

Creditreform Rating

Recent Developments in the European Car Market and Auto ABS Issuance Activity

Semi-Annual Report 2021

Financial Research
September 2021



Management Summary

1.

In the first half of 2021, the European auto industry witnessed a revival as continued support from government schemes and subsidies along with easy financing conditions helped to pull the sector from pandemic-driven decade lows. The European Union and the UK saw new sales registration rise by 25.6% to 6.2mn units in 1H21 (EU+UK), compared to the corresponding period last year. Italy, UK, and Spain led the European pack while Germany turned out to be laggard. That said, the figures are still below the pre-pandemic volumes recorded in 1H19 level. By comparison, the Chinese and American auto industry performed better, with new car sales rising by 27.4% y-o-y (9.8mn) and 29% y-o-y (8.2mn) respectively in the six months through 2021 amidst headwinds arising from chips shortage.

2.

Looking at the market share, although declining, conventional fuels continued to dominate the market. Petrol and Diesel shares declined to 42% and 22% in 1H21 respectively (vs 52% and 30% in 1H20). Notably, Germany and the UK saw a sharper decline in the demand for diesel cars. However, the EU's push towards clean energy and tightened emission regulations continue to bolster demand for electric vehicles. Hybrid electric vehicles (HEV) dominated the alternatively powered vehicle (APV) market, with its share rising significantly to 19% from 9.5% in 1H20. Besides HEVs, Plug-in Hybrid Vehicles (PHEV), too, saw their market share nearly triple to 8.3%. In both these segments, Italy outperformed its peers, with a stellar 557% rise in registrations of PHEVs. Overall, the APV market share rose to over one-third of new car sales in 1H21 (36.4%) versus just below one-fifth in the corresponding period a year ago (18.1%).

3.

The resilience of the European used car market seen in the latter half of 2020, has spilled into 2021 as well. The risks of rising raw material prices, chip shortages, and periods of partial lockdowns across the region proved to be beneficial for the used car market, thus boosting residual values (RVs). The headwinds faced by the industry suggest that buoyancy in the used car market is here to stay.

4.

The European auto ABS market remained quite unenthusiastic in the first half of 2021, as investors seemed to prefer European Central

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Bank (ECB)-led cheap funding as compared to market funding. Issuance volumes stood at a mere 9.5bn euros, less than one-third of the full-year 2020 volumes of 29.7bn euros. Following historical trends, most of the issuances originated from Germany (60%), followed by France (21%) and Spain (11%).

5.

In terms of issuance activities, the captives share outperformed, rising to 81%, or 7.7bn euros, significantly higher than the historical average of 65%. For a second consecutive year, Renault remained at the forefront, raising 5.5bn euros in the six months through June, accounting for about 60% of total market share. Volkswagen took a backseat, although grabbing a 20% market share (2bn euros). Meanwhile, issuance activity by Santander, Fiat, Ford and BMW completely stalled in 1H21. As uncertainty surrounding the pandemic persists even a year on, auto ABS has had to depend largely on loans secured by used cars as consumers remain averse to public transport and simultaneously being hesitant due to the economic fallout. Since 2020, the auto ABS market has witnessed a rise in used car loans collateral in deals. As the outlook for new car sales remains clouded, and furlough schemes come to an end, we may see captive finance companies' market share lag going ahead.

6.

Although overall issuance volumes remained thin through 2021, the rating profile of European auto ABS remained robust in the year so far. Demand for higher-rated assets dominated during 1H21, with the AAA/Aaa-rated category making up 93% of the market. Meanwhile, AA/Aa-rated assets saw volumes at just 400mn euros (4.4% share).

7.

Going forward, the vaccine-led recovery in economic activity and the immense government policy support via subsidies and benefits along with the NGEU fund rollout could keep the positive outlook for the auto sector over the medium term. However, it is unlikely that new car sales would surpass the pre-pandemic levels, whereas 2020 levels should be exceeded. The automotive industry is likely to continue facing severe challenges arising from lack of clarity on the easing of semiconductor shortages, high raw material prices, and the possibility of unemployment rising next year as furlough schemes and other aid measures will gradually wind down. Moreover, uncertainty over the trajectory of the pandemic given the possibilities of new variants and

strains could worsen the outlook, keeping a lid on auto ABS performance through the remainder of the year. Overall, we expect auto ABS issuance volumes to be muted in 2021.

8.

As climate regulation ramps up, securitization, too, can be expected to witness a sustainability-driven makeover in the time to come. The primary reason why ESG-labelled European ABS issuances have been largely absent is mainly due to the lack of green collateral and standardization. Additionally, as the EU moves closer to its 2035 deadline of completely phasing out carbon-emitting vehicles, the debate could soon move around residual value risk calculations. It is likely that the historically predictable residual value risk figures would see increased uncertainty and assumptions, as climate initiatives and technological innovation picks up pace. However, the short-term and fast-amortizing nature of auto ABS should ensure that this risk is kept at bay in the near term.

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1. The European Car Market at a Glance

The year 2021 ushered in a period of global economic recovery as unprecedented government stimulus measures, supportive policies and successful vaccination campaigns played a catalyst. Consequently, as consumer demand gradually returned, the international automotive industry that bore the brunt of the pandemic-induced disruption in 2020, began experiencing green shoots of revival.

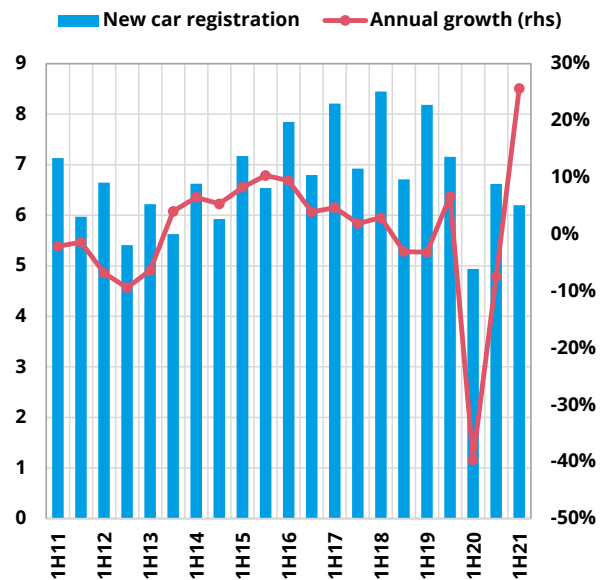
The European market was no exception. In the first half of 2021, demand for new cars in the European market (EU-27 plus UK to make the historical comparison consistent) rose 26% y-o-y to reach 6.2mn units registered in total (see Figure 1). In the EU, barring Romania, sharp increases in registrations were seen across the 27-member bloc. In comparison, other regions, too, reported a positive trend, with sales in the US and China rising to 8.2mn (+29%) and 9.8mn (+27%) units respectively in the six months through June 2021. Meanwhile, passenger car sales in India nearly doubled in the first half-year to 1.5mn.

In the EU, this year's January and February saw double-digit declines in new car registrations as Covid-19 containment measures due to the second wave and uncertainty weighed on markets. The following months more than made up for the declines, with growth albeit once again slowing down significantly in June (+10% y-o-y). This said, according to the European Automobile Manufacturers Association (ACEA), the passenger car registrations reported in 1H21 remain short of pre-Covid volumes in 1H19 by 1.5mn units.

We note that the gains during the first six months of the year were inconsistent across most parts of the world, while remaining well below pre-pandemic levels. On average, across the five key European markets, new car registrations are yet one-fourth below pre-pandemic levels.

Figure 1: European new car registrations (incl. UK) pick up pace in 1H21, yet remain below the pre-pandemic level

New car registrations in mn units



Sources: Creditreform Rating, ACEA

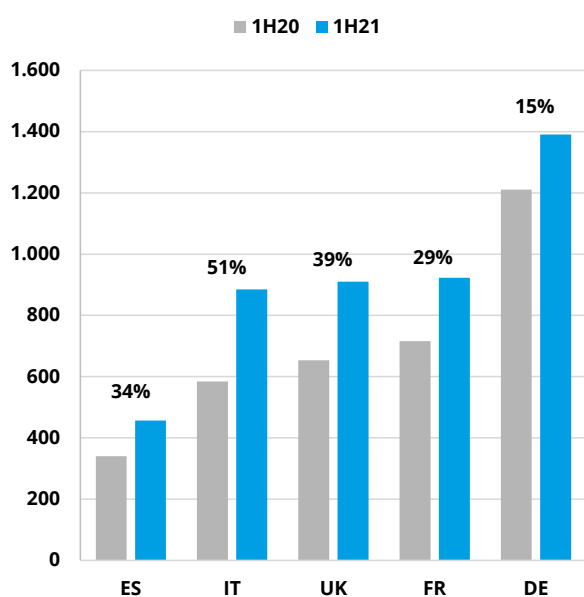
Germany, the largest market in terms of volume, registered a 15% y-o-y growth to clock 1.4mn units in new passenger car registrations in 1H21. Yet, this was the worst performing country amongst the major economies in Europe (see Figure 2). In fact, the German car market remained one-fourth down from the same period in 2019, suggesting that there is still a long way to reach its pre-crisis level.

Ongoing supply chain disruptions due to shortages of e.g. semiconductors have held back factory operations, prompting the Association of German Automobile Manufacturers (VDA) to slash sales forecast for the year. The VDA reduced its sales forecast to 3.15mn (+3%) from an 8% growth estimated earlier. The Ifo Institute, a Munich-based economic institute, reported that the German car industry faced the worst chip supply shortage in 30 years. In this regard, Germany has earmarked 1bn euros for investment and innovation in semiconductor production until 2023 as part of the Important Projects of Common European Interest (IPCEI) in the field of mi-

croelectronics. Nevertheless, Germany hit a milestone in its transformation journey, after e-car registrations hit more than 1mn in June 2021 alone. The share of e-cars in total registrations grew from 8% in 1H20 to 22% in 1H21.

Figure 2: Increase in German car registrations lags amongst key European peers in 1H21

In thousand units, percentages are y-o-y change



Sources: Creditreform Rating, ACEA

Meanwhile, in the UK, new registrations grew by a solid 39% y-o-y to 910,000 in 1H21, out of which, the electric car market, both battery electric vehicle (BEV) and plug-in hybrid electric vehicle (PHEV) models registered triple-digit growth rates year-on-year in 1H21. Pent-up demand and increased consumer confidence were buoyed by the robust vaccination rollout and periods of relatively low infection rates. Consequently, the phased plan of easing Covid-19 restrictions saw dealerships reopen in May for the first time this year. Moreover, the UK's plan of imposing a ban on the sale of new petrol and diesel cars by 2030, and hybrids by 2035 has further supported the momentum of electric vehicles (EV) in the nation.

Nevertheless, the UK is likely to face several challenges that could deter it from meeting its 2030 deadline and hurt the pace of EV adoption. For the UK to continue selling to the 27-member bloc without tariffs, it must meet the stringent rule of origin guideline i.e from 2027, 70% of input in value terms must come from Britain or inside the EU. If not, exports of domestically produced cars would face a 10% tariff. This implies that its already-lagging domestic battery capacity will need to be significantly ramped up before the 2027 due date under the Trade and Cooperation Agreement (TCA).

The UK's recent 1bn pounds boost to the battery industry and associated supply chains have been commendable but remain far from the investment efforts seen at the EU level. Benchmark Mineral Intelligence (BMI) forecasts that the UK needs at least 175 GWh of battery cell capacity by 2035 to supply around 3mn full-electric vehicles. For now, it estimates Britain is way off the pace, with only 56.9 GWh by 2030.

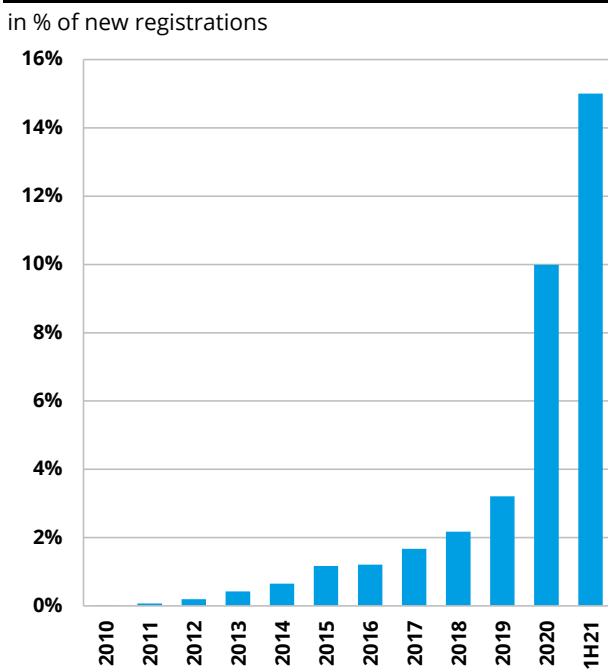
Further, Italy posed as one of the best-performing countries in terms of new registration growth, with sales rising 51% y-o-y in 1H21. In comparison to its peers, Italy's car sales growth stood closest to pre-pandemic levels. The country's robust performance was mainly led by the PHEV segment (+557% y-o-y) in 1H21. With the pandemic gradually fading away and government incentives aiding price gaps, electric mobility made a noteworthy headway in the once dormant Italian EV market.

The Italian electric segment performed exceptionally well, with near-record levels of EV registrations in the first half of 2021. Sales continued to benefit from government subsidies of up to 8,000 euros for full-electric vehicles and up to 4,500 euros for plug-in hybrids. Going ahead, the outlook for the Italian auto industry looks promising given that a new scrapping program is due. Effective August 2021, buyers of a new car emitting 61 to 135 g/km of CO2 who scrap an old car will get a 1,500-euro bonus. The money available is however capped at 200mn euros. Further, an additional 60mn euros has been

made available under a government fund covering incentives to buy battery electric and plug-in hybrid vehicles.

Prospects for France’s EV market transition, too, look bright, given the government’s introduction of EV subsidies of up to 6,000 euros to private individuals for the purchase of alternatively fueled vehicles i.e fuel cell electric vehicles (FECV), BEV, PHEV, hybrid and natural gas, when used to replace an old combustion engine. Overall, car registrations rose 29% y-o-y in France in 1H21, with the share of EVs rising to 15% in the same period (vs 9% in 1H20).

Figure 3: EU (incl. UK) EV sales share



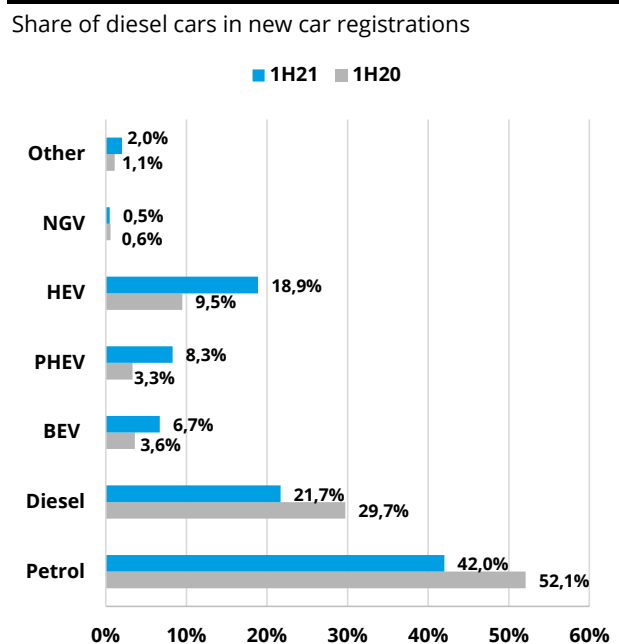
Sources: Creditreform Rating, ACEA, IEA

The shift to electric cars has particularly taken off in Europe, thanks to strict government rules and regulations towards vehicle emissions (see Figure 3). In attempts to achieve carbon-neutrality and bolster the transition towards Electrically Chargeable Vehicles (ECVs), European member states offered some of the highest subsidies in the world in 2020. As a result, Europe overtook China as the world’s largest EV market last year. The UK’s 2030 ban on cars with-

out a plug-in feature and Germany’s four-year-extension of subsidies for EVs have likely acted as key drivers for this.

In 2021, the progress of the European Green Deal is such a landmark reform, under which the European Commission has proposed a de facto ban on sales of all new vehicles with internal combustion engines (ICE), including hybrids, by 2035. Further, the policy package called ‘Fit for 55’, aims to cut emissions by 55% by 2030, to meet its goal of net-zero emissions by 2050. In light of achieving these goals, the existing subsidies, bans, and tax credits would need to stay in place, as EVs still remain years away from reaching price parity.

Figure 4: HEVs market share rises significantly



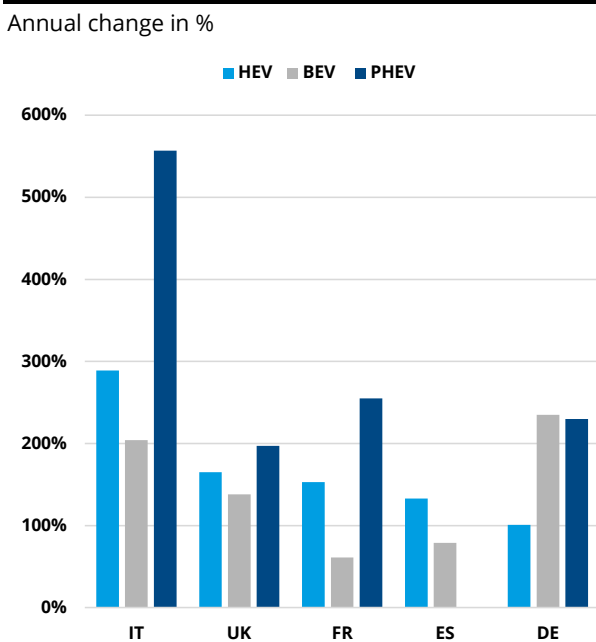
Sources: Creditreform Rating, ACEA

Against the backdrop of stringent carbon emission regulations and targets, the European automotive industry has turned aggressive in ensuring a transition. The share of electrically chargeable cars in new registrations continued to expand. With over 1mn units sold in the EU in 1H21 (+149% y-o-y), hybrid electric vehicles (HEVs) captured the highest market share (19%) of alternatively-powered cars (see Figure 4). The majority of the member states reported

triple-digit percentage growth rates in this category, led by Italy (+289% y-o-y).

Second to HEVs in terms of market share, the PHEV segment witnessed an exceptional rise of 214% to 445K units in 1H21. Amongst the key European markets, Italy once again led the segment with a 557% rise in registrations in 2021 (see Figure 5).

Figure 5: Italy leads HEV and PHEV segments

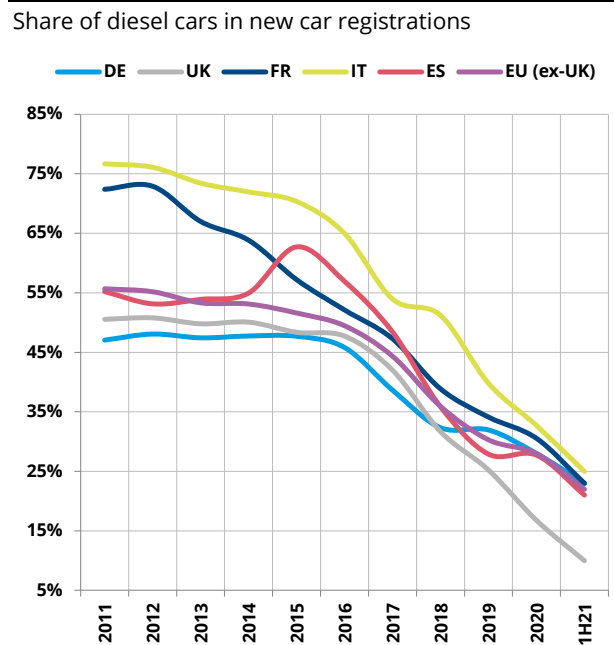


Sources: Creditreform Rating, ACEA

Meanwhile, a study by ACEA reveals how consumer uptake of electric cars is closely linked to its standard of living or GDP per capita in the said country. Member states having an EV market share of less than 3% in 2020, were also some of the countries with low GDP per capita, suggesting that affordability of EVs continues to be a barrier for its adoption. However, looking at the EV uptake in 2021, although the market share remains below 1% for the majority of the EU nations, catching-up economies such as Croatia, Cyprus, Estonia, Lithuania and Poland, to name a few, have all surprisingly reported stellar growth in electric sales.

That being said, the market share of conventional fuel types (petrol and diesel) continued to dominate the EU auto industry, albeit markedly lower, making up just below two-thirds of new cars sold in 1H21 as compared to four-fifths in the same period a year ago. Within the traditional fuel mix, the share of both petrol and diesel-powered car sales declined by 10% and 8% respectively, with the UK now having the lowest diesel-powered cars amongst the key five markets (see Figure 6). New registration of cars in the diesel segment has seen a sharper decline (-9% y-o-y) in 2021 so far, mainly led by UK (-21%) and Germany (-18%). By contrast, at an EU-level, new vehicle registrations of petrol-fueled cars rose 1%, with all major EU nations, except Germany, reporting a rise in sales. However, the petrol segments market share continued to contract through 1H21.

Figure 6: Diesel share further contracts in 2021 with UK and Germany leading the declines



Sources: Creditreform Rating, ACEA

A trend of stunted recovery in the auto sector towards the end of 1H21 was seen across regions as the shortage of semiconductors that emerged last year, seemed to be a problem that was more severe than previously anticipated. As automakers slashed

production due to the pandemic, chip suppliers largely began catering to producers of electronic goods. With demand gradually improving, automakers were left scrambling for the component.

Apart from the pandemic, the supply of semi-conductors was stalled due to a storm in Texas in February and a fire that ripped through a Japanese factory in March. The US-China tensions further contributed to the shortage, after Washington banned foreign companies whose chips use American technology from selling to Chinese tech giant Huawei. As a result, Huawei, later followed by other companies, began stockpiling semiconductors leading to a strain on supply.

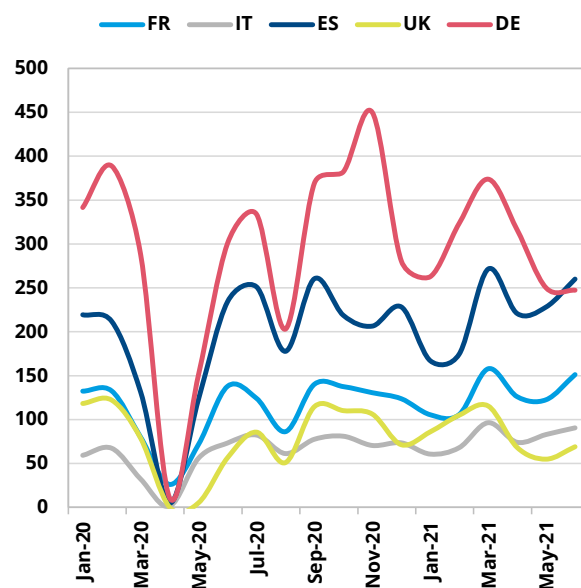
In light of the supply chain disruptions, several major European carmakers such as Volkswagen, Daimler, and Stellantis have warned of the chip shortage lasting through 2022, while some have already begun slowing down auto production. Likewise, the China Association of Automobile Manufacturers (CAAM) reported that China's passenger vehicle sales were off 1.4% in the first half as compared to 2019 levels. For the full year, CAAM expects vehicle sales to rise by around 4% to 26.3mn units. For this estimate to materialise, sales would need to more than double to 18mn units from current levels, which seems challenging given the rough landscape and that, more importantly, subsidies have been drying up. Nevertheless, an increasing number of models being exempt from new electric vehicle (NEV) purchase tax and those eligible for preferential tax policy treatment has ensured that demand push remains intact in 2021.

On the car production front, progress was seen across European markets since manufacturing units reopened in early January. However, the up-trend was short-lived as new variants of the coronavirus and shortages nearly offset any headway made through the year (see Figure 7). Although German production in 1H21 rose 20% y-o-y to 1.8mn cars, monthly figures for June represented an 18% decline. Meanwhile, the VDA reduced its production forecast to 3.6mn (+3%) versus earlier guidance of 13% rise to 4mn cars. In the UK, car plants turned

out 498K cars in 1H21, 38.4% less than the five-year average and a financial loss of about 8.5bn pounds to the auto sector as per the Society of Motor Manufacturers and Traders (SMMT).

Figure 7: Vehicle production in key EU markets

Data in thousand units



Sources: Creditreform Rating, Marklines

The consequences of chip supply issues and the pandemic on vehicle production are being felt across other regions such as China and the US as well.

The output in China is expected to trend lower as infection cases rose to a 7-month high in August. On the other hand, some relief may come from Beijing's recent launch of anti-monopoly investigations, which could yield benefits in terms of stabilising chip supply. Yet, the overall supply constraint could translate into lower global production volumes for 2021.

Although the national and regional-level environmentally-conscious efforts towards e-mobility are a step in the right direction, we believe the outlook for the remainder of the year will likely be marred by uncertainties and obstacles. For starters, there re-

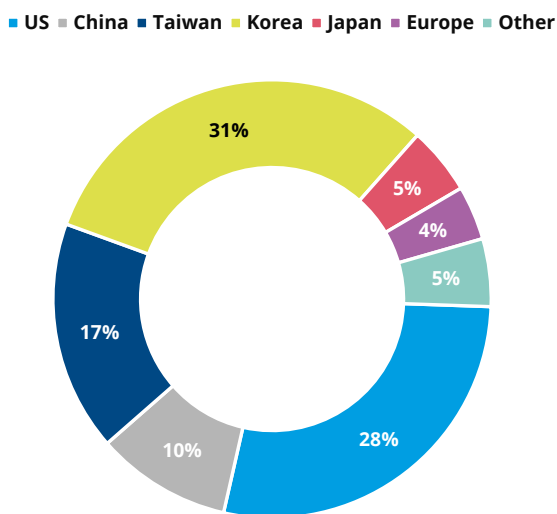
mains low visibility regarding the easing of the ongoing chip shortage that could drag through 2021 and possibly beyond. As a result, the corresponding impact on production and car sales might continue to be felt in 2H21, as indicated by declining monthly data prints for July. German and the UK car production plunged 25% y-o-y and 38% y-o-y, respectively. Likewise, new car registrations took a hit in both Germany (-13% y-o-y) and the UK (-30% y-o-y).

To make matters worse, prices of materials such as steel, copper, and aluminium have been on the rise. Nevertheless, the chip shortage has ignited discussions at the EU-level over the need to reduce dependence on American and Asian producers to attain digital sovereignty when it comes to semiconductors. Over the past few decades, Europe's share in global semiconductor production has drastically declined from 35% to 9% currently, mainly due to stiff competition from Asian markets where production costs are 30-40% cheaper. Europe, however, aims to double its share in global chip production to 20% by 2030.

This seems rather problematic as the region has one of the lowest shares in the global semiconductor capex (see Figure 8). Although efforts such as the European Commission's launch of Alliance on Processors and Semiconductor Technologies are admirable, the positive impact on the automobile industry will likely only be seen in the longer term.

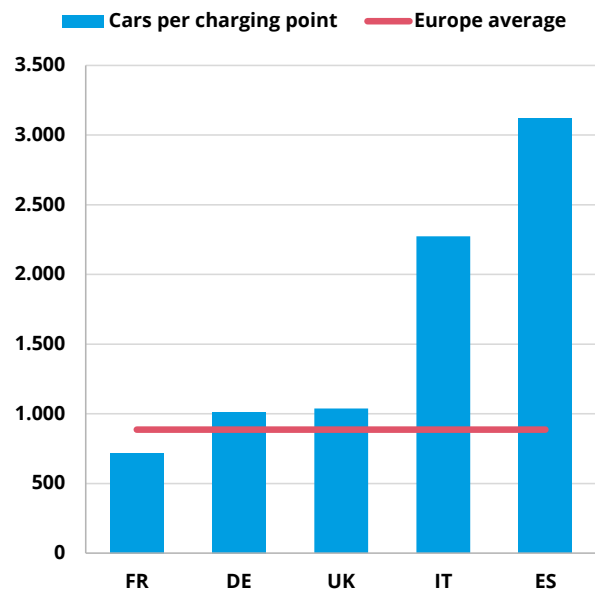
Secondly, while Europe has been a frontrunner in capturing the global EV share in 2020, the wide disparity in charging infrastructure could hinder further growth, putting the European Commission's target of setting up 1mn charging points by 2025 at risk. As of end-2020, the total stock of EV chargers in the EU (ex-UK) stood at 286,000. For the gap to be made up, around 150,000 new points will be needed each year, which may seem ambitious at this stage. In comparison, the stock of EV chargers in China, its key competitor, stood at over 800,000 in 2020. As per VDA, on average, Europe (EU+UK+EFTA) has one charging point for 887 passenger cars, suggesting several countries need to catch up (see Figure 9).

Figure 8: Global share of semiconductor capital expenditures (2019)



Sources: Creditreform Rating, SIA

Figure 9: Number of cars per charging point (1Q21); France beats peers



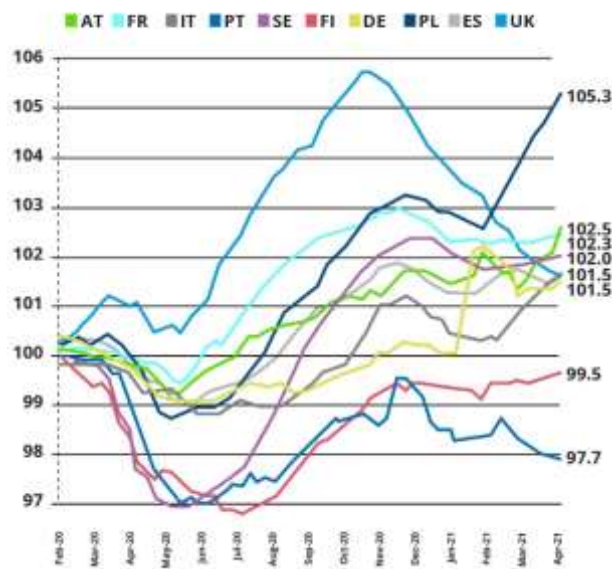
Sources: Creditreform Rating, VDA

Thirdly, Covid-19 infections have surged due to the highly transmissible Delta variant. This has instilled uncertainty over a return to normality, even as Europe’s vaccination campaigns have significantly picked up pace. Several countries such as UK, Spain, and Italy have witnessed spikes in infections, which, while not warranting nationwide lockdowns this time, could keep posing challenges to the economic recovery.

From the point of view of original equipment manufacturers (OEMs) and dealers, 2021 has further strengthened the need for innovation and sales-channel management to adapt to the new reality. In a scenario where fiscal subsidies and benefits eventually cease to exist, OEMs would need to rebuild strategies that would revolve around adopting lower list prices when incentives run out.

Figure 10: RVs in selected European economies

Price index in respective countries (02-Feb-20=100)



Sources: Creditreform Rating, AutoVista

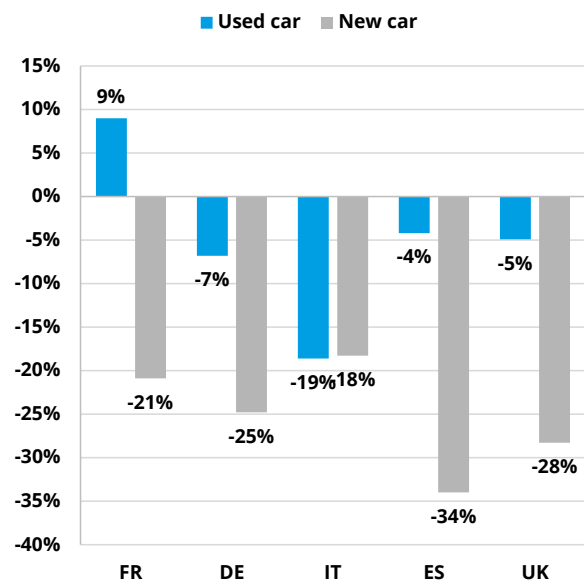
Meanwhile, resilience of the European used car market seen in the latter half of 2020, has spilled into 2021 as well. As opposed to the new car market, the risks of rising raw material prices, chip shortages and periods of partial lockdowns across the region proved to be beneficial for the used car

market, supporting residual values (RVs). Although RVs remain below the one-off peak witnessed in October 2020, the respective indices have currently largely settled above pre-pandemic levels (see Figure 10).

The headwinds faced by the industry suggest that buoyancy in the used car market is likely to remain in place for some time to come. Furthermore, the downturn seen in the new car market was much more severe than that of the used car market as the former relies more heavily on dealer networks. Even when compared to pre-pandemic levels, the used car market has performed relatively better than the new car market in 1H21 (see Figure 11).

Figure 11: Used car transactions and new car registrations

1H21 % change over 1H19



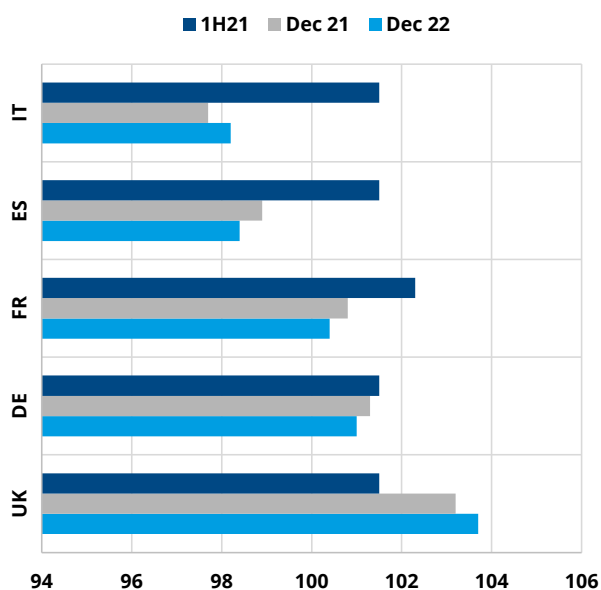
Sources: Creditreform Rating, AutoVista

The performance of the used car market in Spain has been stable this year. Southern Europe and especially Spain has faced multiple intense waves of infections, with lockdowns continuing into 2021. Additionally, high prices and poor infrastructure contributed further to the challenges in both the new

and used car markets. Autovista expects RVs to decline drastically to 98.9 by end-2021, the lowest amongst key European markets (see Figure 12).

Figure 12: AutoVista Group RV forecast

Figures for 1H21 are as of April 2021, indices for performance of absolute RVs (100=Feb-20)



Sources: Creditreform Rating, AutoVista

The potential pressure on Spanish RVs is expected to stem from the impact of more generous EV purchase incentives with Plan MOVES III, which has been introduced in April 2021 to encourage consumer demand. After Spain expanded the budget for its e-mobility subsidy program MOVES II from 100mn to 120mn euros, the successor program MOVES III was introduced earlier this year with a budget of 400mn euros, which includes FCHVs for the first time. The program will cover the period until 2023, the budget for which can be increased to upto 800mn euros if required. Under the scheme, without scrapping, the amount of the subsidy per electric car is up to 4,500 euros.

Steady RVs were seen in Germany and France as well. Consumer purchasing power in light of robust government support and supply disruptions translated to stable performance for used car markets in Germany. RVs have eased post their peak around

January 2021, and the outlook for RVs could face some headwinds as very little emphasis has been made on incentives for used cars. That said, Volkswagen Financial Services, one of the world's largest automotive captive-finance companies, was reported as having reached an earnings target four years earlier than anticipated on the back of surging demand for pre-owned cars. The lending arm's operating profit more than doubled to 2.3bn euros in the first half of 2021, from a previously estimated 2.8bn euros for the entire year.

France also benefitted from the release of pent-up demand, and it doubled its premiums for buyers looking to trade older vehicles for a cleaner model. As this trade-in bonus applied to used cars, RVs witnessed some support. However, the incentives for used car purchases have been lowered as compared to 2020.

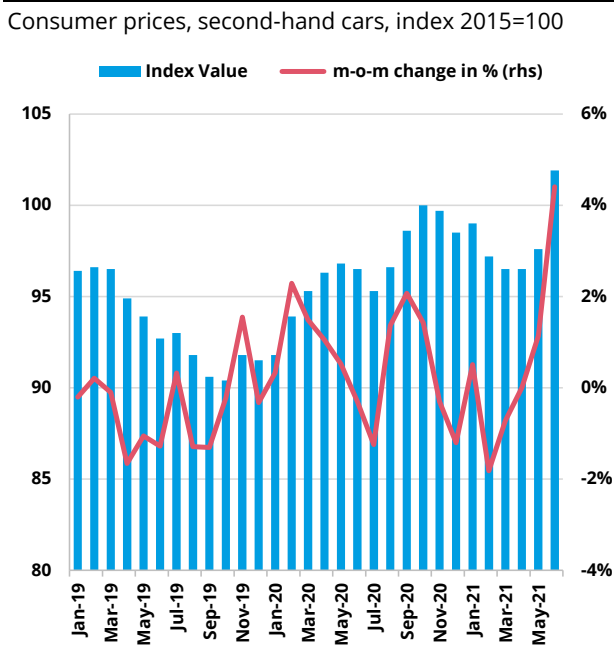
Likewise, RVs in Italy began rising in February 2021. The outlook, however, seems somewhat dampened as additional incentives for low-emission new cars has applied pressure on used car demand and RVs. Apart from the five key European markets, Poland's used car market deserves mentioning, as the respective RV rose sharply to above 105 in April 2021 and is estimated to climb to 107.1 by end-2021 and 109.9 by end-2022.

According to Autovista's projection, RVs in Italy are expected to see the largest drop by end-2021. Offering some of the highest purchase incentives for EVs, the comparatively long duration of the bonus/malus scheme and the additional purchase incentives (both are to remain in place until end of 2021) grants a substantial discount on new EVs, thereby asserting pressure on used-EV prices.

The UK's used car market witnessed exceptionally strong demand in 2Q21, following the country's third national lockdown in the first few months of the year. Increased demand for used cars coupled with delays in new-car production, resulted in RV in the UK remaining elevated through the year. Simul-

taneously, a drag on supply stocks of used cars further ensured higher RVs. This was mainly attributed to the increase in lease-contract extensions and fewer fleet renewals by rental companies as travel and tourism had collapsed since last year. As consumers remained averse to public transport, used car prices rose 4.4% m-o-m in June (see Figure 13), the strongest increase since 1988, with the index climbing to its highest level since 2015.

Figure 13: UK used car prices post record rise in June



Sources: Creditreform Rating, ONS

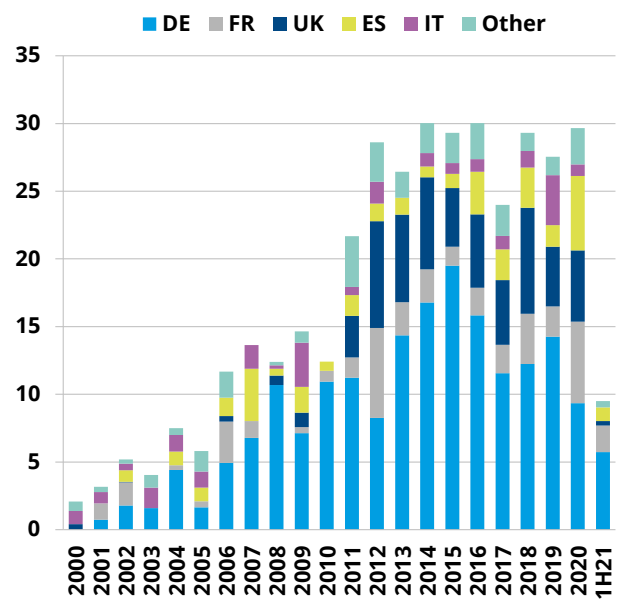
2. The Auto ABS Markets in Europe

After rising to a four-year high in 2020 despite the economic fallout of the pandemic, the traction of auto ABS issuance volumes took a backseat in the first six months of 2021. The segment proved to be more resilient through the pandemic than initially expected, thanks to government support measures such as unemployment benefits and stimulus

checks that ensured delinquencies and defaults remain low. However, in 2021, issuance volumes stood at a mere 9.5bn euros i.e., one-third of the full-year volumes seen in 2020 (see Figure 14) and a decline of about 18% y-o-y as compared to the corresponding period last year.

Figure 14: Auto ABS issuance activity in 1H21 lags

Volume of new auto ABS issuances in billion euros, by origin of collateral



Sources: Creditreform Rating, Refinitiv

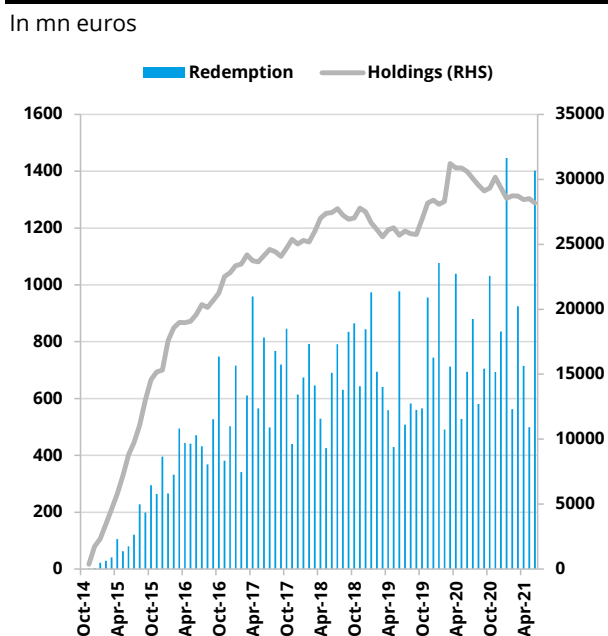
The lacklustre momentum can be attributed to the dull issuance activity in the UK, which contributed low single-digit to the total volumes, as compared to high teens in the past several years. Auto players seem to find comfort in accessing the liquidity provided by the central banks rather than attempting primary market deals. Both the Bank of England (BOE) and the ECB remained very accommodative amidst the pandemic. BOE slashed rates to a record low of 0.1% while targeting 875bn pounds of government bond purchases.

The ECB's Targeted Longer-Term Refinancing Operations (TLTROs) have apparently played a large role in curtailing European supply in the overall ABS market. In December 2020, the ECB prolonged its

support for the third series of TLTROs until June 2022, among other things. The extension could have held back public securitisation markets by offering a cheaper source of alternative funding, especially as interest rates are unlikely to rise anytime over the next 12-18 months at the very least. For the rest of 2021, the ECB is due to run two more rounds of TLTROs financing in September and December.

Apart from TLTROs, the ECB's Asset Backed Securities Purchase Program (ABSPP) and Corporate Sector Purchase Program (CSPP) under the umbrella of Asset Purchase Program (APP) announced in 2014, has further made their impact felt on the securitisation market (see Figure 15). As of 1Q21, auto loans made up 32% and 10% of the ABSPP and CSPP bond universe respectively. In the first half of 2021, total redemptions under both ABSPP and CSPP increased significantly thereby apparently tightening liquidity conditions for issuers to some extent.

Figure 15: ECB's total holdings and redemption of ABSPP



Sources: Creditreform Rating, ECB

Additionally, the pandemic may have nudged car-makers towards cash conservation as the second and third wave of infections forced the industry to

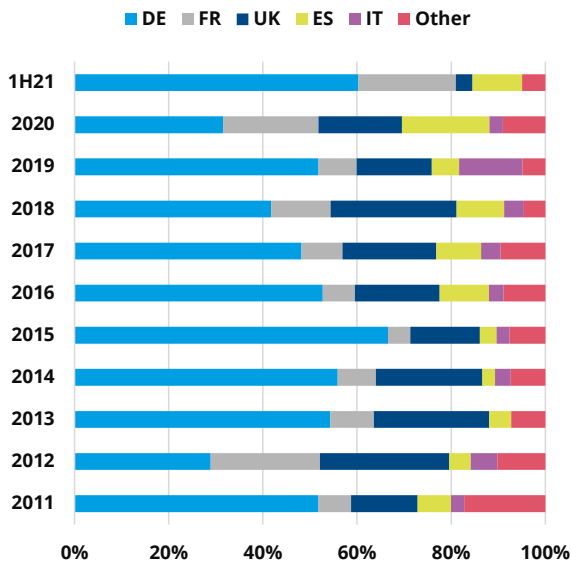
reconsider its capex plans. Daimler for instance has changed its strategic approach, with a 20% cut to capex and fixed costs until 2025. After capex peaked at 10% in 2020, manufacturers like Renault, too, reported a decline in capex and R&D at 8.1% of group revenue in 1H21. BMW Group expects its FY21 capex ratio to stay unchanged at 4%, below its strategic target of 5%. Meanwhile, improved cash flow and lower cash outflows from the diesel segment coupled with significantly higher operational effects of the past M&As resulted in a strong increase in net liquidity for the automotive division of Volkswagen. The capex to sales ratio fell sharply to 3.5% in 1H21, significantly below the pre-crisis level of 5% in 1H19. Hence, declining capex is likely to have translated to a reduced need for funding via ABS route.

Meanwhile, on the regulatory front, the lack of 'simple, transparent and standardised' (STS)-labelled high-quality deals could be seen as the cause of hesitancy from the investor perspective. According to Prime Collateralised Securities (PCS), a third-party verification agent under the STS regulation in both the UK and the EU, only 56 transactions had been listed on as STS, which along with 9 transactions listed in the UK, brings the total to 65 as of 1st June 2021. This compares to the full-year number of 300 for 2020. Traditionally, more deals are completed in 2H than 1H. But even accounting for this, PCS believes STS issuances are expected to fall this year.

A closer look at the country-specific performance shows that Germany maintained its top position as originator in this year's first half, accounting for the largest market share (60%), with issuances totalling 5.7bn euros. This is followed by France with issuances of 2bn euros. More notably, for the first time Spain overtook the UK as having the third largest market share last year, with the trend continuing into 2021 (see Figure 16). Germany, France, and Spain together accounted for over 90% of volumes in 1H21. The UK's issuance volumes stood at a mere 300mn euros, with a market share of 4% in the first half. This compares to a 5-year-average market share of 20%.

Figure 16: Spain overtakes UK's market share; Germany and France lead

Share in auto ABS deals by origin of collateral, measured by annual issue volume



Sources: Creditreform Rating, Refinitiv

For the UK specifically, the steep decline in issuances can also be associated with the uncertainty surrounding STS regulation in a post-Brexit world. Given that the UK exited the bloc with fairly less clarity regarding its financial systems, parallel to the EU, it is now in the process of launching a review of its own securitisation regulations with risk retention and SME funding in focus. The UK has already begun a review into making its special purpose vehicle regime more tax-efficient.

That said, continued availability of payment holidays and furlough schemes contributed to low levels of defaults and stable asset delinquency levels, which boded well for the auto ABS market overall.

3. Originators of Auto ABS

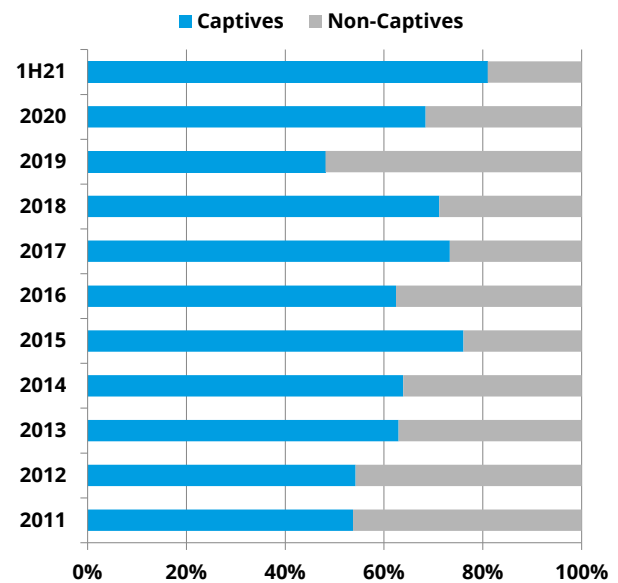
Historically, captives (originators affiliated with automobile manufacturers) have dominated the European auto ABS market, with their share in new auto ABS issuances accounting for an average of over

two-thirds of the total issuance volume since the year 2000.

Even as uncertainty and economic repercussions of the pandemic continued to play havoc, issuance activity from captives performed well in 2021 (see Figure 17). Their share in the European new auto ABS issuance volumes stood at 81% in 1H21, closing the first-half of 2021 with total issuances at 7.7bn euros. This compares to a 68% share (20bn euros) in all of 2020. When compared to previous market-disrupting events, captives have performed well through the pandemic and into 2021. In the aftermath of the financial crisis as well as the European debt crisis, the share of captives remained much lower.

Figure 17: Captives in the lead

Share in the volume of new auto ABS issues by originator



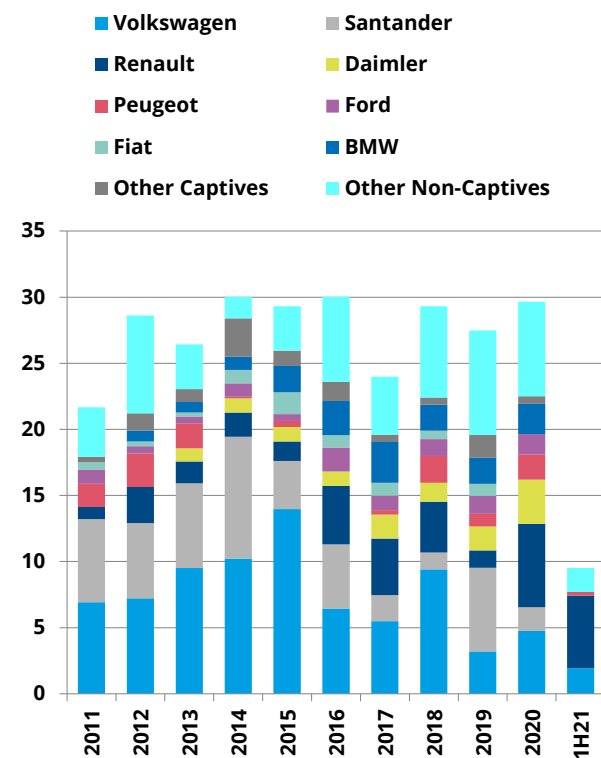
Sources: Creditreform Rating, Refinitiv

For a second consecutive year, Renault remained at the forefront, raising 5.5bn euros in the six months through June, accounting for about 60% of total market share (see Figure 18). In comparison, the average market share over the past five years stood at a mere 15%. Consequently, Volkswagen took a backseat, although grabbing a 20% market share (2bn euros). Including French automaker Peugeot's

issuances activity (300mn euros), the top three automakers made up 81% of the issuance activity. Surprisingly, activity from other auto majors, such as BMW, Fiat, Ford and Daimler remained absent in 2021. Non-captives took the remainder of issuance activity worth 1.8bn euros and corresponding to 19% of the market share.

Figure 18: Renault dominating the market at the current juncture

Volume of new auto ABS issuances in billion euros



Sources: Creditreform Rating, Refinitiv

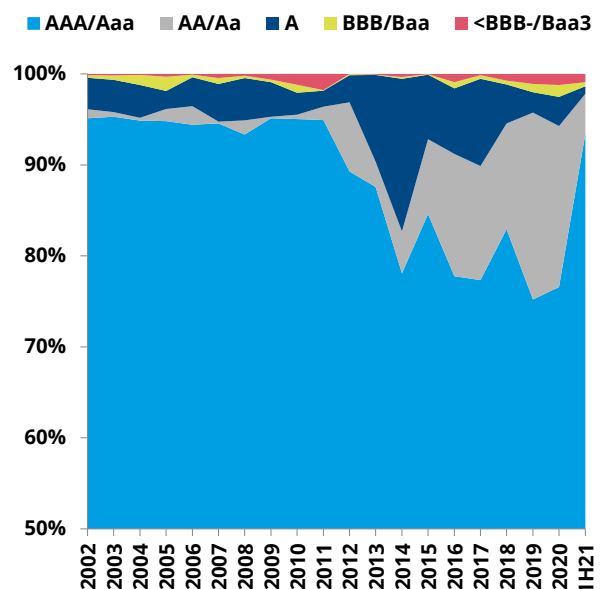
As uncertainty surrounding the pandemic persists even a year on, auto ABS has had to depend largely on loans secured by used cars as consumers remain averse to public transport and simultaneously being hesitant due to the economic fallout. Since 2020, the auto ABS market has witnessed a rise in used car loans collateral in deals. As the outlook for new car sales remains clouded and furlough schemes come to an end, this trend could continue well into the remainder of the year. This suggests that we may see captive finance companies' market share lag going forward.

4. Rating profile of the European auto ABS market

Although overall volumes remained thin through 2021, the rating profile of European auto ABS remained robust in the year so far. Historically, the majority of auto ABS issuances fall in the coveted triple A rating category, comprising over four-fifths (88%) between 2000 and 2020. However, the share has dwindled since the European debt crisis, from 95% (2011) to 77% in 2020. In absolute terms, AAA-rated issuances stood at 8.6bn euros in 1H21, representing a whopping 93% of total issuances (see Figure 19). Meanwhile, the AA/Aa segment gained traction over the years with its share rising from a mere 1.5% in 2011 to 18% in 2020, but settling at 4.4% in the first half this year amidst thin volumes. Over the past two decades, the proportion of the single A rating category stood at 6%, albeit shrinking to 1% of volumes in 1H21.

Figure 19: AAA-rated auto ABS issuance surges in 1H21

Initial ratings (S&P, Moody's, Fitch) include senior and subordinate tranches, share in the yearly issuance volume, measured by the issue volume of all rated notes



Sources: Creditreform Rating, Refinitiv

The issuance volumes at the lower end of the investment-grade category (BBB/Baa) remained relatively stable in 2021 so far, totalling 40mn euros. Its share remained relatively in line with historical trends at 0.4% in 2021, compared to a 10-year average of 0.5%.

Thus, the preference for the triple-A and AA/Aa rating category maintained its positive momentum, especially among yield-hungry investors that chased attractive yield premiums in the current low-interest environment (as compared to other fixed income asset classes with similar credit profiles), while also taking advantage of featuring lower credit risk, diversification benefits, and bond-like liquidity.

5. Perspectives for the issuance of European auto ABS

Even two years after European Securities and Markets Authority (ESMA) rolled out the Securitization Regulation, uncertainty on the regulatory front continues to impact the ABS market, as the EU Securitization Regulation still remains engulfed amidst Brexit-induced differences as both the EU and the UK prepare their respective versions of the framework. As a result of the UK's exit from the bloc, the EU Securitization Regulation is "onshored" by the Securitization Onshoring Regulations, that would adapt the EU Securitization Regulation to UK domestic law, creating a British version of the Securitization Regulation. Against this backdrop, the key focus for market participants is the impact the Securitization Onshoring Regulations will have on the STS regime. Whilst similar to the existing EU STS regime, the new UK STS regime is intended to function as an entirely separate scheme having its own notification process.

Speaking of the geographical definition, as per EU Securitization Regulation, a securitization can only be STS if the originator, sponsor and securitization

special purpose vehicle (SPV) are established in the EU. The UK, however, has allowed for a more lenient definition based on Asset-Backed Commercial Paper (ABCP) or non-ABCP transactions. For non-ABCP deals, the sponsor has to be located in the UK, but the special purpose vehicle for the transaction does not. Meanwhile, for ABCP transactions, neither SPV nor the sponsor has to be located in the UK.

Post Brexit, the recognition of the STS status in the UK and the EU differs widely, in that the UK regulation contains grandfathering provisions in relation to STS. The UK allowed for EU securitization notified as being STS under EU Securitisation Regulation before 31 December 2020, to be recognized as STS in the UK within a period of up to two years. Meanwhile, the EU, so far, has no reciprocal provision for UK STS, implying that EU investors would receive inferior capital and liquidity treatment on their UK STS bonds starting 2021. The absence of any technical grace period post the January 2021 deadline also led to the removal of all UK STS deals from ESMA's STS list.

What is more, regulatory technical standards (RTS) on risk retention, also known as the requirement for 'skin-in-the-game', that was borne out of criticism of securitization markets following the global financial crisis, has not yet been adopted by the European Commission. Currently, both Securitization Regulations impose a direct obligation on the originator, sponsor or original lender of a securitization to retain a material net economic interest in the securitization of at least 5%. Since the risk retention RTS did not come into force before the end of the Brexit transition period, new UK RTS will need to be developed, indicating that we may see some divergence between the final EU and UK RTS in relation to risk retention.

Looking ahead, the existence of two separate regimes may pose some challenges for cross-border transactions, as the geographical requirements applicable to key transaction parties will make it more difficult to structure an STS-compliant cross-border transaction.

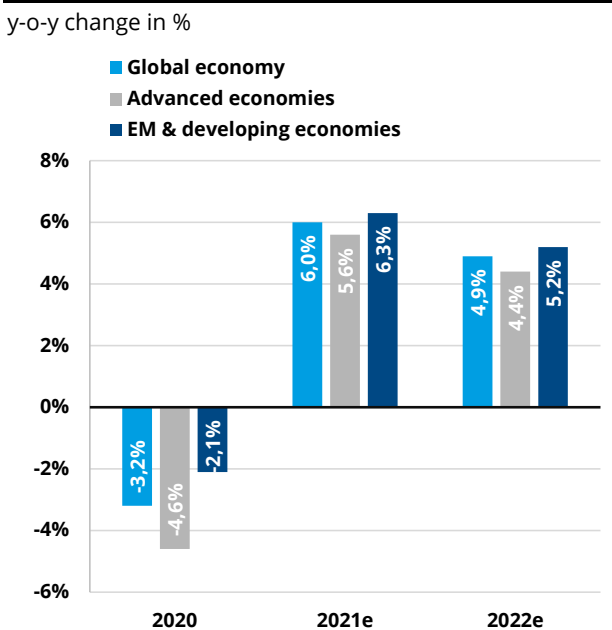
Furthermore, as climate regulation ramps up, securitization, too, is expected to witness a sustainability-driven makeover in the time to come. A European Banking Authority (EBA) report expected to be released in the coming months has tackled environmental, social and governance (ESG) issues in ABS, focusing on setting up a market of sustainable securitization. The primary reason why ESG-labelled European ABS issuances have been largely absent is mainly due to the lack of green collateral and standardization, the impediments of which are likely to be addressed by the EBA report. Additionally, as the EU moves closer to its 2035 deadline of completely phasing out carbon-emitting vehicles, the debate could soon move around residual value risk calculations. It is likely that the historically predictable residual value risk figures would see increased uncertainty and assumptions, as climate initiatives and technological innovation picks up pace. However, the short-term and fast-amortizing nature of auto ABS should ensure that this risk is kept at bay in the near term.

2021 has allowed for resumption of economic activity in most parts of the world. In its latest World Economic Outlook released in July, the International Monetary Fund (IMF) forecast a global GDP growth rate of 6.0% in 2021, unchanged from its April projection. However, recovery prospects were seen as uneven across developed and emerging markets. Advanced economies boasted of a more optimistic view against April estimates (+0.5 p.p. to 5.6%), while the forecast for emerging markets and developing countries was lowered by 0.4 p.p. to 6.3% for 2021 (see Figure 20). The revisions have taken into consideration the varying extent of vaccinations across markets.

On the monetary and fiscal front, the unprecedented support provided by global central banks and governments in 2020 and resulting spikes in inflation in 2021, kickstarted tapering discussions amidst developed-market central banks. Although the Federal Reserve stood at the forefront of the tightening debate, the talk of letting the emergency asset purchases phase out became louder in the euro area as well. After suffering two technical recessions, the euro area GDP expanded by 2.2% in 2Q21 (14.3% y-o-y), while inflation climbed above the central bank's 2% threshold. However, this comes after the ECB effectively hiked its inflation target from "below but close to 2%" to a symmetric 2% target over the medium term, implying that both overshooting and undershooting may be tolerated for some time but is "equally undesirable."

Going ahead, we are likely to see a distinct policy deviation between the Fed and ECB, with the former likely to start tapering its bond purchases by end-2021. As of June, the FOMC expected a first rate hike to take place in 2023. This is in marked contrast to the ECB that maintains the inflationary uptick as temporary amid the imminent threat from rising Delta variant cases in several parts of the region. The Bank of England echoed similar sentiments as the ECB, pushing off debate over unwinding its balance sheet given pandemic-driven uncertainty.

Figure 20: IMF GDP growth forecasts

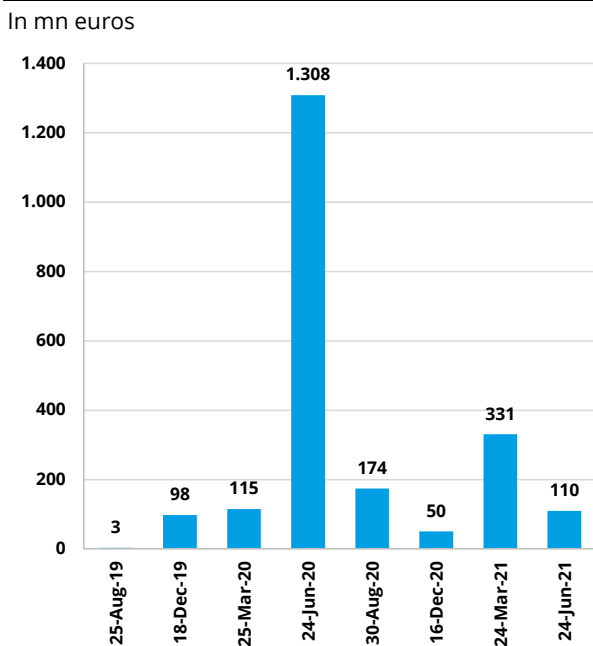


Sources: Creditreform Rating, IMF

Looking at the global macro landscape, the acceleration of vaccination campaigns since the start of

That said, the ECB’s extended accommodative monetary policies and a range of non-standard funding measures such as TLTROs, APP and PEPP ensure that financing conditions remain favourable throughout this year. With the extension of the TLTRO-III series into June 2022, the prolonged access to cheap liquidity further buoyed market sentiments. The size of the total TLTRO-III operation now runs at 2.2bn euros. In the latest tranche (TLTRO-III.8) in June 2021, the ECB allotted roughly 110bn euros of funding for bank. Meanwhile, an additional special reference period runs from October 2020 to December 2021 and meeting the lending benchmark would now qualify for the -100bps rate from June 2021 to June 2022.

Figure 21: Additional benefits introduced resulted in high take-up in TLTRO III.4 and TLTRO III.7



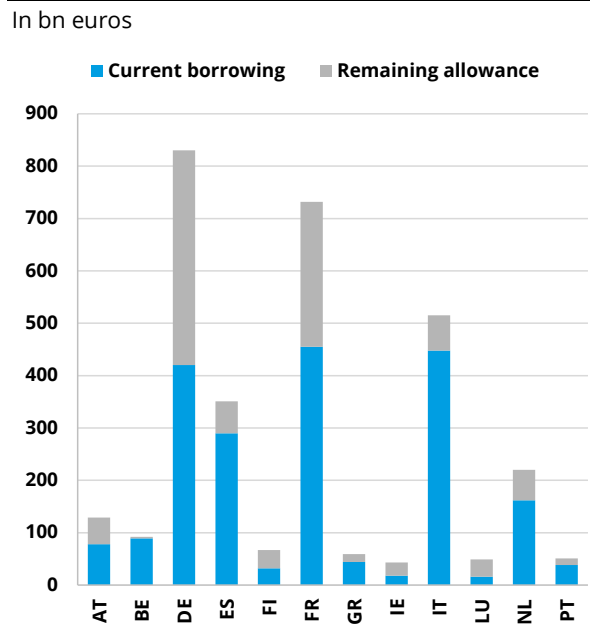
Sources: Creditreform Rating, ECB

The robust TLTRO uptake seen until June 2021 implies that the most European banks managed to meet their set of lending benchmarks, thereby locking in the attractive TLTRO rate until June 2021. The strong interest at auctions is also a result of ECB’s move to increase the amounts bank can draw from the operation from 50% of eligible loans to 55% of

eligible loans as at 28 February 2019; along with the extension of the special rate period to June 2022 (see Figure 21). In addition, the leverage ratio relief granted in September 2020 and that was due to expire in June 2021 was also extended until March 2022, boosting TLTRO take-up.

A key aspect determining future take up of TLTRO III depends on the remaining balance allowance for each bank. As seen in Figure 22, most of the countries have utilised a significant part of their total allowance.

Figure 22: Germany and France can still borrow large amounts in future auctions



Sources: Creditreform Rating, ECB MMCG

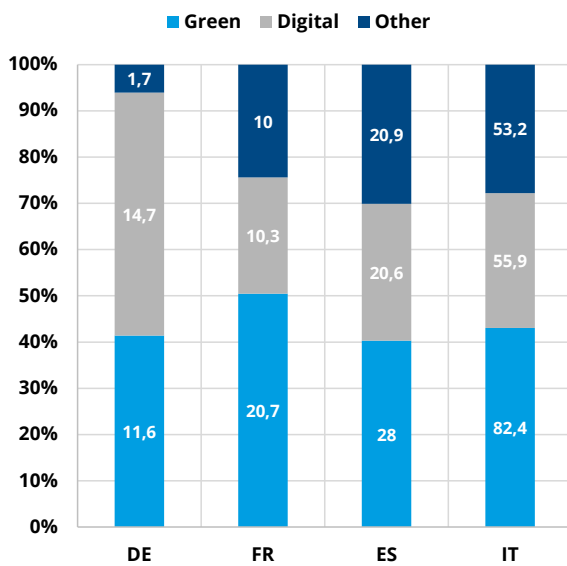
Belgium, Portugal, Italy and Spain have already utilised a relatively high share of their TLTRO-III borrowing allowance, while banks in countries such as Germany and France may have further room to increase their drawings in the remaining tranches subject to their lending performance. However, participation in the remaining TLTRO III operations look comparatively unenthusiastic.

The take-up in September and December will largely depend on whether banks decide to roll over some operations. As we move closer towards the

2022 expiration of the special TLTRO conditions, liquidity conditions could tighten, prompting banks to replace TLTROs for market funding.

Figure 23: Resource allocation from RRF grants for green transition rises above 37% target in key European countries

In bn euros, based on submitted national recovery plans; for Italy, both RRF grants and loans are included.)



Sources: Creditreform Rating, Bruegel

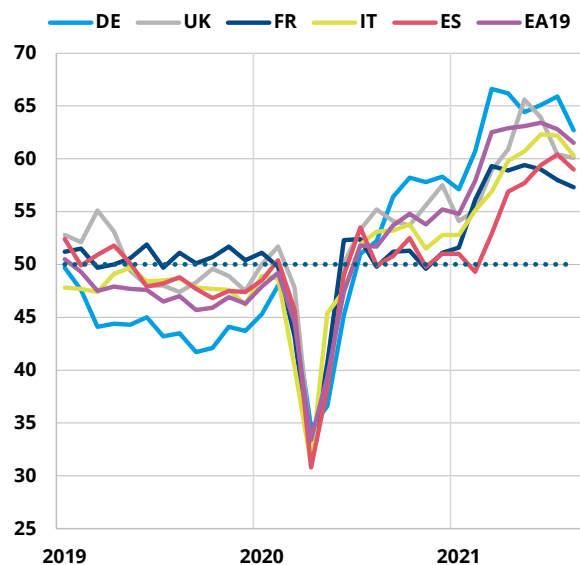
Furthermore, with inflation rising and PEPP potentially being wound down next year, EU's political cohesion over the rollout of funds from the NextGenerationEU (NGEU), including its largest component, the Recovery and Resilience Facility (RRF), stimulus package has created fiscal policy space. In June 2021, the EU issued the first tranche of bonds under the NGEU program, with some EUR 80bn expected to be raised this year, out of a roughly EUR 800bn expected to be raised between 2021 and end-2026. More notably, through NGEU policymakers across the bloc have made a clear commitment towards green transition. This has meant setting a 37% minimum target for spending on climate objectives under the RRF. So far, the four key EU economies have surpassed this target (see Figure 23). Green initiatives also hope to fulfil the European Commission's target of at least 30mn zero-emission cars by 2030

and its ambition that European factories would cover 90% of the demand for batteries.

As regards to the macro performance in the euro area, indicators point to a rebound in economic activity, enabling economies to escape any further deepening of recession. As inoculations gathered momentum and factory activity reopened despite spikes in infections, manufacturing activity, as depicted by the PMI, surged significantly above the 50-mark since the beginning of 2021, rising to a record high of 63.4 in June. However, the impact of supply bottlenecks, material shortages, and poor transport availability are reflected in July PMI figures that cooled off from record highs (see Figure 24). These factors further resulted in record supply chain delays (see Figure 25) as seen by suppliers' delivery times index that remained below the 50-mark, i.e. it will take longer for suppliers to provide goods to factories. This appears to translate into higher prices as manufacturers pay more to ensure sufficient supplies of key inputs.

Figure 24: Manufacturing PMI loses steam in July

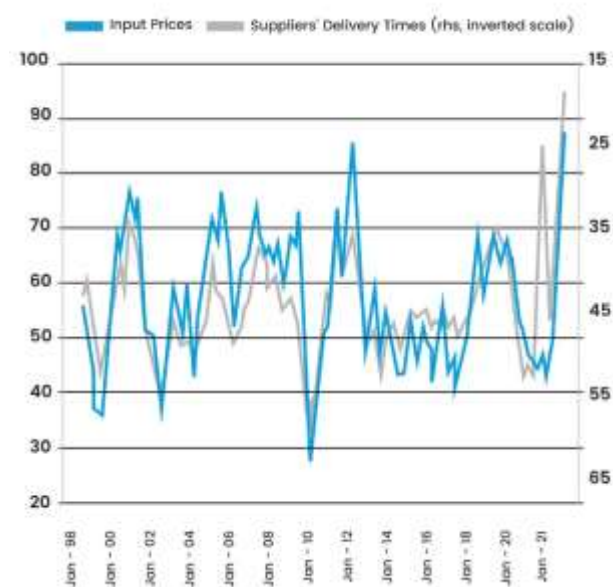
Purchasing Manager's Index, 50 unchanged growth



Sources: Creditreform Rating, Refinitiv

Figure 25: Capacity constraint indicators continue to flash red

Euro area PMI, 50 ⇔ no change m-o-m



Sources: Creditreform Rating, IHS Markit

In the UK, too, leading indicators such as the PMIs in the manufacturing, services, and construction sectors continued to move in the expansionary territory in 1H21. However, July witnessed deterioration, widely due to reported shortages of staff and/or materials. UK's Q2 GDP growth rate of 4.8% has however managed to mask these challenges.

Looking ahead in 2021, the trajectory of manufacturing as well as services industry performance will remain highly dependent on the emergence of any new coronavirus strains and variants as well as on how soon supply issues will be resolved. The pandemic has already led to renewed fears of disruption in some European countries in light of the Delta variant. Moreover, with 59% of total EU population fully vaccinated (as of 16-Sep-21), the region still remains some way off herd immunity (80% of population immunized). Accordingly, the ECB maintained its accommodative monetary policy stance at its meeting in September, albeit indicating a slightly slower pace of asset purchases under PEPP, with this program still anticipated to remain in place until at least the end of March 2022.

Turning to the European automotive industry - apart from supply and raw material challenges addressed in the first chapter, the gradual scaling back of employment support schemes and financial aid could weigh on the auto sector. While government support has helped to avoid a cliff-edge scenario, at least half of the euro area members have curtailed pandemic aid, and seek to further phase out billion's worth of subsidies more aggressively in autumn and through the end of the year. Although increasing demand and eased restrictions have seen workers being absorbed into the workforce, the number of people that remain in furlough schemes still make up for a large share. The monthly unemployment rate, which had inched towards 9% at the peak of the pandemic, has since edged down, but at 7.7% in June 2021, still remains above the pre-crisis level.

After repeated extensions, many national-level job retention schemes, which cost the EU economies over 500bn euros in the past 18 months, are set to end in September e.g. in Spain, the Netherlands, and Sweden, and become less generous in neighbouring countries. Additionally, debt repayment holidays for firms that took advantage of cheap sovereign-backed loans will soon wind down in most EU economies. In Germany, a rule that temporarily suspended the obligation to file for insolvency has expired. In the UK, the government held back grants for businesses reopening after lockdowns, and is likely to end a special unemployment benefit top-up by October. That said, unemployment rates in the EU and UK could yet increase, posing as a downside risk to the ABS market.

Secondly, the demand push that helped Europe overtake China in EV uptake in 2020 was on the back of some of the highest subsidies in the world. To put it in perspective, EV purchase subsidies in Germany stood at around 9,900 US dollars, 7,700 dollars in France, and 4,400 dollars in Italy and Spain respectively. At the same time, countries such as Romania offered some of the highest purchase subsidies of around 11,000 US dollars in 2020. This compares to only 3,300 dollars in China.

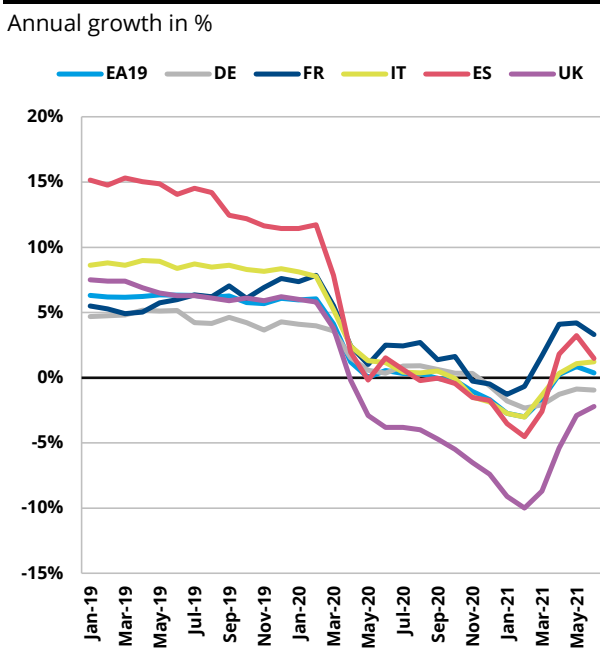
While China has sought to gradually phase out its EV purchase subsidies by 2022, it remains unclear

as to how long the EU will keep offering these benefits. It is likely that Europe remains in the lead only until subsidies are doled out, without which, China's population size and economies of scale could help it regain its dominance over the long term. For now, it seems that EU countries will have to rely on government support not only for the EU to remain in the lead but also to meet its stringent emission guidelines under the 'Fit for 55' package.

Looking at the securitisation market, amendments to the securitisation regulation since last year along with the ECB's prolonged accommodative stance was expected to improve financial institutions' lending capacity to households, thereby facilitating the use of securitization. This, however, has not yet materialised, judging by still weak household consumer credit growth, which seems way off pre-pandemic levels. (see Figure 26). However, we believe there still exists some room for improvement on the back of an eventual pick-up in factory activity and consumer demand as large-scale vaccinations relieve the severity of coronavirus infections in the near term.

Overall, as in 2020, we believe prospects for the European automotive industry in 2021 to remain somewhat mixed, depending largely on the development of the epidemiological situation and the possible emergence of new coronavirus variants as well as on supply bottlenecks, not only in the region, but across the world, which could persist through the remainder of 2021. Moreover, the semiconductor shortage has already negatively impacted sales and production volumes in 1H21, issues of which are unlikely to disappear in the short-run. Having said this, we expect the momentum in the industry to progress on the back of revival in consumer demand as progress on vaccines and widespread inoculations ensure buoyancy. We expect full-year car sales to grow from their 2020 level, albeit unlikely to surpass 2019 levels.

Figure 26: Household credit growth stalls in June



Sources: Creditreform Rating, ECB, BOE

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