

December 2021

Future used car market overview

Welcome to the latest version of our overview. Our aim is to bring you the best content and layout, making it easy to identify new and revised information. As always, any customer feedback on this format would be appreciated: e-mail dylan.setterfield@cap-hpi.com

The content is structured as follows:

- 1. Forecast Changes
- 2. Market Conditions
- 3. Historic Forecast Accuracy
- 4. Forecast Methodology
- 5. Sector Reforecast Schedule 2021

1. Forecast Changes

The overall average change in new car forecasts for ALL cars between November and December is approximately -0.4 % at 36/60, which is approximately +1.2% higher than the normal expectation of the seasonal change for full year forecasts at this time of year. This is again a reflection of the large number of ranges reforecast through a combination of sector reviews and Interproduct reporting and also the average increases in forecast values for those vehicles (see below).

Details of all 36/60k forecast values revised by $\pm 5\%$ can be found via the following link: **Monthly Reports**

Sector reforecasts

This month, we publish new reforecasts for the Lower Medium and MPV sectors. (As mentioned previously, Electric Vehicles are now reforecast in conjunction with their associated body style sectors).

Similar to the reviews over the past few months, the recent extreme increases in used values have prompted us to increase the deflation expectation over the next 12 months, as the strength seen this year is not expected to be repeated. This is now offset by a more positive outlook for the second year of the forecast, with increasing inflation in the third year (as lower new car registrations in 2020-21 result in significantly lower used car volumes from September 2023 onwards). As we move through time, the 24-month period now is expected to see the first real impacts of lower used car supply. The overall impact across all sectors reviewed is an approximate increase in deflation of between -5% and -6%, all loaded into the first 12 months, with improvements in later years.

Average forecasts for Lower Medium see an average improvement of approximately +1.4% for 3-year-old vehicles, with MPV increasing by +3.3.

There are differences in the relative changes by fuel type in each sector. There are again smaller average increases for Lower Medium BEVs although electric MPVs increase by slightly more than the sector average.



We also performed a review of Lower Medium automatic premiums following a customer query and several ranges see small increases on automatic variants (average of around £100 at 36/60).

The overall impact of the changes to forecasts for this sector at 36/60k is shown below:

SIZE & FUEL TYPE	UNDERLYIN G FORECAST CHANGE	SEASONAL ELEMENT	OBSERVED CHANGE NOVEMBER TO DECEMBER
Lower Medium Diesel	+2.1%	-2.1%	0.0%
Lower Medium Electric (BEV)	+1.0%	-1.8%	-0.8%
Lower Medium Hybrid (HEV)	+1.8%	-1.8%	0.0%
Lower Medium Petrol	+1.1%	-1.8%	-0.7%
Lower Med Plug-In Hybrid (PHEV)	+1.7%	-1.8%	-0.1%
MPV Diesel	+2.9%	-1.2%	+1.7%
MPV Electric (BEV)	+4.0%	-1.7%	+2.3%
MPV Petrol	+4.3%	-1.7%	+2.6%
MPV Plug-In Hybrid (PHEV)	+2.9%	-1.7%	+1.2%
Overall Average	+1.9%	-1.8%	+0.1%

Forecast changes this month

Once again we have repeated our extensive Interproduct review this month. Approximately 140 ranges (over 20% of current ranges) were considered, but in a small number of cases it was decided to make no changes to the forecasts.

Some of these ranges were already reforecast as part of the Interproduct exercise in recent months, but required re-assessing due to the magnitude of continued used value movements. In some of these cases there were no further changes to the 36-month position, but increases were made to the 12-month position in recognition of further strength in used values that is not expected to be sustainable beyond the 12-month point.



ABARTH 500/595/695 (09-) ABARTH 500C/595C/695C (10-) ASTON MARTIN DB11 VOLANTE (17-) AUDI A1 (18-) AUDI A5 CABRIOLET (19-) AUDI A5 CABRIOLET (19-) DIESEL AUDI A5 COUPE (19-) AUDI A5 COUPE (19-) DIESEL AUDI A5 SPORTBACK (19-) AUDI A5 SPORTBACK (19-) DIESEL AUDI A6 ALLROAD (19-) AUDI A6 ALLROAD (19-) DIESEL AUDI E-TRON (18-) Electric AUDI E-TRON SPORTBACK (19-) Electric AUDI Q5 SPORTBACK (21-) Petrol Hybrid AUDI Q7 (19-) AUDI RS Q8 (19-) AUDI RS6 (19-) AUDI S3 (20-) AUDI S5 COUPE (19-) DIESEL AUDI S5 SPORTBACK (19-) DIESEL AUDI S6 (19-) Diesel BENTLEY BENTAYGA (15-) BENTLEY CONTINENTAL GTC CONVERTIBLE (18-) BMW 4 SERIES CONVERTIBLE (20-) BMW 4 SERIES CONVERTIBLE (20-) DIESEL BMW 7 SERIES (19-) BMW 7 SERIES (19-) DIESEL BMW 8 SERIES CONVERTIBLE (18-) Diesel

BMW M3 SALOON (20-) BMW X1 (20-) Hybrid BMW X6 (19-) BMW X6 (19-) DIESEL BMW X7 (18-) CITROEN C1 (14-) CITROEN C5 AIRCROSS (18-) Diesel DS DS3 CROSSBACK (19-) FIAT 500 (15-) FIAT 500C (09-1) FIAT PANDA (12-) FORD MONDEO (18-) DIESEL FORD MONDEO (18-) HYBRID HYUNDAI 110 (19-) JAGUAR F-PACE (20-) JAGUAR F-PACE (20-) DIESEL JAGUAR F-PACE (20-) Hybrid JAGUAR F-TYPE (19-) JAGUAR F-TYPE CONVERTIBLE (19-) JAGUAR I-PACE (18-) JAGUAR XE (19-) JAGUAR XE (19-) DIESEL KIA RIO (16-) KIA SORENTO (20-) DIESEL KIA SORENTO (20-) Hybrid LAMBORGHINI HURACAN (14-) LAMBORGHINI HURACAN SPYDER (15-) LAMBORGHINI URUS (18-)

LAND ROVER DEFENDER (19-1)

LAND ROVER DEFENDER (19-) Diesel LAND ROVER DISCOVERY (16-) LEXUS ES (18-) Petrol Hybrid LEXUS LC COUPE (17-) LEXUS LC COUPE (17-) PETROL HYBRID LEXUS NX (18-) HYBRID LEXUS RX (19-) HYBRID LEXUS UX (18-) Petrol Hybrid MASERATI GHIBLI (13-) MASERATI GHIBLI (20-) Hybrid MCLAREN 765LT (20-) MERCEDES-BENZ AMG C CLASS (18-) MERCEDES-BENZ AMG E CLASS (16-MERCEDES-BENZ AMG E CLASS CABRIOLET (18-) MERCEDES-BENZ AMG E CLASS COUPE (18-)
MERCEDES-BENZ AMG G CLASS (18-) MERCEDES-BENZ C CLASS COUPE (18-) DIESEL MERCEDES-BENZ E CLASS (16-) DIESEL MERCEDES-BENZ E CLASS (18-) MERCEDES-BENZ EQC (19-) Electric MERCEDES-BENZ G CLASS (19-) DIESEL MERCEDES-BENZ GLB (20-) Diesel MERCEDES-BENZ S CLASS (20-1) MERCEDES-BENZ S CLASS (20-) DIESEL MG 3 (18-) MINI ONE (18-) MITSUBISHI OUTLANDER (18-) HYBRID MITSUBISHI SHOGUN SPORT (17-) DIESEL PEUGEOT 108 (14-)

PEUGEOT 2008 (19-) DIESEL PEUGEOT 208 (19-) PEUGEOT 208 (19-) DIESEL PEUGEOT 208 (19-) Electric PEUGEOT 508 (18-) DIESEL PORSCHE 911 [992] (18-) PORSCHE 911 [992] CARRERA CABRIOLET (19-) PORSCHE 911 [992] GT (21-) PORSCHE CAYENNE COUPE (19-) RENAULT CLIO (19-1) ROLLS-ROYCE CULLINAN (18-) ROLLS-ROYCE DAWN (15-SKODA FABIA (18-) SKODA KAMIQ (19-) SKODA SUPERB (19-SKODA SUPERB (19-) DIESEL SMART FORTWO (20-) ELECTRIC SUBARU BRZ (12-) TOYOTA LAND CRUISER (17-) DIESEL TOYOTA YARIS (20-) HYBRID VAUXHALL CORSA (19-) VOLKSWAGEN ID.4 (21-) Electric VOLKSWAGEN POLO (17-) VOLKSWAGEN T-ROC CABRIOLET (20-) VOLKSWAGEN UP (12-) VOLKSWAGEN UP (13-) ELECTRIC VOLVO V60 (18-) VOLVO V60 (18-) DIESEL VOLVO V60 (19-) PETROL HYBRID

Hyundai i30 (2017----) Premium for N trim increased from £1,250 to £2,175 at 36/60 – change resulted in forecast increases.

Maserati Levante (2015----) Facelift tag added for current vehicle range due to further information on the visual changes to MY 22 from the manufacturer, creating an £1,850 uplift at 36/60 – change resulted in forecast increases.

Nissan Qashqai (2021----) Last month's Interproduct changes did not flow into forecast values due to a system error. The new model was intended to move in tandem with the outgoing model and this was corrected this month - change resulted in forecast increases.

Seasonality changes

In line with our gold book methodology, all other model ranges which are outside of the sector reforecasts, have had their used forecasts moved forward from month to month by seasonal factors (without plate effect) which are differentiated by sector and fuel type and are based on analysis of historical used value movements.

2. Market Conditions

At the time or writing, the period of used car price increases appears to finally have ended. There are signs that consumer demand has reverted to something much closer to normal levels, but we have still seen below average decreases in value for the time of year.

The strength in used values over recent months has been astonishing. We expected the market to be strong when dealers re-opened in April, but not as strong as when they re-opened last year, simply because dealers had been able to trade online in much greater volumes than during the first lockdown and pent-up demand was expected to be lower, Indeed, the market was slightly slower to pick up in early April than we had expected. The prevalence of the 'accidental saver' resulted in extremely strong consumer demand, which stayed strong for fully 6 months,

We are still in a situation where retail prices for many used cars are priced above cost new and there are even cases where the trade value significantly exceeds list price. Retail prices have been increasing, but much more slowly than the trade, resulting in pricing headaches for dealers, especially for those cars already over cost new.



Several supply issues had already extended new car delivery lead times and new car supply problems (often referred to as "the semi-conductor shortage", but in reality a whole host of different issues) suddenly got a lot worse in early September. This was partly (but not exclusively) due to a Covid-19 breakout in several Asia-Pacific countries in July and August. This is likely to have a knock-on effect for several months to come, although additional capacity from new chip manufacturing plants now open in Germany and Austria will mitigate the impact at some stage. Several semi-conductor makers are now claiming that the shortages have been overcome and that leadtimes have stabilised, but it will be another few months before that impact is felt in new car supply.

The shortage of new car supply, combined with fewer trade-in vehicles and delayed fleet replacements all contributed to the record strength in values, as many drivers and fleet managers are also running cars for longer due to lower mileage through the pandemic. The government's additional support for business has now come to an end, but the anticipated negative economic impacts have undoubtedly been reduced by the multiple extensions to the various schemes. Further lockdowns now seem unlikely, although concerns remain regarding new variants (in particular, the "AY3" and "AY4.2" versions of the Delta variant, which may be more vaccine resistant and more transmissible respectively than the current dominant Delta variant). Reports of potentially vaccine resistant variants in Southern Africa are also of potential concern.

In summary, our view is that:

- The current reductions in used values are part of a typical seasonal slowdown (albeit less severe than normal) as the used market 'pauses for breath'. Retail days to sell appear now to be around what would be expected in a 'normal' market, reflecting a slowdown in demand, but still at a healthy level for the time of year. For most sectors, our short-term forecast continues to show positive movements in early 2022, but some sectors are expected to decrease, albeit by less than average for these months.
- There are still plenty of cases where logical relationships have been broken and where nearly new used values are above list prices. These will resolve themselves in time, but values are not expected to go down as fast as they have increased. Clearly this may be accelerated if retail demand reduces in early 2022 and consumer confidence drops. Even if this is the case, however, we would still expect a gradual market adjustment over the next 12 months or so, rather than a 'mirrored' fall.
- The used value increases on some models have effectively set a new market and may not return to previous levels, but even in these cases we have tended to apply significant negative editorial adjustments during our Interproduct reviews. Although there has been an improvement in retail pricing in recent months, some dealers still have not increased prices on aged stock and the 'two tier' retail market on some models makes it very challenging to determine how sustainable values are likely to be.
- The effects of the new car supply issues (including the semi-conductor shortage) are many and varied and seem to be changing every week. In many cases, the news from OEMs changes every time we have the discussion and even some who were not expecting any significant impact a couple of months ago now seem to be significantly affected, while others are expecting imminent improvement. In many cases there are derivative specific impacts within the same model, with complex decisions regarding production allocation being reviewed on a daily basis. There are multiple supply issues exacerbating the situation and predictions from individual brands for the next few months still vary considerably and some are changing on an almost weekly basis.



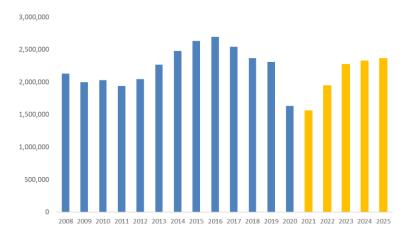
- A significant factor currently contributing to lower levels of fleet returns is still fleet
 managers and drivers running cars for longer, due to lower mileage during the
 pandemic. These cars will return to the used market at some stage and we are
 factoring this into the phasing of our deflation assumptions for sector reviews.
- One-year-old vehicles will remain in relatively short supply for the foreseeable future, and the longer the current new car supply issues persist, the longer there will be a shortage. However, once leadtimes for the majority of models reduce, it is expected that consumers will once again hold out for the new car. However, despite the prolonged shortages of nearly new stock, the trend for some time has been for 3-year-old cars outperforming the 1-year-old market and they have not increased by as large a proportion and therefore adjustments are expected to be slightly less than for 3-year-old cars once the market settles. This is reflected in our recent forecasts.
- After the deflationary low point at the end of 2022, values will recover over the next couple of years as the economy and consumer confidence improves, and used supply starts to reduce (helped significantly by the shortfall in new car registrations that we have been seeing over the past 18 months or so).

There will still be variations by sector and fuel type. Convertibles are falling as expected as we head towards winter and dealer demand turns to other vehicles. Similarly, many Sports models have increased by so much that any further softening of consumer demand next year is likely to result in decreases in used values by more than the market average.

Supply side factors

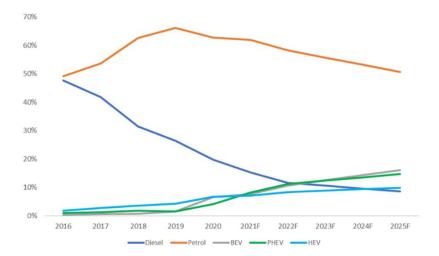
New forecast for new car registrations from the SMMT was updated in July from 1.83 million to 1.820mm and last month down to 1.66mm. Our original forecast outlook was: 2021 1.902mm, 2022 2.162mm, 2023 2.270. Our forecast had been revised down from 1.965mm once it was clear that dealerships would not be opening during March and remains under review, but the 12-month rolling total in June increased to 1.88mm and appeared on track to meet our estimate. New car supply issues impacted the July & August totals by more than expected and so our forecast was reviewed again.

After the publication of September sales data, we revised our forecast for the current calendar year to 1.560mm, -4.4% down vs.2020 and -32.5% vs.2019. 2020 and 2021 combined will now represent a shortfall of around 1.5 million cars compared to 2019 registration levels. Supply issues will continue to subdue the new car market to an extent early in 2022, but will ease during the year and there should be a strong recovery in the second half, although some issues are likely to remain. We expect that registrations will gradually increase to a level above 2.3 million registrations a year, but not reaching the peaks seen in 2016.





The chart below shows the forecast market share split by fuel type. Petrol and Diesel volumes include mild hybrids. The decline in diesel will continue but slow down since it will remain the right choice for a minority of drivers.



Growth will be led by battery electric vehicles (BEVs) which we expect to become the dominant AFV type by 2023. Post-Covid driving patterns (shorter and few journeys due to the increase of home working and online meetings) are likely to add to demand. The government's proposal to ban new ICE cars from 2030 will also be part of this increase, provided enough vehicle supply is made available and investment in charging infrastructure keep pace with demand.

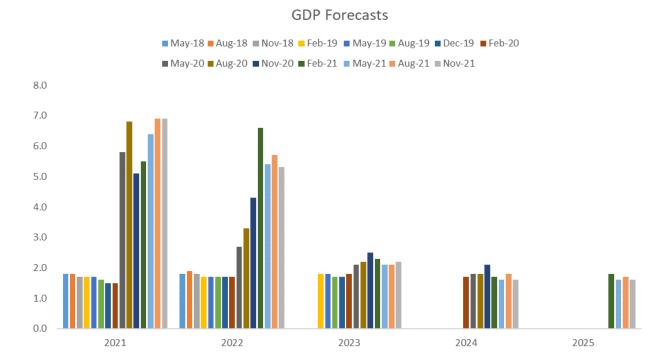
Demand side factors

Latest independent forecasts for the UK economy were published on 17th November and maintain the outlook for GDP this year, but with the average of +6.9% remaining slightly below the Bank of England estimate of +7.2%. The 2022 estimate improves slightly but longer-term GDP recovery remains subdued, with decreases of between -0.1% and -0.2% for 2023/4/5 compared to the August forecasts.

Although the forecast for GDP is maintained for 2021, the BoE view is now that there are "two-sided risks" in the medium term (previously they were "heavily skewed to the downside"). The outlook remains "uncertain", with their 'fan charts' as widely spaced as they have ever been.



The chart below shows the latest GDP forecasts to 2025, alongside previous forecasts.



The latest unemployment forecasts continue to show a longer, flatter curve, with unemployment expected to peak at 5.4% over the next two years (rather than peaking this year); then taking several years to return close to pre-Covid-19 levels. This clearly reflects the impact of the extension to the government measures to support businesses in general and the furlough scheme in particular.

Inflation has now reached 4.2% (compared to the expected peak of 4.5% in 2022 (although our expectation has been for it to be higher) and the BoE do not now expect it to come back below target until at least 2023. The recent increases have been driven by a combination of increased energy costs, shortage of goods, supply issues, the end of some government COVID-19 support measures and labour market imbalances, some of which are almost certainly short-term. Base rates are set to increase in the near term but are forecast to remain low, but our conclusion is that consumer confidence and willingness to pay for big ticket items such as replacement cars, may be limited in the medium term due to the reduced growth and increased unemployment. A significant proportion of consumers have built up considerable savings, but many will be cautious about their future economic stability and others have reduced financial circumstances as a result of the pandemic. The BoE's surveys suggest that only 10% of accumulated savings will be spent and 75% of households do not intend to spend any at all.

3. Historic Forecast Accuracy

Since the introduction of gold book at the end of 2013, we have been able to track the accuracy of historic forecasts against current (black book) values. This tracking is longest for 12-month forecasts (tracked since January 2015) and shortest for 60-month forecasts (tracked since January 2019).

Overall, we are satisfied that accuracy results are generally been within the +/- 5% target agreed with customers but recognise that results were affected by the unexpected strength of petrol values, which started in 2017 as a result of anti-diesel press, but which fell away



since late 2018, as we had always predicted. Diesel forecast accuracy has generally been within target, while petrol forecast accuracy fell outside of target during the period of strong values.

In the past 12 months, our historic forecast accuracy was impacted by the strength of the used market after dealerships re-opened after the first COVID lockdown. The pausing of the market followed by significant strength on resumption (at a time when we would normally expect to see depreciation in each month) resulted in a significant short-term shift in accuracy.

Therefore, the tracking charts below all show the same general patterns, with the difference to target being less for 12-month forecasts (reforecast most recently); and being more for longer term forecasts (reforecast less recently).

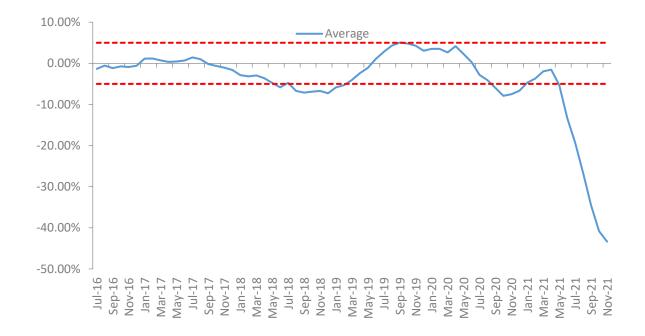
Clearly, the current unprecedented strength in the used car market is also resulting in further short-term deterioration in accuracy.

Details are shown below for 12 and 36 months, but all details are available on request.

12-month results

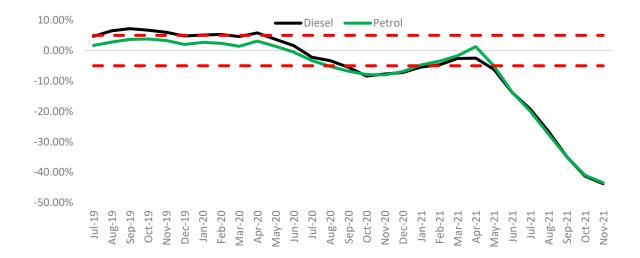
Since measurement started our 12 month used forecasts have averaged -3.1% less than used values across all vehicle ids, and the most recent results show November 2020 12/20 gold book forecasts being -43.3% less than November 2021 12/20 used values (unsurprising following record breaking used value increases in recent months).

Overall results:

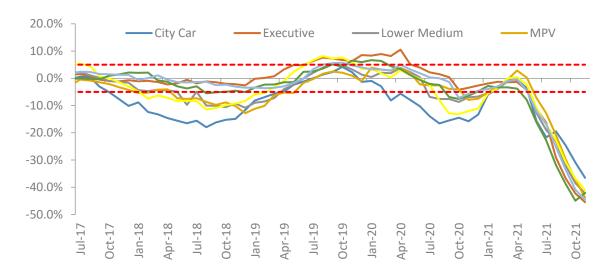




Fuel Type Results:



Sector Results:



The most recent results for the main sectors are as follows:

Nov 21	Average of Diff (%)	
City Car	-36.5%	
Executive	-45.5%	
Lower Medium	-42.3%	
MPV	-43.8%	
Supermini	-41.0%	
SUV	-42.1%	
Upper Medium	-44.6%	

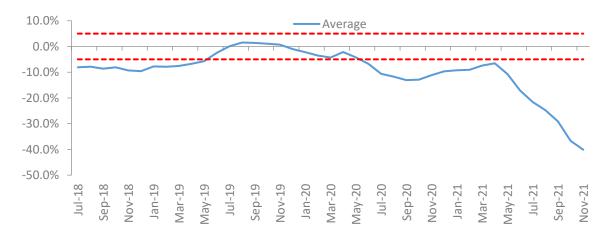
Cycurd Total	
Grand Total	-43.3%



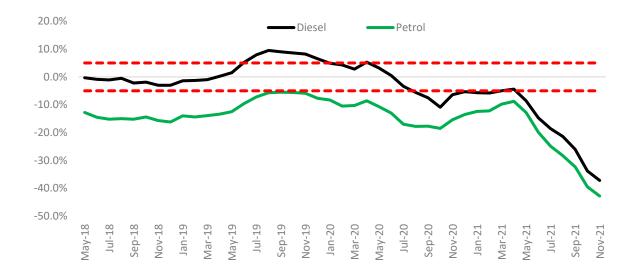
36-month results

Since measurement started our 36 month used forecasts have averaged -7.2% less than used values across all vehicle ids, and the most recent results show November 2018 36/60 gold book forecasts being -40.1% less than November 2021 36/60 used values.

Overall Results:

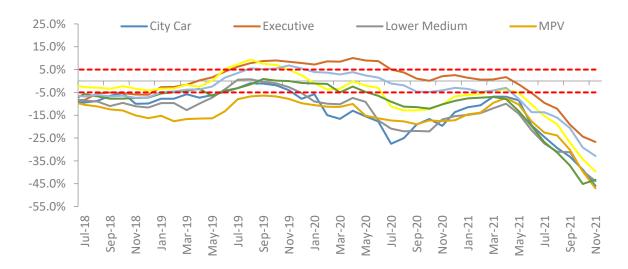


Fuel Type Results:





Sector Results:



The most recent results for the main sectors are as follows:

Nov 21	Average of Diff (%)	
City Car	-46.0%	
Executive	-26.7%	
Lower Medium	-43.9%	
MPV	-47.0%	
Supermini	-39.6%	
SUV	-43.3%	
Upper Medium	-32.9%	

Grand Total	40.1%

4. Forecast Methodology & Products

Overview & gold book iQ

Our values take current month used values as a starting point (uplifted for model changes where necessary), are moved forward according to age/sector/fuel specific year on year deflation assumptions regarding future used car price movements and are then subjected to additional adjustments by the Editorial Team. Finally, the values are moved forward by the next month's seasonality adjustments which are differentiated by sector and fuel type and are based on analysis of historical used value movements.

All these assumptions and adjustments are available for scrutiny to our customers through our gold book iQ product: complete transparency in automotive forecasting. Changes may be actioned wherever there is reason to do so outside of the sector reforecast process and we continue our monthly inter-product analysis with our used value colleagues exactly as before.



Short Term Forecast (0-12 months)

Our short-term forecast product, (covering 0-12 months) was launched in 2014. This is a live, researched product with a dedicated editor and filled a gap in our historical forecast coverage.

Forecast Daily Feed

In December 2017 we introduced a daily feed of forecasts for new models launched onto the market, so that customers do not have to wait until the next month to receive these forecasts.

Forecast Output

Individual forecasts are provided in pounds and percentage of list price for periods of twelve to sixty months with mileage calculations up to 200,000. Each forecast is shown in grid format with specific time and mileage bands highlighted for ease of use.

All forecast values include VAT and relate to a cap hpi clean condition and in a desirable colour. All new car prices in forecast data include VAT and delivery.

Parallel Imports

Particular care must be taken when valuing parallel imports. Vehicles are often described as full UK specification when the reality is somewhat different. These vehicles should be inspected to ensure that the vehicle specification is correct for the UK. Parallel imports that are full UK specification and first registered in the UK can be valued the same as a UK-sourced vehicle.

Grey Imports

cap hpi gold book does not include valuations for any grey import vehicles, (i.e., those not available on an official UK price list).

5. Reforecast Calendar 2021/22

We previously accelerated our calendar of sector reforecasts, to ensure that forecasts for all sectors incorporate the latest views of the future market in this fast-changing environment. The table below shows our revised future schedule of sector reforecasts:

Monthly Product	Sector 1	Sector 2	Sector 3	Sector 4
Jan-22	Convertible	Coupe Cabriolet	Sports	Supercar
Feb-22	SUV			
Mar-22	City Car	Supermini		
Apr-22	Upper Medium	Executive	Large Executive	Luxury Executive
May-22	Lower Medium	MPV		
Jun-22	Convertible	Sports	Supercar	
Jul-22	SUV	·	·	
Aug-22	City Car	Supermini		
Sep-22	Upper Medium	Executive	Large Executive	Luxury Executive
Oct-22	Lower Medium	MPV		,
Nov-22	Convertible	Coupe Cabriolet	Sports	Supercar
Dec-22	SUV	·	·	·