previous years. Compared with auto ABS in the US, of which 86.4% were assigned a rating of AAA, Europe stood at a slightly lower level. During the entire period under review, 82.2% of all European deals displayed the highest level of creditworthiness. Reviewing auto ABS by originator showed that auto ABS issued by captives since 2015 have tended toward a slightly lower risk of default. The origins of the underlyings here did not play a substantial role.

8.

In view of the issuance activity in the auto ABS market in the current year, we expect it to remain on its robust trajectory - whereby the volume of new European auto ABS issues at the end of the year should be slightly

below that of 2016. Meanwhile, the medium-term outlook is benign; we are, however, only cautiously optimistic as to whether there will be any significant increase in issuance volumes in the near future. Instead, we assume that the auto ABS market will consolidate, with the market volume of new auto securitization issues remaining stable at the level seen in recent years. The recent changes made to EU regulations should not have any significant influence on issuance activity and the asset purchase program of the ECB should not entail significant effects, and we maintain a favorable outlook with regard to the macro-financial environment in the medium term

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I. Auto Securitizations as a Support for the European ABS Market

A growing number of people in Germany turn to loans and leasing when purchasing an automobile, while the percentage of those financing a new car with their own resources continues to shrink, the latest figure amounting to only 25%. According to a report by the German Association of Automotive Banks (BDA),ⁱ Banks affiliated with carmakers (captives) have profited from this situation, recording new business in financing and leasing in the amount of 41.5bn euros - an increase of 9%. At the same time, the total number of all leasing and financing contracts with BDA-affiliated captives rose to 112.9bn euros at the end of 2016, thus reaching an all-time high.

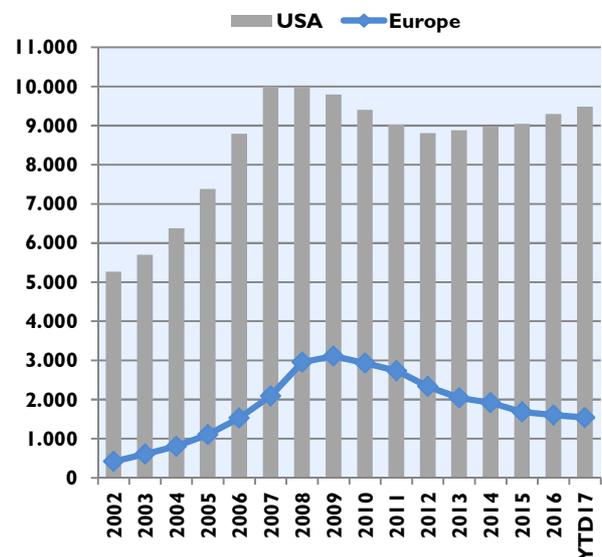
The fact that an increasingly large share of auto purchases is financed by means of loans and leasing is probably largely due to the favorable financing conditions provided by banks affiliated with carmakers to their customers. In turn, these can offer their private and corporate customers attractive financing schemes provided they themselves have favorable and diversified ways of refinancing. One important element of the refinancing strategy for many captives is auto ABS.ⁱⁱ In this context, the question of whether the increase in financing through loans and leasing is reflected in a rise in issuance activity in the auto securitization market.

In the first place, it must be recognized that the European securitization market as a whole is currently far from a significant revitalization. It is true that securitizations have to be seen as a fundamental component of any efficient, functioning financial market. The market, however, has been unable to completely rid itself of the stigma which has plagued it since the onset of the US subprime crisis. Decision-makers at the pan-European level have taken measures such as introducing higher

equity requirements, due diligence and rules of conduct, and standards for securitizations aimed at making them less complicated and safer and creating a more solid foundation for markets.ⁱⁱⁱ Notwithstanding, market activity remains moderate, whereby it is unclear whether this comes as a result of a lack of confidence on the part of investors due to opaque origination and transactional structures as well as a general lack of transparency, or whether it has been caused by European legislative and executive authorities, whose regulative measures have resulted in a continually increasing set of rules which create uncertainty in the market with regard to the regulatory treatment of securitizations and the implementation of the various frameworks.^{iv}

Fig. 1: Outstanding volume in the European and American securitization markets

Shown in USD billion, year-to-date: until Q2-2017



Source: SIFMA, Creditreform Rating

Thus, securitization activity in Europe has remained sluggish (see fig. 1). In comparison with its peak level in 2009, when the outstanding volume stood at approx. USD 3.1tr, the volume of the European securitization market was halved by the end of the second quarter of 2017 (USD 1.5 tr).

However, there is evidence of a gradual stabilization based on the moderate upward trend in the volume of new securitization issues since 2013. The volume of new issuances increased last year to 238.6bn euros, although this only brought it to the level seen in 2003/04, with a continuing decrease in outstanding volume.

This situation contrasts in two ways with the development in the USA. Firstly, the securitization markets there recovered much more rapidly than in Europe. To be sure, the outstanding volume in the USA decreased after the financial crisis from USD 10.0 trillion in 2007 to USD 8.8 trillion in 2012. Nevertheless, the market volume began to climb again in 2013, with comparatively dynamic development ever since. At the end of the first half of 2017 the outstanding volume in the US securitization market amounted to USD 9.5 trillion, only 5.1% below its 2007 peak. Moreover, it should be noted that the US market is more than six times the size of its European counterpart.

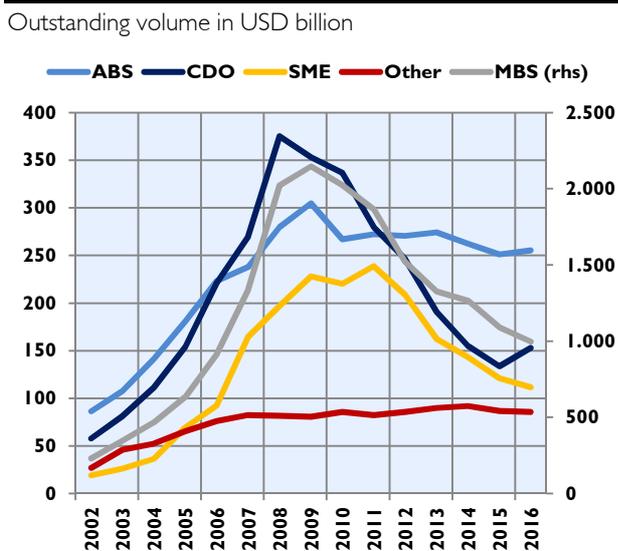
In this context, however, it must be emphasized that in Europe not all forms of securitization have been affected to the same extent by this downward trajectory (see fig. 2). Primarily affected were securitizations collateralized by mortgages: residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS). While the market volume of RMBS dropped by USD 1.0bn, i.e. 53%, the outstanding volume of CMBS fell by USD 122.0bn, i.e. 59%. Thus the MBS segment accounts for three quarters (76%) of the decrease in outstanding volume in the European securitization market.

By contrast, the market for asset-backed securities (ABS) remained stable even in 2016. If one takes 2010 as the base year, excluding the USD 37.8bn decrease between 2009 and 2010, then the ABS securitization market has largely remained stable. The outstanding volume of ABS securities fluctuated from 2010 to 2016 within a narrow range of between USD 250.9bn and USD 274.2bn (2016: USD 255.3bn).

Worth noting here is that auto ABS not only play a major role in the context of the ABS securitization market, but has also continued to grow, contrary to the declining market trend. Thus, the auto ABS market recorded an outstanding volume of USD 79.4bn in 2016. For the entire year this corresponds to an increase of USD 3.7bn, i.e. 4.9%. By comparison, in 2010 it was USD 50.7bn - a gain of 56.7%. Hence the type of the securitized receivables seems to play a significant role. Generally, this asset class should benefit from predictable cash flows and from comparatively short maturities of financing and leasing contracts for vehicles.

Based on the favorable development of European auto ABS, they have gained importance over the past two years (see fig. 3). After the significant increase in the share of auto ABS in the ABS securitization market from 19.0% in 2010 to 28.6% in

Fig. 2: Development of securitization markets in Europe by collateral

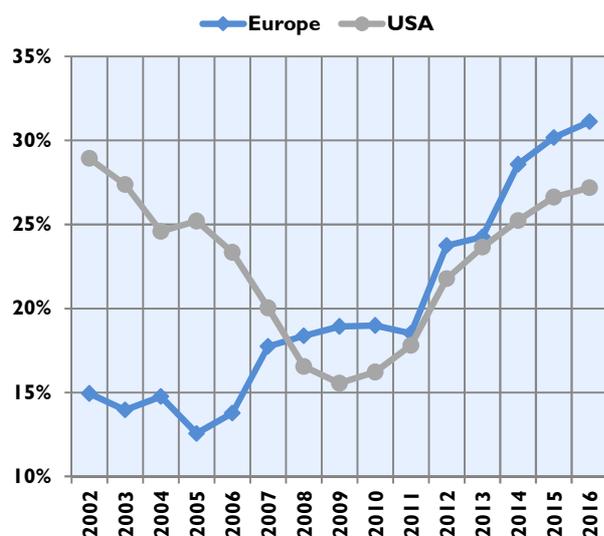


Source: SIFMA, Creditreform Rating

2014, this share rose again in 2015 and 2016 by two percentage points to 31.1%, enabling it to expand its market position. In contrast, the development of the auto securitization segment in the US faltered between 2006 and 2009, in the course of which the share of ABS securitizations in the USA fell from 23.3% to 15.6%. From 2010, auto ABS gained significance again in the US: by 2016 it gained more than ten percentage points, bringing the share of auto ABS in the ABS securitization market to 27.2%.

Fig. 3: The significance of auto ABS in global comparison

Share of ABS in the outstanding volume of the total ABS market in Europe and the United States



Source: SIFMA, Creditreform Rating

Against this background we continue our study of the developments in the auto ABS market which we undertook for the first time in 2015 ('Fasten Your Seatbelts – European Auto ABS on the Rise' - September 2015). Here we will continue to focus on the European auto ABS market, expanding our study to an additional analysis of the auto ABS segment in the USA. In this context, chapter 2 deals with the issue volumes of auto ABS, whereby we will first focus on the origin of collateral, i.e.

the automobile loans underlying the auto ABS. In chapter 3 we will look at the auto ABS market by taking into account the originators of the auto ABS issues. In the fourth chapter we look at auto ABS from a risk perspective, taking a closer look at the rating profiles of auto ABS in Europe and the USA, as well as issuance spreads. Finally, we will discuss auto ABS' perspectives by highlighting the most significant macro-financial and regulatory framework conditions.

In this study we took into account all auto ABS issued from 2000 until 31 August, 2017 in the EU-28 countries as well as in Switzerland, Norway, Iceland (↔ Europe), and in the United States.

2. The Auto ABS Markets in Europe and the United States

After the annual volume of new issuances increased fivefold in the space of one decade from 5.8 (2005) to 30bn euros (2014), the European market for auto securitizations has stabilized during the last two years. (see fig. 4). In 2015, new European auto ABS issuances amounted to 29.3bn euros, and in 2016 the 30bn euro mark was again reached. Nevertheless, the growth seen in the last year was not experienced to an equal extent in all European markets.

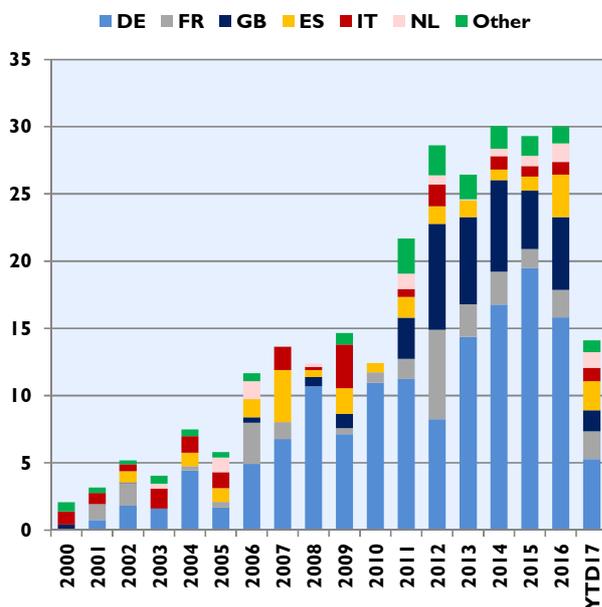
In Germany, the biggest European market for auto ABS, the volume of new issuances declined during the last year. After the volume of new German auto securitization issues peaked in 2015 at 19.5bn euros, new auto ABS totaling 15.8bn euros were issued in 2016. This decline, however, was more than compensated for by the growth seen in other important European markets. Thus the volume of French auto ABS issuances rose in 2016 from 1.4 to 2.0bn euros; growth was also seen in

securitized auto loans backed by British and Spanish collateral, which reached issue volumes of 5.4 and 3.2bn euros respectively. For purposes of comparison, the respective volumes for new issues in 2015 were significantly lower, with 4.3 and 1.0bn euros.

With regard to the current year, issues with German collateral continue to dominate the European market (5.3bn euros), followed by Spain (2.2bn euros) and France (2.0bn euros). The total volume of new issues between January and August came to 14.1bn euros, below last year's total of 18.4bn euros.

Fig. 4: Development of auto ABS issuance activity in Europe

Volume of new auto ABS issuances in billion euros, by origin of collateral, year-to-date until the end of August 2017



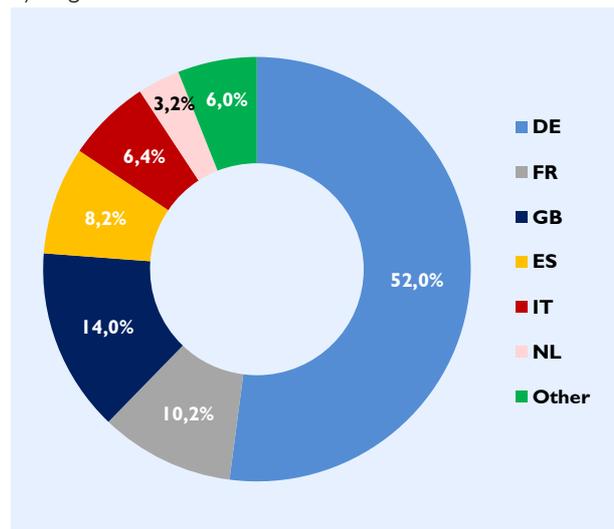
Source: Thomson Reuters, Creditreform Rating

From a long-term perspective, if we look at the European market for auto ABS according to the origin of the securitized loans since the year 2000, we see that the majority of the collateral originates from a small number of countries (see fig. 5). Thus, more than half of new auto ABS issues in

the period under review were backed by German collateral (52.0%). This makes Germany the most important market for auto ABS in Europe, well ahead of Great Britain and France, which accounted for one-seventh (14.0%) and one-tenth (10.2%) of the volume of new issuances. This means that, measured by the country of origin of the underlyings, 80% of the volume issued in Europe within the period under review was accounted for by only three countries.

Fig. 5: Country of origin for underlyings of European Auto ABS

Auto ABS deals, 2000 to Aug-17, Share in Auto ABS deals by origin of collateral in %



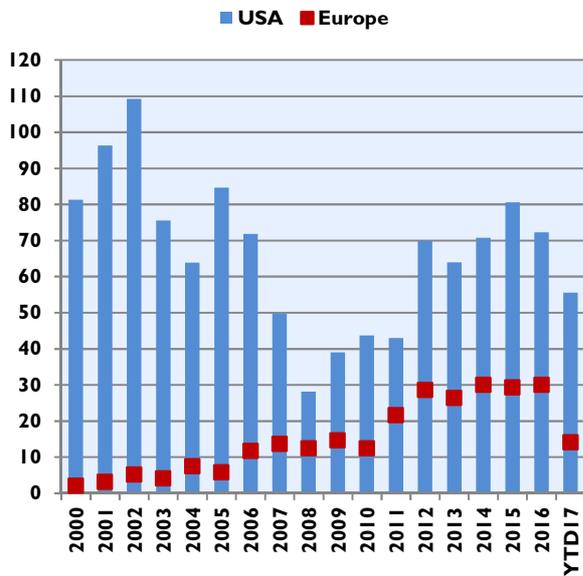
Source: Thomson Reuters, Creditreform Rating

In comparing the market for auto ABS in Europe with its American counterpart, two main differences can be discerned. Firstly, the US market finds itself at a more mature stage of development, as is indicated by its issue volumes (see fig. 6). Since 2000, auto ABS in the amount of 1,199.6 billion euros have been issued in the USA, a significantly higher volume than in Europe (272.8bn euros) during the same period. Secondly, the US market was more volatile - in contrast to the European market, which had been characterized by increasing issuance activity since 2000. Starting at

its historical peak in 2002, when auto ABS in the amount of 109.2bn euros were issued in the US market, (Europe: 5.2bn euros), issuance activity started on a downward trajectory which lasted for several years. The volume halved in 2007 to 49.9 euros before the lowest volume of new issues was registered during the course of the financial crisis in 2008, at 28.1bn euros.

Fig. 6: Development of issuance activity of Auto ABS in the United States

Volume of new auto ABS issuances in billion euros, by origin of collateral, year-to-date until the end of August 2017



Source: Thomson Reuters, Creditreform Rating

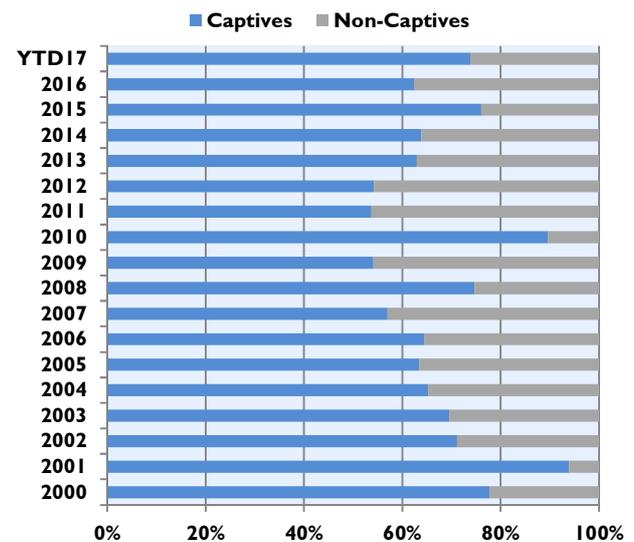
In the years following, until 2011 (43.0bn euros), a modest recovery was seen until 2012, which brought a significant revitalization of issuance activity and when a volume of 69.9bn euros was recorded. In 2016, the volume of new auto ABS issues stood at 72.2bn euros, a slight decrease year-on-year (previous year: 80.6bn euros). Notwithstanding the fact that the US market is significantly larger than that of its European counterpart, Europe is certainly catching up. For orientation: the size of the European auto ABS market in 2005 was only 7% of its US counterpart; by 2016 this had already expanded to 42%.

3. The Originators of Auto ABS

Having studied the auto ABS market by looking at the volume of new issues in Europe and the USA, and having looked at some of the current developments in the market, in this chapter we will have a look at the structure of the market at the level of the originators. Who then are the most important players? This question can be answered unambiguously when we look at the volume of securitizations.

Fig. 7: Captives and non-captives in the European auto ABS market

Share in volume of new issues by originator, in %, year-to-date: through the end of August 2017



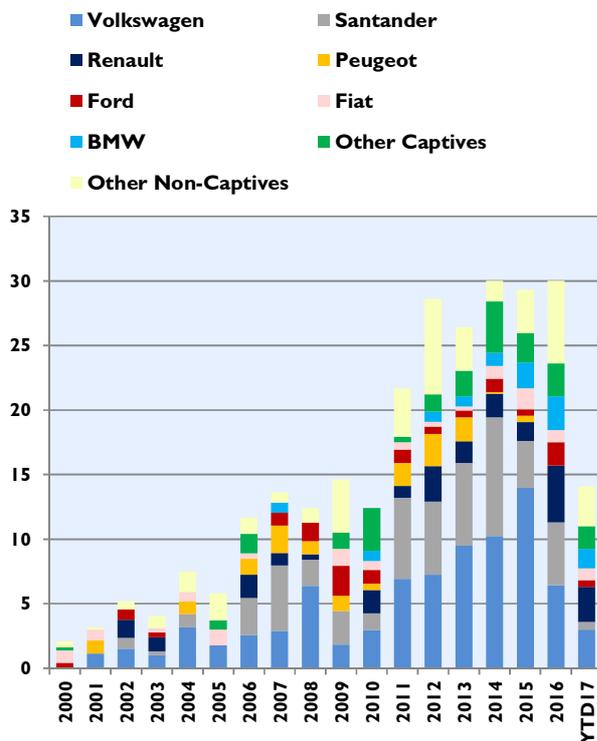
Source: Thomson Reuters, Creditreform Rating

As we see in fig. 7, the majority of auto loans in Europe are securitized by banks affiliated with automobile manufacturers (so-called 'captives'). Despite the fact that the share of captives in the total volume of new issues has fluctuated, they have nevertheless accounted for more than half of the issuance volume since 2000. In 2016, 62.4% of new auto ABS were issued by auto banks, a slightly lower percentage than over the entire period under review (65.2%). Market activity in the cur-

rent year has been even more clearly dominated by captives. Of the new issues between January and August, 10.4bn euros (73.9%) were accounted for by banks affiliated with auto manufacturers.

Fig. 8: Development of European auto ABS issues by originator

Volume of new auto ABS issuances in billion euros, year-to-date until the end of August 2017



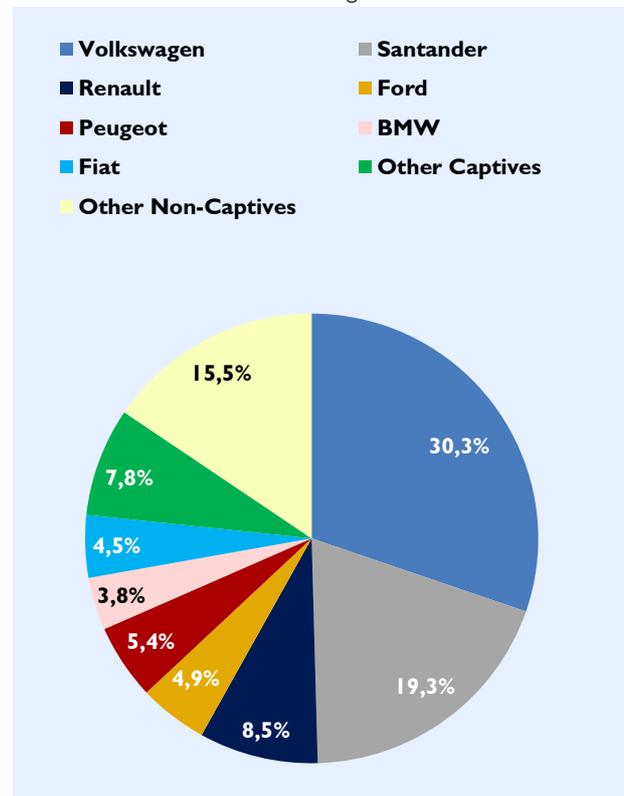
Source: Thomson Reuters, Creditreform Rating

Volkswagen, the most significant issuer in European auto ABS, securitized a lower volume of automobile loans last year for the first time since 2009 (see fig. 8). After its issuance volume had grown over the course of six consecutive years from 1.8bn (2009) to 14.0bn euros (2015), last year Volkswagen issued auto ABS amounting to 6.4bn euros, reaching the level of 2008; by contrast, BMW saw its volume increase for the third consecutive year in 2016. While the German auto manufacturer issued securitized car loans in the amount of 0.8bn euros in 2013, in 2016 that figure was up to 2.6bn - an increase of 30% from the

previous year (2015: 2.0bn euros). Another carmaker with an important role in the auto ABS market has been Renault. With 4.4bn euros, the issue volume of the French carmaker tripled in 2016 almost within the year (2015:1.5bn euros). Meanwhile, Santander was able to hold its ground as the leader among non-captives in 2016. After a sharp decline from 9.2 to 3.6bn euros in 2015, the Spanish bank again issued a slightly higher volume of auto ABS last year (2016: 4.9bn euros); however, Santander's issuance activity does not currently indicate that it will surpass this level in 2017. As of the end of August, Santander had only issued a volume of new auto ABS amounting to 0.6bn euros. Volkswagen and Renault were significantly more active in the market during this period, with an issue volume amounting to 3.0 and 2.7bn euros respectively.

Fig. 9: Originators in the European auto ABS market

Share in the volume of new issues by originator, issuances between 2000 and the end of August 2017



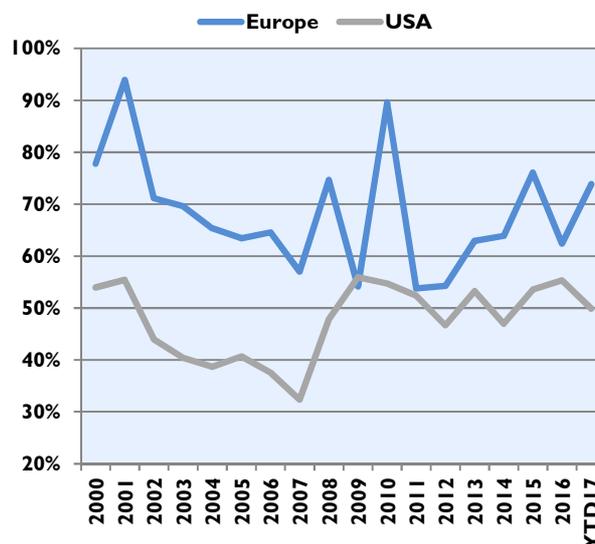
Source: Thomson Reuters, Creditreform Rating

That Volkswagen's dominant position in the European market for auto ABS is not merely a snapshot from 2016 is evident from fig. 9. Measured by issue volume since 2000, Volkswagen maintains a market share of 30.3% and is thus the most significant player, followed by Santander, whose share in the market amounts to one-fifth (19.3%). Thus, almost half (49.6%) of the total issue volume is accounted for by these two originators, followed by the two French captives Renault (8.5%) and Peugeot (5.4%). Thus, a relatively strong concentration of few players is characteristic of the European auto ABS market.

The dominant role of captive banks in the European auto ABS market has already been discussed. What then is the situation in the US market? Captives in the USA do not dominate the market as is the case with their European counterparts (see fig. 10). Measured by issuance volume, the share of captives in the US market is structurally below that of Europe. While US captives accounted for just over half (54.0%) of the total volume of new issues in 2000, their share dropped to only one-third (32.4%) in 2007 before the trend in market share shifted with the onset of the financial crisis. In contrast with non-captive banks, whose new issuances nearly halved between 2007 and 2009, captive banks in the US did not withdraw from the market - on the contrary. While financing companies tied to US carmakers issued new auto ABS worth 16.1bn euros, the issue volume climbed to 21.9bn euros in 2009. Their market share simultaneously rose to 55.9%. The share of captives in the US has since fluctuated around the 50% mark. Of the auto ABS issued in the USA between January and August 2017, 49.8% of the volume was accounted for by captives.

Fig. 10: Relevance of captives in the European and US auto ABS markets

Share of auto ABS issued by captives, year-to-date until the end of August 2017



Source: Thomson Reuters, Creditreform Rating

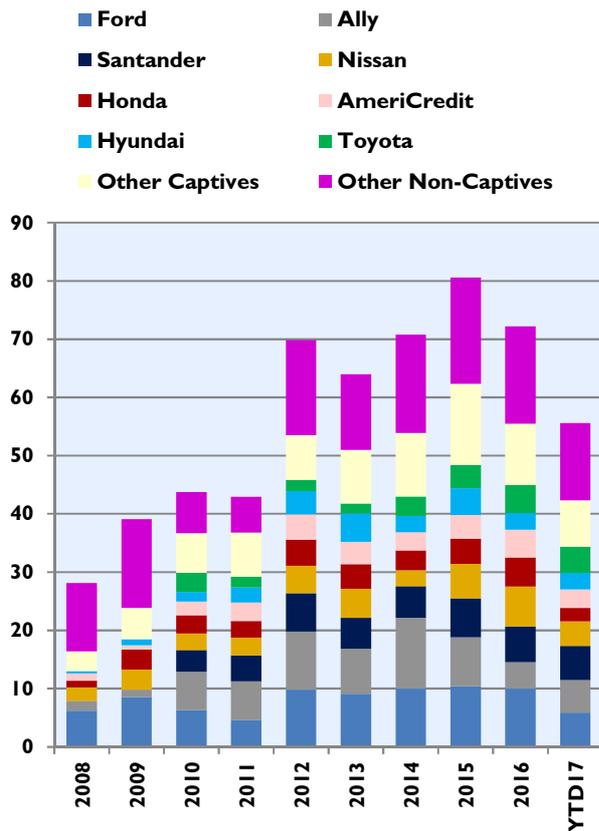
Despite a modest decrease in issuance volume from 10.4 to 10.0bn euros, Ford maintained its position as the largest originator in the US market for auto ABS, one which it had already held in the previous year (see fig. 11). It is notable that there is no other US carmaker among the captives aside from Ford with comparable issuance volumes. Noteworthy is also the development of the issue volumes of Asian captives in recent years; Nissan and Honda issued auto ABS securities in the amount of 6.9 and 5.0bn euros in 2016, enabling them to grow in comparison with 2015, when the 5.9 and 4.3bn euros, respectively.

Toyota is another Asian captive which has increased its engagement in the US market. While the Japanese corporation issued auto ABS in the amount of 4.0bn euros as recently as 2015, the volume of new issues in 2016 amounted to 4.8bn euros. In the current year, Ford and Santander are the most significant issuers with issue volumes of 5.9bn euros each at the end of the first eight months of 2017. Thus, the Santander Bank already

issued between January and August what it had issued in the whole of 2016.

Fig. 11: Development of auto ABS issues in the US by originator

Volume of new auto ABS issuances in billion euros, year-to-date until the end of August 2017



Source: Thomson Reuters, Creditreform Rating

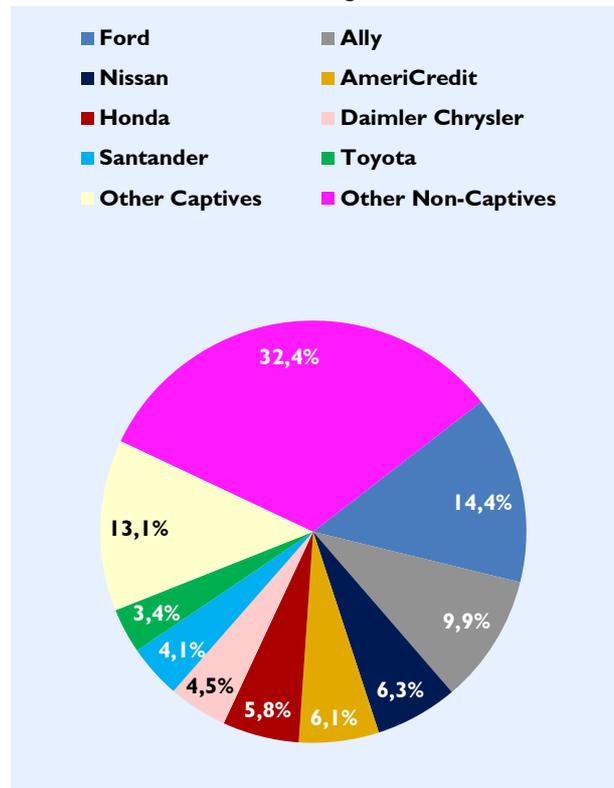
In contrast to the European ABS market, the composition of the US market is significantly more heterogeneous. For comparison: since 2000, a total of 93 originators have been counted in the USA - double that of Europe. The broader diversity among originators in the US is primarily due to the fact that in the US - in contrast to Europe - a significantly larger number of non-captive financing companies participate in the market. This is also reflected in the distribution of issue volumes (see fig. 12). One-third (32.4%) of the total issue volume in the USA is accounted for by 'other non-

captives' - a significantly higher percentage than in Europe (15.5%).

The automobile manufacturer Ford is the largest single player in the US market. In total, the company issued auto ABSs amounting to 172.7bn euros during the period under review, corresponding to 14.4% of the total market volume; Ally Financial and Nissan follow with market shares of 9.9% and 6.3% respectively. Thus the three largest originators in the US stand for one-third (30.6%) of the entire market, while the corresponding value in Europe amounts to 58.1%.

Fig. 12: Distribution of originators in the US auto ABS market

Share in the volume of new issues by originator, issuances between 2000 and the end of August 2017



Source: Thomson Reuters, Creditreform Rating

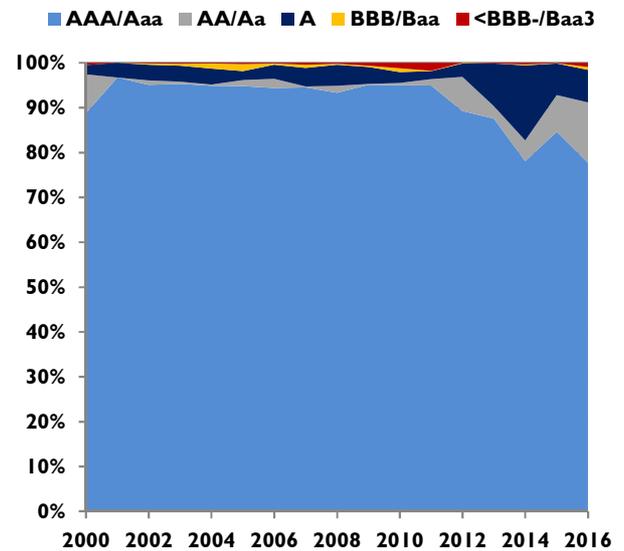
4. Rating Profile and Spread Development Indicate a High Degree of Soundness

Rating profiles, as well as market-based risk indicators such as issuance spreads, indicate that auto ABS can arguably be regarded as a safe haven asset. Thus, the vast majority of the auto ABS notes evaluated last year received an initial rating of AAA (see fig. 13). Measured by issuance volumes in 2016, four of five auto ABS tranches (77.8%) were assigned a rating of AAA. It is worth noting that this rating took into account not only senior tranches, but also subordinate tranches. If we exclusively take senior tranches for our analysis, in 2016 the percentage of AAA ratings was even slightly higher, at 80.6%. However, the percentage of AAA-rated auto ABS securities was somewhat lower than in the previous year. The percentage of auto ABS with an initial rating of AAA had risen in 2015 from 78.1% to 84.6%. Over the entire period under review, 88.2% of all tranches displayed the highest credit quality; in the case of senior tranches the percentage was as high as 92.6%.

Notably, the share of AAA has been somewhat declining since 2012. While this remained stable above the 90% mark until 2011, in 2012 it was at “only” 89.3%. It must be emphasized here that this development is not a great cause for concern given the still excellent rating profile of auto ABS. Nevertheless, in recent years we have seen a higher volume of AA and A-rated senior tranches. In 2016 AA and A notes amounted to 13.4% and 7.2% respectively (2011: 1.5 and 1.8%). Most of these were deals collateralized with Spanish, Portuguese, or Italian auto finance.

Fig. 13: Development of European auto ABS ratings

Initial ratings (S&P, Moody’s, Fitch) include senior tranche as well as subordinate tranches, percentage per year of issue in %, measured by issue volume of all rated notes

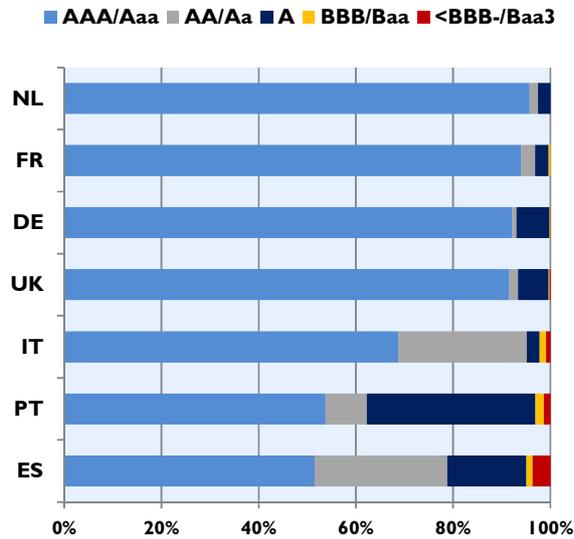


Source: Thomson Reuters, Creditreform Rating

In fig. 14 it is evident that the rating profile varies in dependence on the origin of collateral. The largest percentage of auto ABS notes with the highest credit quality showed - with 95.8% - transactions with Dutch underlyings. Following closely behind are auto ABS tranches from France and Germany. In the period between 2000 and August 2017, a total of 93.9% and 92.1% of all notes received an AAA rating. UK auto securitizations have a similarly favorable profile (AAA: 91.5%). By contrast, the rating profiles of deals from Italy, Portugal, and Spain remain significantly less favorable. For transactions from Italy and Portugal, the percentage of tranches with an AAA rating stands at a comparatively low 68.7% and 53.8% respectively, with only one of two ABS notes (51.5%) collateralized by Spanish auto loans receiving an AAA rating.

Fig. 14: Auto ABS ratings by origin of collateral

Initial ratings (S&P, Moody's, Fitch), include class A as well as subordinate tranches, measured by issue volume of all rated notes between 2000 and August 2017

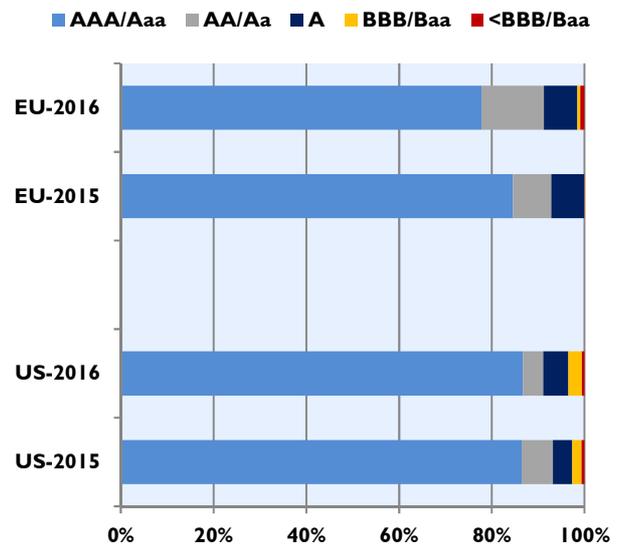


Source: Thomson Reuters, Creditreform Rating

Differences are also evident when comparing auto ABS issued in the European and US (see fig. 15). In 2015, the percentage of European auto ABS with a rating of AAA was 84.6%, taking into account notes with underlyings from the EU-28 countries as well as Switzerland, Norway, and Iceland. Compared with auto ABS in the US, of which 86.4% received AAA, Europe stood at a similar level. In the following year, the AAA share of auto ABS notes with European underlyings fell considerably to 77.8%, while securitizations rated at AA amounted to 13.4% (2015: 8.2%). By contrast, the corresponding percentage of US auto ABS tranches with highest credit quality was 86.7%, the same level as the previous year. At the same time, the percentage of tranches in the US rated with BBB fell to 2.9%, roughly four times as high as in Europe (0.7%).

Fig. 15: Auto ABS ratings in Europe and the United States

Initial ratings (S&P, Moody's, Fitch), include senior tranche as well as subordinate tranches, proportion by year of issue in %, measured by issue volume of all rated notes

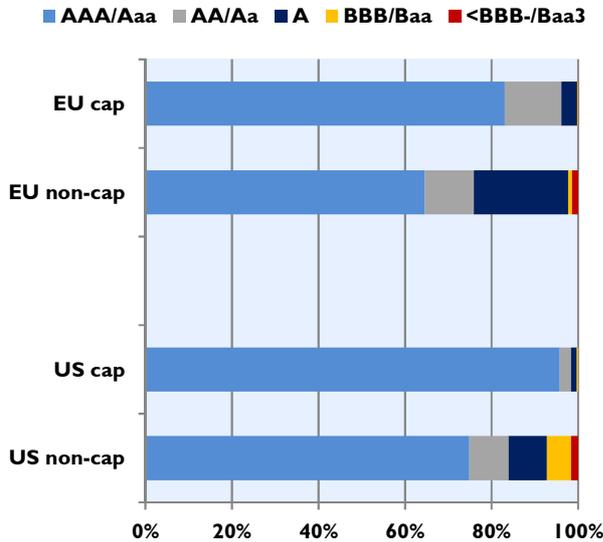


Source: Thomson Reuters, Creditreform Rating

When we compare auto ABS by its originator, it is evident that auto ABS issued by non-captives since 2015 tend to have a moderately higher risk of default than the notes of auto finance securitized by captives. The origin of the underlyings does not play any substantial role here, even though the percentage of AAA is somewhat higher on the other side of the Atlantic (see fig. 16). Thus, the percentage of senior notes by European captives with an AAA rating is 83.0%, while securitizations issued by non-captives stands at 64.6%. In the US there is an even larger gap in ratings, with AAA ratings of captives at 95.8% - significantly higher than those of non-captives (74.9%). In addition, auto securitizations by non-captives with a rating of BBB+ or lower in the USA comprise 7.2% of the total issue volume of all rated tranches, compared with just 0.3% for captive banks.

Fig. 16: Auto ABS ratings by captives and non-captives

Initial ratings (S&P, Moody's, Fitch) measured by issue volumes of all rated notes, 2015 to August 2017, cap ↔ captives, non-cap ↔ non-captives

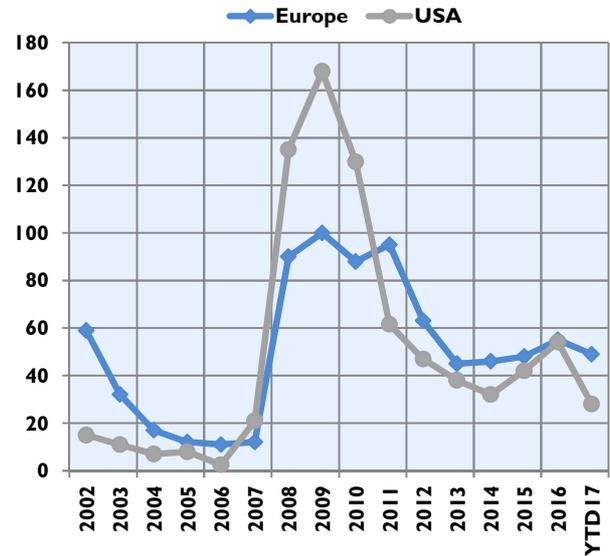


Source: Thomson Reuters, Creditreform Rating

The high quality of the assets and high investor demand translate into low risk premia. Thus, the average issue spreads of (median) European auto ABS continued to remain at a low level (see fig. 17). Since 2013, the average spread offered to investors during an issue has oscillated at around 50 basis points, climbing marginally from 48 basis points in 2015 to 55 points in 2016. In the current year as well, auto transactions were placed at very low mark-ups; the spread of auto ABS issued up to August 2017 was at an average of 49 basis points. US auto securitizations posted an average issue spread which stood consistently below the European auto ABS spread since 2011. While risk premia for US auto ABS fluctuated between 32 and 47 points between 2012 and 2015, the spreads rose to 54 basis points in 2016 before falling again to 28 points in the current year.

Fig. 17: Development of basis spreads of European and US auto ABS

Average issue spread (median) by year of issue, in basis points, year-to-date until the end of August 2017

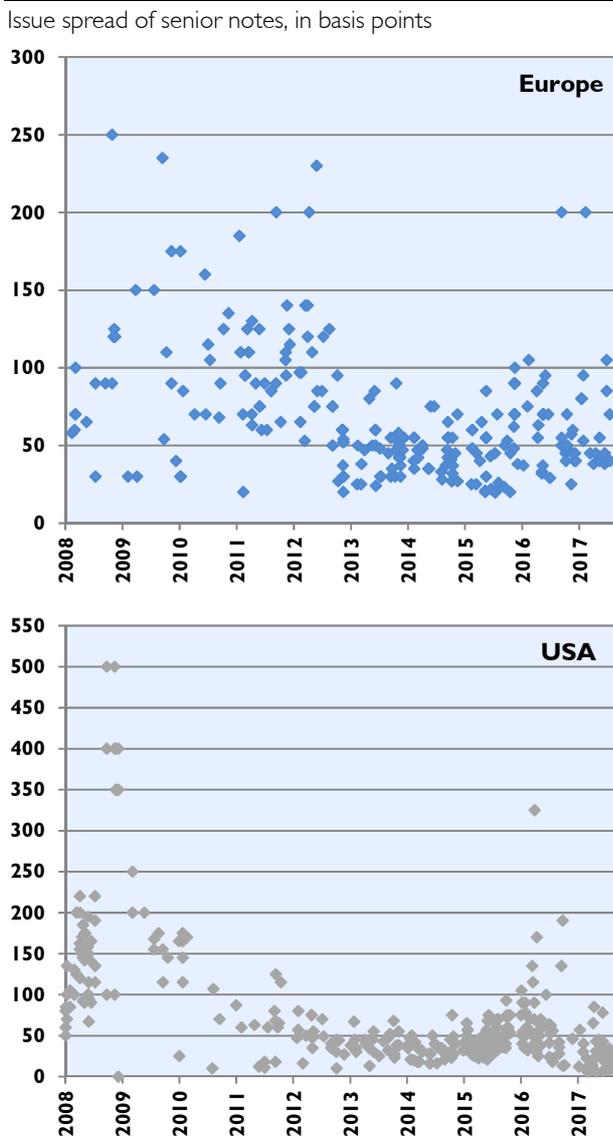


Source: Thomson Reuters, Creditreform Rating

Although the referendum on the status of the UK in the European Union and the elections in France and the Netherlands had created political uncertainty in addition to the economic developments in China and the euro area, the dispersion of European auto ABS spreads - which had been tightened since 2012 - remains very low (see fig. 18).

After the issue spreads of US auto ABS have risen slightly since 2015, we currently see lower risk mark-ups again. While the ECB maintained its monetary stance, continuing to put pressure on ABS spreads by means of its purchase program, in the United States signs of a gradual return to monetary normalization emerged. The Federal Reserve raised its target range for the Fed Funds rate a total of four times by 25 basis points to only between 1 and 1.25%. Lately, however, anticipation of a noticeably more restrictive monetary policy has subsided and inflation has not continued to rise. Moreover, developments in the USA have caused some doubt concerning the implementation of an expansionary fiscal policy.

Fig. I 8: Dispersion of basis spreads since 2008



Source: Thomson Reuters, Creditreform Rating

5. Perspectives for the Issuance of European Auto ABS

In view of the issuance activity this year in the European auto ABS market, we expect it to continue on its robust trajectory. It seems fundamentally feasible that the level of the previous year can be reached again; in recent years we have observed that activity in the auto ABS market is more dy-

namic in the second half of the year than in the first. On the whole, we expect the volume of new issues of auto ABS in Europe to be slightly lower at the end of the year than in 2016.

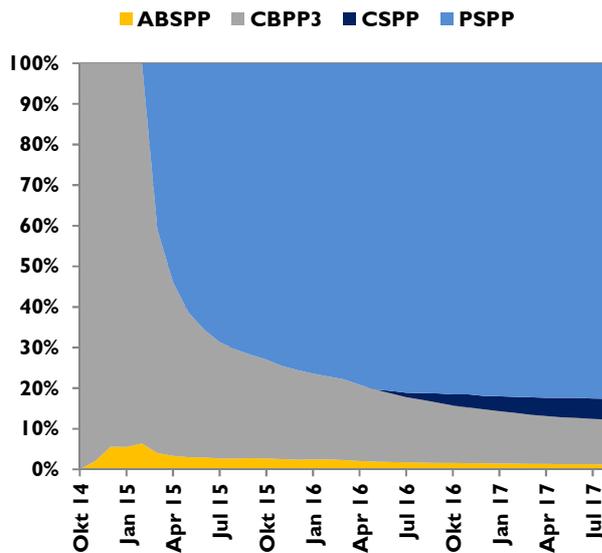
Meanwhile, the medium-term outlook is mainly benign; we are, however, only cautiously optimistic as to whether there will be any significant increase in issuance volumes in the near future. Instead, we assume that the auto ABS market will consolidate, with the market volume of new auto securitization issues remaining stable at the level of recent years. The recent changes made to EU regulations should have no significant influence on issuance activity, nor should the bond purchase program of the ECB entail notable effects; at the same time, we maintain a favorable outlook with regard to macro-financial circumstances in the medium term.

The Asset-Backed Securities Purchase Program (ABSPP) of the ECB has, in our opinion, helped the securitization market to a better reputation as an asset class and has to some degree removed the stigma which had become attached to it since the financial crisis. Moreover, the ABSPP is thought to have taken on a significant role in the tightening of ABS spreads seen in recent years (see above). With regard to issuance activity in the European primary market for auto ABS, however, the purchase program will, at best, have little impact due in part to the relatively low volume of purchases. At the end of August 2017, the volume of ABS purchased since November 2014 amounted to approx. 24,4bn, with just under 40% accounted for by the primary market. In comparison with the total Expanded Asset Purchase Program, in the context of which the ECB holds assets at a volume of 2,063 euros, this corresponds to only 1.2%. Auto ABS, it seems, comprised a relatively low percentage of the ABS purchased. The largest

portion is government bonds, accounting for 1,704bn euros / 82.6% (see fig. 19).

Fig. 19: Asset breakdown of the Expanded Asset Purchase Program (AAP) of the ECB

Share of different asset classes in the volume purchased within the framework of the AAP

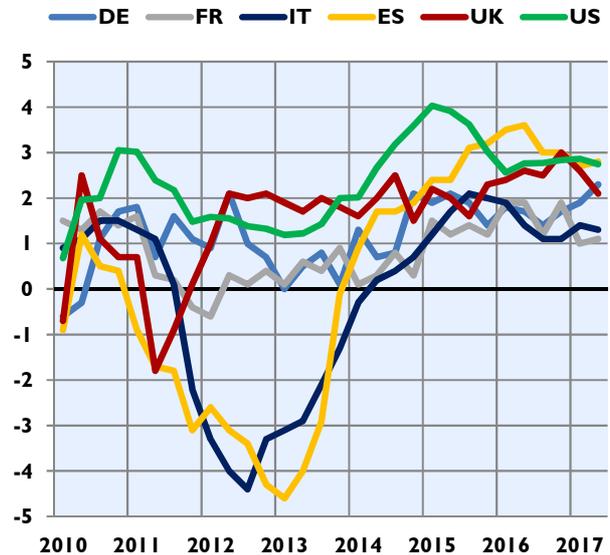


Source: ECB, Creditreform Rating

It seems probable that the ABSPP will be terminated in the foreseeable future. After its meeting to discuss monetary policy on 7 September 2017, the ECB recorded that the net acquisition of assets within the scope of 60bn euros per month was to be continued until the end of December 2107, or longer if necessary. We currently assume that the ECB will make changes to the purchase program in the follow-up to its October meeting, allowing for the APP purchase volume to be gradually reduced in the course of the next year. In any case, the volume of ABS securitizations purchased within the framework of the ABSPP continued to decrease in 2017; while the 2016 volume of 7.5bn euros was only half of the 2015 volume, the volume purchased between January and August of this year amounted to only 1.6bn, compared with 4.8bn in the same period of the previous year (-33.5%).

Fig. 20: Development of private consumption in selected economies

Changes, y-o-y, in %, quarterly data



Source: Bureau of Economic Analysis, Eurostat, Creditreform Rating

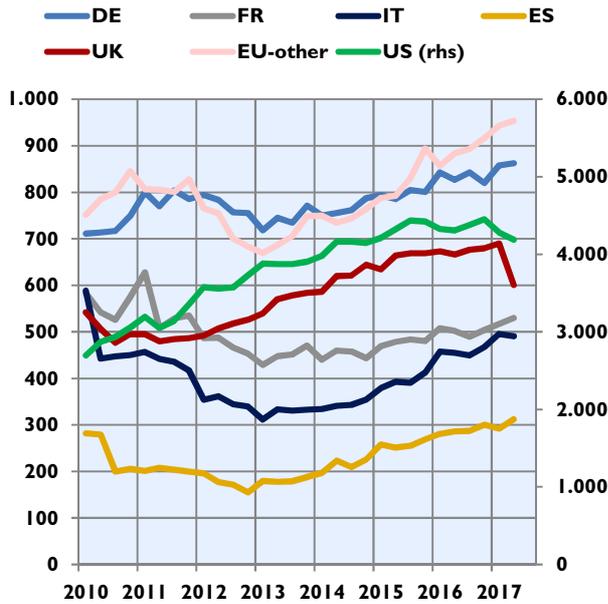
The macro-financial framework conditions should remain constructive as regards the development of the issuance activity of auto ABS. For the euro area, we forecast that real GDP growth will accelerate, resulting in a possible annual growth rate of 2.1% in 2017 and 1.9% for the following year, mainly due to vivid private consumer spending, which grew 2.6% (Q1) and 1.7% y-o-y in the first half of this year. Thus, private consumer spending continued its robust development, having grown by 1.8% during 2016 (2015: 2.0%). In this respect, private consumer spending in the BIG 5 economies - the most important individual markets in Europe for car sales - has continued to be brisk (see fig. 20).

The European auto markets should continue to profit from this consumer trend in the short to medium term. European auto markets are on a growth trajectory; in Germany, the most important market for auto securitizations, the market is particularly buoyant. Here, in the first half of 2017, approx. 1.7m new cars were registered, an

increase of 3.0% from the first half of 2016 (see fig. 21).

Fig. 21: Car markets in Europe and the USA

New car registrations per quarter, in thousands, USA light vehicles (cars and light trucks), EU other □ EU-28 excl. DE, FR, IT, ES, and UK



Source: ECB, Bureau of Economic Analysis, Creditreform Rating

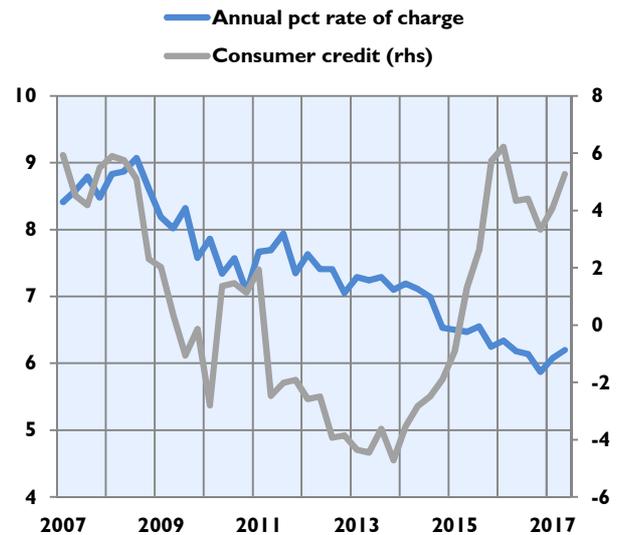
In Italy and Spain the number of new registrations also rose noticeably, by 8.0% and 6.6% respectively, to 987,000 and 604,000 new vehicles. Although there was a decrease of 3.7% y-o-y in the first half of the year in Great Britain, with the number of new registrations there in Q2-17 (601,000) at its lowest level since 2014, the situation in Europe as a whole can nevertheless be seen as very favorable. New car registrations in the EU-28 reached their highest level since Q1-2008 in the first quarter of this year, with 3.8 million new cars registered.

Loans to private households are, after all, on an upward trajectory and currently continuing to recover (see fig. 22). While the volume of outstanding loans to private households increased by 4.1% (y-o-y) in the first quarter, in Q2 this rose

again to 5.3%. By comparison, in the first half of 2015 growth rates for consumer loans were at -0.9% and 1.3%. This favorable development was underpinned by the development of bank lending rates, which have significantly decreased, mainly driven by the very accommodative monetary policy of the ECB. Towards the middle of the year, lending rates for consumer loans were at 6.2%, slightly higher than at the end of last year (5.9%). Nevertheless, interest rates for consumer loans continue to decrease.

Fig. 22: Financial conditions in Europe

Fluctuations in the outstanding volume of consumer loans y-o-y, in %, annual percentage rate (APRO) in %, quarterly data



Source: ECB, Creditreform Rating

As regards regulation, in the summer of this year, after a process spanning several years, regulations for simple, transparent, and standardized securitizations (so-called STS securitizations) were published, with which the EU aims to provide securitization markets with a more solid foundation and to revitalize securitization as an effective financing mechanism for investors such as banks. Thus, on 26 June 2017 a new securitization directive,^v was published, as well as a directive to amend regulation 575/2013 on capital requirements for banks.^{vi}

The securitization regulation applies to all securitizations. In addition to rules related to due diligence for investors and transparency requirements, this directive introduces a prohibition of re-securitization as well as rules according to which the sale of securitizations to retail investors is allowed. One important aspect in which regard the market had requested more transparency is that of risk retention. In this case, the 5% stated in the existing regulation was retained. In order to fulfill due diligence obligations and to increase market transparency, data depots (securitization repositories) are to be established in which all relevant data and reports on securitizations are to be made available, in particular information on the underlying exposures of a securitization.

The securitization directive also contains a framework for STS securitizations containing the requirements which a securitization must fulfill in order to be described as simple, transparent, and standardized. Fundamentally, only true sale securitizations can receive the STS status according to the directive. Furthermore, the STS framework excludes securitizations whose originator/sponsor/SPV is not based in the EU - an aspect which, in the context of Britain's exit from the European Union, should become significant. Third parties are permitted to verify compliance with the STS requirements; however, this does not free originators/sponsors/SPVs from the obligation to carry out their own evaluations, as they alone remain responsible for compliance with the requirements.

One important new aspect of the amending regulation on capital requirements is related to the hierarchy which was introduced with regard to the approaches of calculating capital requirement. This stipulates that a bank must first take recourse to the IRBA approach in calculating the capital requirements for securitization positions. Otherwise,

the bank should use the standard approach if the IRBA approach is either not feasible or not permissible. Only when recourse to these approaches is not possible can external ratings be used for calculating the risk-weighting of ABS tranches. Auto ABS have received separate treatment in the amending regulation and are exempted from this hierarchy. According to Article 254 (2)(c), recourse to the ERBA approach is permitted instead of the standard approach for securitization transactions which have auto loans or leases as their underlying assets.

Aside from the fact that the number of credit quality steps (CQS) has been expanded to 17 in the amending directive, capital requirements for STS and non-STS securitizations are regulated. It should be noted that risk weighting for non-STS securitizations is higher than for STS securitizations. Moreover, the risk weightings of senior tranches used for capital requirement in the CQS, which show higher credit quality, are higher than in the currently still valid CRR regulation.

It must be said that the new regulation is far from removing all ambiguities. Thus, EU institutions point out that the three supervisory authorities EBA, EIOPA, and ESMA should set out a number of regulatory technical standards (RTS) in order to amend the text of the directive. That said, the set of regulations does not take effect until 1 January, 2019. So far there has been no ABS which fulfill all STS criteria.^{vii} In terms of perspective, the issue of an STS securitization should prove to be relatively demanding before the final modalities are made known in their entirety.

Accordingly, we see the effects of the new directive on the issuance activity of the auto ABS market as rather neutral. Due to the high quality of auto ABS, we think that auto securitizations could be successfully placed in the market even if they may not be labeled as STS securitizations.

ENDNOTES

ⁱ Cf. BDA (2017): Banken der Automobilhersteller weiter auf der Überholspur: Bestwerte im Geschäftsjahr 2016, Press release, Frankfurt a.M., 26.04.17.

ⁱⁱ Cf. Fiedler, F. (2016): Auto-ABS: Rückgrat der Refinanzierung der deutschen Autoindustrie, Zeitschrift für das gesamte Kreditwesen, 69. issue 18-2016.

ⁱⁱⁱ See European Commission (2015): Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation and amending Directives 2009/65/EC, 2009/138/EC, 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012, Brüssel, COM(2015) 472 final.

^{iv} Cf. Rützel, M. (2016): STS-Verbriefung – quo vadis?, Zeitschrift für das gesamte Kreditwesen, 69. Jg., 18-2016.

^v See General Secretariat of the Council (2017): Proposal for a Regulation of the European Parliament and of the Council laying down common rules on securitisation and creating a European framework for simple, transparent and standardised securitisation and amending Directives 2009/65/EC, 2009/138/EC, 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012, 2015/0225 (COD), Brussels, 26. June 2017

^{vi} See General Secretariat of the Council (2017): Proposal for a Regulation of the European Parliament and of the Council amending Regulation No 575/2013 on prudential requirements for credit institutions and investment firms, 2015/0225 (COD), Brussels, 26. June 2017.

^{vii} Cf. Baker McKenzie (2017): The EU framework for Simple, Transparent and Standardised (STS) Securitisation - Part I: An Overview, Client Alert, Structured Capital Markets, July 2017.

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