October 2022

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 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 & Products
5. Sector Reforecast Schedule 2022/23

1. Forecast changes

The overall average change in new car forecasts for ALL cars between September and October is approximately 1.1% at 36/60, which is slightly more than the normal expectation of the seasonal change for full year forecasts at this time of year. This reflects the increases made to the MPV and Lower Medium sectors as outlined below.

Sector reforecasts

This month, we publish new reforecasts for the Lower Medium and MPV sectors.

As we move through time, the first real impacts on the used car market of lower used car supply also get closer. We expect this to have an effect from around September 2023 onwards, which now falls around our one year position. As a result, we have applied further changes to our deflation phasing, with an overall improvement for all sector/fuel combinations, influenced by improvements in the first year.

The deflation assumptions increased by the following averages across all fuel types and ages of vehicle, with the impact on forecast values offset by a combination of changes to previous adjustments and used value movements since the last review: Lower Medium +5.0%, MPV +2.4%. There were minimal differences between fuel types within the same sector.

Average forecasts movements are displayed in the table below.

SIZE & FUEL TYPE	UNDERLYING FORECAST CHANGE	SEASONAL ELEMENT	OBSERVED CHANGE SEPTEMBER TO OCTOBER
Lower Medium Diesel	+3.8%	+0.2%	+4.0%
Lower Medium Electric (BEV)	+5.8%	+0.2%	+6.0%
Lower Medium Hybrid (HEV)	+5.6%	+0.2%	+5.8%
Lower Medium Petrol	+4.9%	+0.2%	+5.1%
Lower Med Plug-In Hybrid (PHEV)	+4.8%	+0.2%	+5.0%
MPV Diesel	+5.2%	+0.1%	+5.3%
MPV Electric (BEV)	+6.6%	+0.4%	+7.0%
MPV Hybrid (HEV)	+4.6%	+0.4%	+5.0%
MPV Petrol	+3.0%	+0.4%	+3.4%
MPV Plug-In Hybrid (PHEV)	+1.7%	+0.4%	+2.1%
Overall Average	+4.7%	+0.2%	+4.9%

Forecasts for battery electric vehicles increased by more than for ICE models on average across both sectors, despite increased negative editorial adjustments on the BEV models in many cases – this is mainly a function of significant used value movements since the last review.

The following profile generations were moved into the generic 'low mileage' profile (labelled as "Luxury Exec Diesel" in gold book iQ, but denoting our generic low mileage profile).

FORD TRANSIT CUSTOM (20-) Diesel
MERCEDES-BENZ EQV (20-) Electric
MERCEDES-BENZ V CLASS (14-19) DIESEL
MERCEDES-BENZ V CLASS (19-) DIESEL
MERCEDES-BENZ V CLASS MARCO POLO (17-19) DIESEL
MERCEDES-BENZ V CLASS MARCO POLO (19-) DIESEL
VOLKSWAGEN CALIFORNIA (15-20) DIESEL
VOLKSWAGEN CALIFORNIA (19-) DIESEL
VOLKSWAGEN CALIFORNIA (17-19)
VOLKSWAGEN CARAVELLE (10-20) DIESEL
VOLKSWAGEN CARAVELLE (19-) DIESEL
VOLKSWAGEN CARAVELLE (15-19)
VOLKSWAGEN GRAND CALIFORNIA (19-) Diesel
VOLKSWAGEN ID.BUZZ (22-) Electric
VOLKSWAGEN MULTIVAN (22-) Diesel
VOLKSWAGEN MULTIVAN (21-) Hybrid
VOLKSWAGEN MULTIVAN (21-)

The forecast impacts are decreases at lower mileage, which increase in magnitude as mileage decreases and incremental increases at higher mileage as mileage increases. Underlying forecasts at benchmark mileage are not impacted by this change – these changes were made via the sector reviews.

The following profile generations were moved into the generic 'high mileage' profile (labelled as "Supercar Diesel" in gold book iQ, but denoting our generic high mileage profile).

CITROEN BERLINGO MULTISPACE (08-18) DIESEL
CITROEN BERLINGO MULTISPACE (18-) DIESEL
CITROEN C3 PICASSO (09-17) DIESEL
FIAT DOBLO (10-19) DIESEL
FORD C-MAX (10-19) DIESEL
KIA CARENS (13-19)
KIA VENGA (10-18) DIESEL
PEUGEOT 5008 (10-17) DIESEL
TOYOTA VERSO ESTATE (09-18) DIESEL
VAUXHALL MERIVA (10-17) DIESEL

The forecast impacts are increases at lower mileage, which increase in magnitude as mileage decreases and incremental reductions at higher mileage as mileage increases. Underlying forecasts at benchmark mileage are not impacted by this change – these changes were made via the sector reviews.

Forecast changes this month

The focus of our Interproduct reporting remains split between cases where our forecast was too far below the used value and those where recent used value reductions have resulted in forecast values above the latest used value position. This month over 135 ranges were considered, but in many cases, it was decided to make no changes to the forecasts.

In some of the examples below 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. However, this month we also again needed to make some negative adjustments on a small number of models which had either seen significant recent reductions in used values, or where previous increases were reversed as a result of revised or new data.

Interproduct Reporting Changes

ALPINA B5 (20-)
AUDI A6 (19-) HYBRID
BMW 5 SERIES (16-) DIESEL
BMW 5 SERIES (17-) HYBRID
CITROEN C3 (16-)
CITROEN C5 X (21-) Hybrid
DACIA SANDERO (20-)
FIAT 500 (20-) Electric
FORD FIESTA (21-)
GENESIS G80 (21-)
GENESIS G80 (22-) Electric
HONDA e (20-)
HONDA JAZZ (20-) HYBRID
HYUNDAI I10 (19-)
HYUNDAI I20 (20-)
KIA PICANTO (17-)
LEXUS ES (18-) Petrol Hybrid
LEXUS LC COUPE (17-)
MERCEDES-BENZ C CLASS (21-) DIESEL
MERCEDES-BENZ CLS (18-)
MERCEDES-BENZ E CLASS (18-) DIESEL HYBRID
MERCEDES-BENZ EQE (22-) Electric
MG 3 (18-)
PEUGEOT 208 (19-)
PEUGEOT 208 (19-) DIESEL
PEUGEOT 208 (19-) Electric
PEUGEOT 508 (18-)
PEUGEOT 508 (18-) DIESEL
RENAULT CLIO (19-)
RENAULT CLIO (20-) Hybrid
SKODA OCTAVIA (20-)
SKODA OCTAVIA (20-) DIESEL
SKODA OCTAVIA (20-) Hybrid
SKODA SUPERB (19-) Hybrid
SMART FORFOUR (20-) Electric
SMART FORTWO (20-) ELECTRIC
TOYOTA YARIS (20-) HYBRID
TOYOTA YARIS GR (20-)
VAUXHALL CORSA (19-)
VAUXHALL CORSA (19-) ELECTRC
VOLKSWAGEN ARTEON (17-) DIESEL
VOLKSWAGEN ARTEON (20-) Hybrid
VOLKSWAGEN POLO (17-)
VOLVO S90/V90 (17-) HYBRID

LEXUS NX (14-20) Hybrid Donor vehicles changed to amend the depreciation curve closer to expectation at ages >60 months, resulting in used car forecast decreases at those ages.
NISSAN JUKE (14-20) DIESEL 1.2 DiGT [115] and 1.6 [94] engines adjusted to -£550 behind master engine following analysis of used value premium history prompted by used forecast interproduct reporting.
SEAT ATECA (16-) Penalty for S trim versus SE increased from -£875 to -£1750 following analysis of used value premium history prompted by used forecast interproduct reporting.
SKODA OCTAVIA (13-20) Penalty for S trim versus SE increased from -£325 to -£975 following analysis of used value premium history prompted by used forecast interproduct reporting.
VOLKSWAGEN ID.4 (21-) Electric 4Motion GTX, 4Motion GTX Max, Life Edition Pure and Life Edition Pure Performance trims increased following updated specification information from the manufacturer.

Additional profile generations from other vehicle sectors were also moved into the generic 'high mileage' profile (labelled as "Supercar Diesel" in gold book iQ, but denoting our generic high mileage profile):

NISSAN JUKE (10-20) DIESEL
PEUGEOT 208 (12-20)
SKODA OCTAVIA (13-20) DIESEL
SUZUKI JIMNY (05-18)
VAUXHALL MOKKA (12-19) DIESEL

The forecast impacts are increases at lower mileage, which increase in magnitude as mileage decreases and incremental reductions at higher mileage as mileage increases. Underlying forecasts at benchmark mileage are not impacted by this change.

Seasonality changes

In line with our gold book methodology, all other model ranges outside of the other changes listed above, have had their forecasts moved forward from month to month by seasonal factors which are differentiated by sector and fuel type and are based on analysis of historical used value movements.

2. Market changes

Retail demand has not been quite as subdued as we expected, although the cost-of-living squeeze continues to make itself felt and there is a considerable variance in both the current level of demand experienced and the expectation for the remainder of the year. Many dealers have continued to demonstrate the resilience of the industry with their desire to buy stock in the current situation, especially given the issues many have with aged stock, whilst others are now concerned at the level of financial exposure of their stockholding. Concerns about future stock shortages are starting to ease for many, with the increased new and used car supply still expected to be matched with core demand from 'needs purchasers'. Trade performance has remained very robust across the board, although the softening of prices for older cars has continued (albeit at a slower rate), primarily because their typical buyers will tend to suffer more from the cost-of-living squeeze. The marginal increase in used values at 36/60 of +0.3% was fairly typical for the month of September.

Despite the modest average price reductions seen over recent months, retail prices for many used cars remain priced above cost new and there are still a small number of cases where the trade value significantly exceeds list price. In particular, some of the volume BEV models sit exceptionally high against cost new and our significant negative editorial adjustments reflect the fact that this situation is not sustainable. We expect the re-pricing of aged stock to continue and demand to soften in the face of the cost-of-living squeeze. Therefore, reductions in used values are expected for most of the remainder of the year, albeit at a steadier rate than was originally forecast, although with a possibility that they will accelerate towards the end of the year. It is currently very difficult to determine where the market will be in 12 months' time, due to the increases in used car volume being delayed to such an extent that they start to merge into the period of reduced supply from lower new car registrations through the pandemic.

The latest developments to have impacted on new car supply delays have been severe weather and typhoons across the islands of Japan. There are still concerns about the potential for lockdowns in various cities in mainland China due to the latest Covid variants and their possible spread triggering responses in line with China's ongoing "zero

Covid" policy. Further significant disruption would be expected to follow, especially if Shanghai is locked down again. The delays to parts (including spares), components, systems and BEV batteries from the previous lockdowns are still being felt to some extent. There are ongoing Covid-related impacts all across the supply chain and global supply chains remain fragile. Semi-conductor supply remains constrained, but availability for several manufacturers has improved and is expected to result in improved new car registration performance before the end of the year. Longer term concerns regarding security of water and power supplies in Taiwan, plus the potential for invasion by China, result in an outlook where chips in general remain in relatively short supply until additional manufacturing capacity comes on stream. Further supply disruption seems inevitable and the timing of that disruption and location of the countries impacted is likely to be impossible to predict.

Many of the increases in raw material costs caused by the war in the Ukraine have eased, but rising global energy markets remain a significant problem. Container prices and shipping costs are now well below their previous highs and oil prices are markedly lower than they were two months ago, but wholesale gas prices remain stubbornly high and the global inflation outlook remains complex. Increases in base rates from central banks, including the Bank of England, are thought to be unlikely to have any significant impact on inflation and appear to have potential to limit growth.

The UK Government's "fiscal event" in September has provoked widely disparate views on the longer-term impact. In the short term, sterling has (at the time of writing) fallen against major currencies and is likely to contribute to further inflation as import costs increase. The prospect of improved disposable income as a result of changes to income tax, national insurance, alcohol duty and stamp duty may well boost consumer confidence for some, but many at the lower end of the spectrum will feel that there is nowhere near enough on offer to help them. The proposals on Investment Zones and the cancellation of the planned increase to Corporation Tax will be very welcome for businesses, but the biggest concern is that a combination of increased borrowing and higher interest rates will fuel further inflation and negate the growth that the government aims to foster.

In summary, our view is that:

- Reductions in used values are expected to resume for the remainder of the year and may accelerate in late November and December as part of a typical seasonal slowdown. Retail demand will continue to soften over the short term as the reality of the cost-of-living squeeze continues to make itself felt and concerns start to build over the impact of increasing interest rates on mortgage costs when the Bank of England inevitably apply at least another +0.5% to base rates when they next meet in early November. Used car volumes will continue to slowly increase in the coming months as fleets start to receive replacements for some long overdue vehicles. For most sectors, our short-term forecasts now show increasingly negative movements for the next few months, although this is broadly in line with typical seasonality.

- There are still a significant number 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. It is extremely hard to predict how retail demand will progress through 2023, especially given the complex economic situation. However, we still expect a gradual market adjustment over the next several months or so and not a 'mirrored' fall from the earlier high point.

- 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 and sector reviews.

- The effects of the new car supply issues (including the semi-conductor shortage) remain varied and subject to frequent change for many OEMs, but several major manufacturers are now experiencing improvements in supply on some models, which we expect to continue. There remain many cases of derivative specific impacts within the same model, with complex decisions regarding production allocation continuing to be reviewed on a daily basis for many production planners.

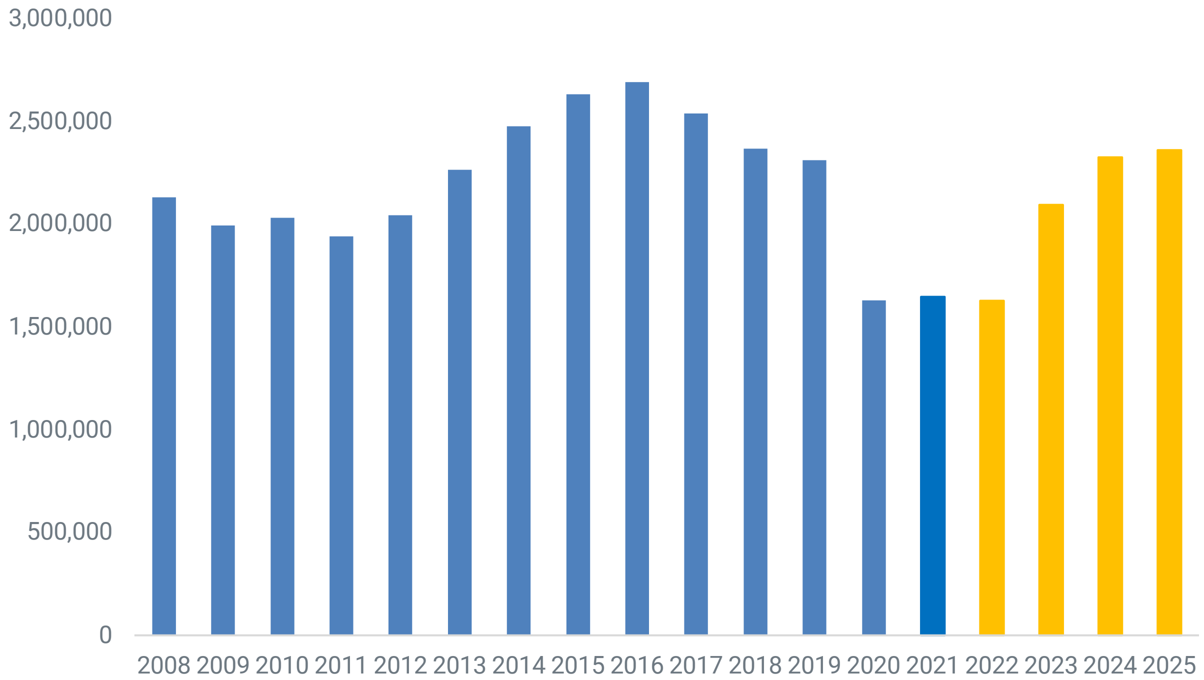
- One-year-old vehicles will remain in relatively short supply for the foreseeable future. However, once leadtimes for the majority of models reduce, it is expected that consumers will cease to pay a premium for a used vehicle over the new car. However, despite the prolonged shortages of nearly new stock, 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, therefore adjustments are expected to be slightly less than for 3-year-old cars once the market settles.

- From the second half of 2023 onwards, we will start to see the positive impact of reduced used car supply as a result of the 2 million or so fewer cars registered through the course of the pandemic, particularly from fleets.

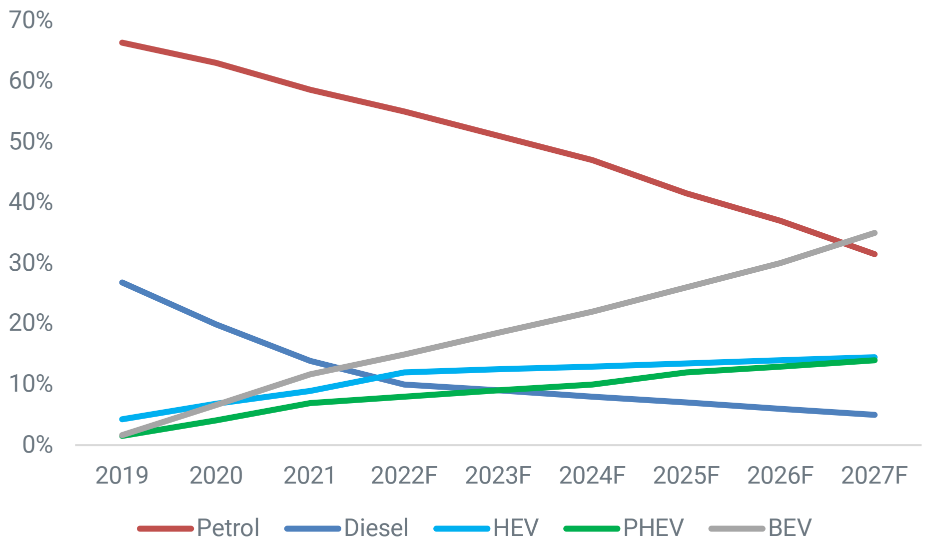
Supply side factors

The 2021 forecast for new car registrations from the SMMT started at 1.83 million reduced in July to 1.820mm and in October revised down to 1.66mm. Our forecast followed a similar trajectory. Final results were 1.65mm – down +1.0% higher than 2020 but -28.8% down on 2019. New car supply issues will continue to limit registrations in 2022, but our original forecast for this year was an improvement to just under 1.9mm. Following the disruption of the key month of March due to the war in the Ukraine this was again revised down to a fraction below 1.8mm (an improvement of +9% vs. 2021, but -22% vs. 2019), and following further unforeseen disruption, our latest forecast for 2022 was reduced to 1.63 mm earlier in the year, now -1.2% down on 2021. The SMMT forecast reduced to 1.60mm In August.

Our forecast for 2022 still assumes some element of recovery for some OEMs in the final quarter, but also assumes that some further supply issues are likely to occur. The rolling 12 month sales rate remains around 1.53 mm, but appears now that the low point was reached in July. Our forecast for 2023 is unchanged at 2.09mm (still almost -10% down on 2019). We expect that registrations will gradually increase to a pre-pandemic level of 2.3 million registrations by 2024, but not returning to the peaks seen in 2016.



The chart below shows our updated forecast market share split by fuel type. Petrol and diesel volumes include mild hybrids. The decline in diesel will continue but is likely to slow down since it will remain the right choice for a hard-core minority of drivers and use cases.



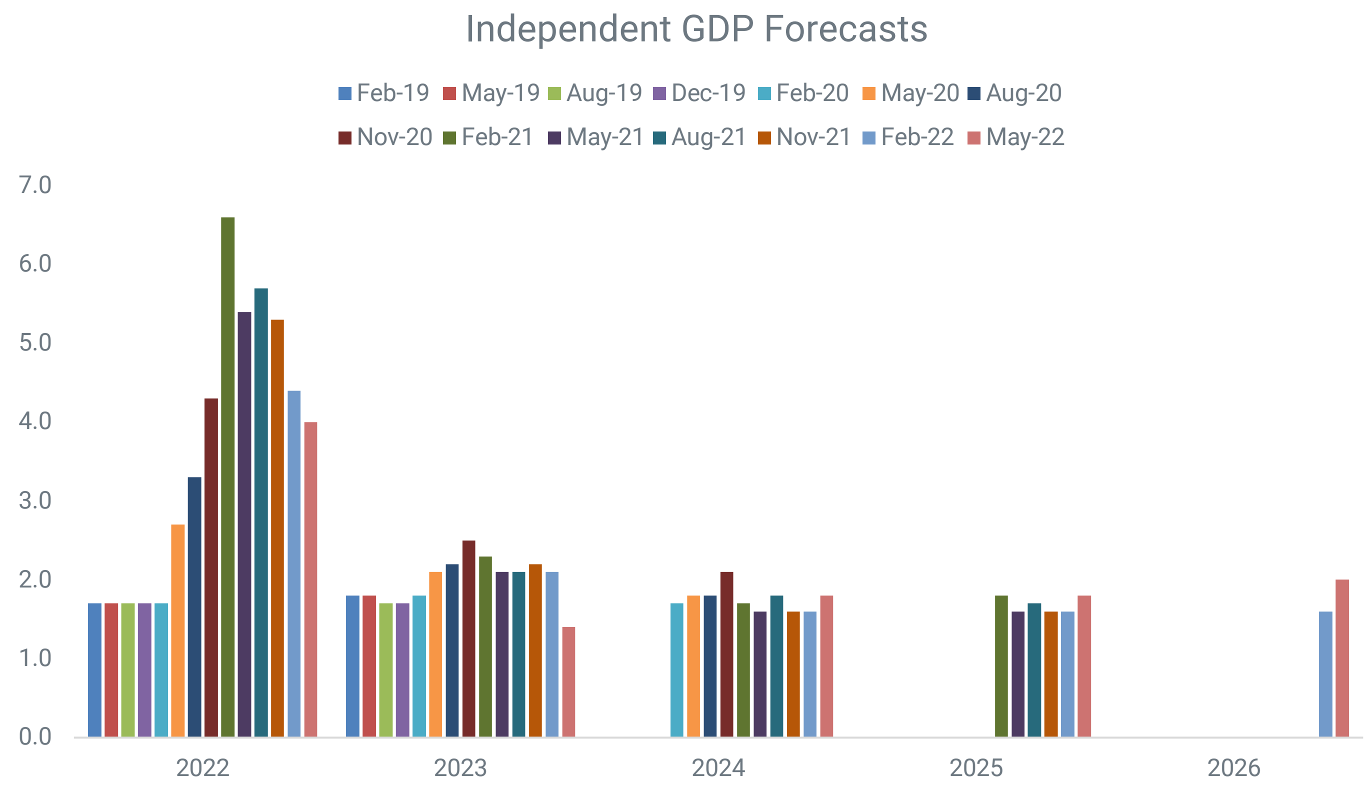
Growth will be led by battery electric vehicles (BEVs) which we expect to become the dominant AFV type towards the end of 2022 and the largest fuel type in the market by the end of 2027. Post-Covid driving patterns (shorter and few journeys due to the increase of home working and online meetings) are 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 keeps pace with demand.

Demand side factors

Latest independent forecasts for the UK economy were published in August and showed further significant downgrades on the outlook for GDP for 2022 and 2023 compared to May, down by -0.5% to -0.2% respectively to 3.5% and 1.2% (compared with OBR forecasts of +3.8% and +1.8%). The Bank of England estimate is more conservative at +3.2% but assumes deflation decreasing more quickly than the independent forecasts and being back below target by the middle of 2024. Longer-term GDP recovery improves in the independent forecasts, with GDP forecast to improve slightly for 2024/5/6 to +1.9%, +2.0% and +2.0%, although this also partially reflects the lower growth expected in 2023.

The BoE outlook remains "uncertain", with their 'fan charts' remaining as widely spaced as they have ever been.

The chart below shows the latest GDP forecasts to 2026, alongside previous forecasts.



The latest independent unemployment forecasts are reasonably flat for the next few years, with the Bank Of England still showing a gradual increase from current levels and close to pre-pandemic levels by 2025.

Inflation continues to increase to 10.1% (from 9.4% last month, 6.2% in March and compared to the original expected peak of 4.5% in 2022) and the BoE do not now expect it to come back below target until the end of 2024. The recent increases have been driven by a combination of increased fuel and energy costs, everyday household goods, food and clothing, and current labour market imbalances, some of which are almost certainly short-term. Base rates increased by a further 50 basis points to 1.75% in August and may increase again in in the near future, but are still forecast to remain low by historical standards, especially given concerns that raising rates too quickly could cause a recession, particularly since the current high inflation is primarily driven by energy prices rather than business or consumer behaviour. A significant proportion of consumers had built up considerable savings during the pandemic, but many will be cautious about their future economic stability and others have reduced financial circumstances. The BoE's August survey forecasts household savings rate already at historically low levels to decline from 5% in 2022 Q3 to 3½% at the end of next year and still suggests that only 10% of accumulated savings will be spent and 75% of households do not intend to spend any at all, with those funds now earmarked to fend off the cost-of-living squeeze.

The UK Government's comprehensive package of tax cuts announced today (23/09/22) are intended to fuel growth, but it will be some time before the effectiveness of these measures can be judged and many remain sceptical about their potential to drive sustainable growth. We will consider in the coming weeks if forecast action is appropriate.

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).

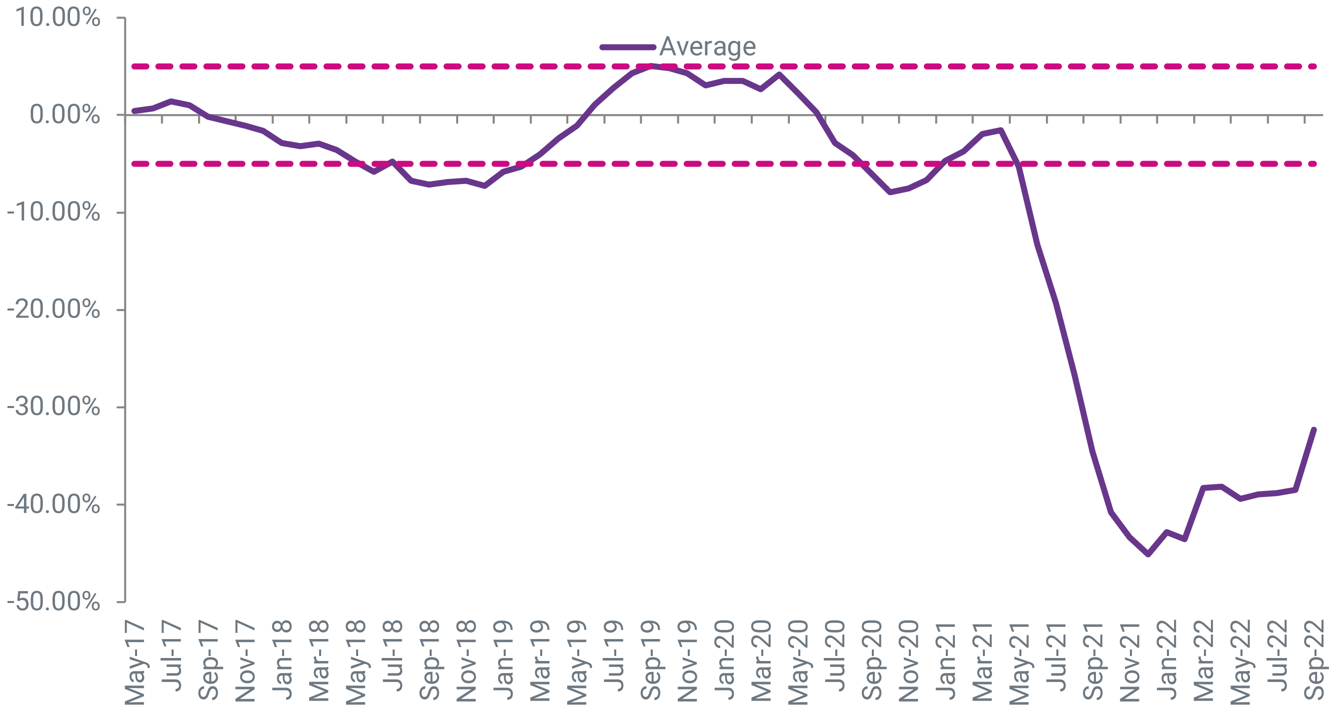
Clearly, the current unprecedented strength in the used car market is also resulting in further short-term deterioration in accuracy.

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

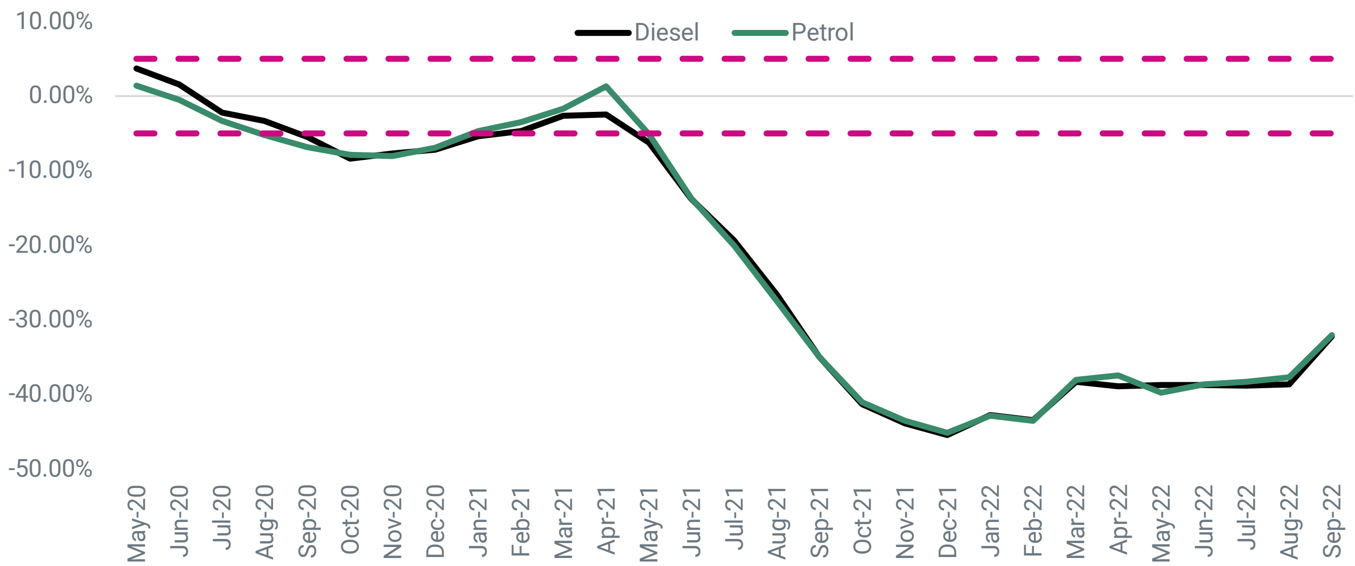
12-month results

Since measurement started our 12 month used forecasts have averaged -7% less than used values across all vehicle ids, and the most recent results show September 2021 12/20 gold book forecasts being -32.3% less than September 2022 12/20 used values (unsurprising following record breaking used value increases in recent months).

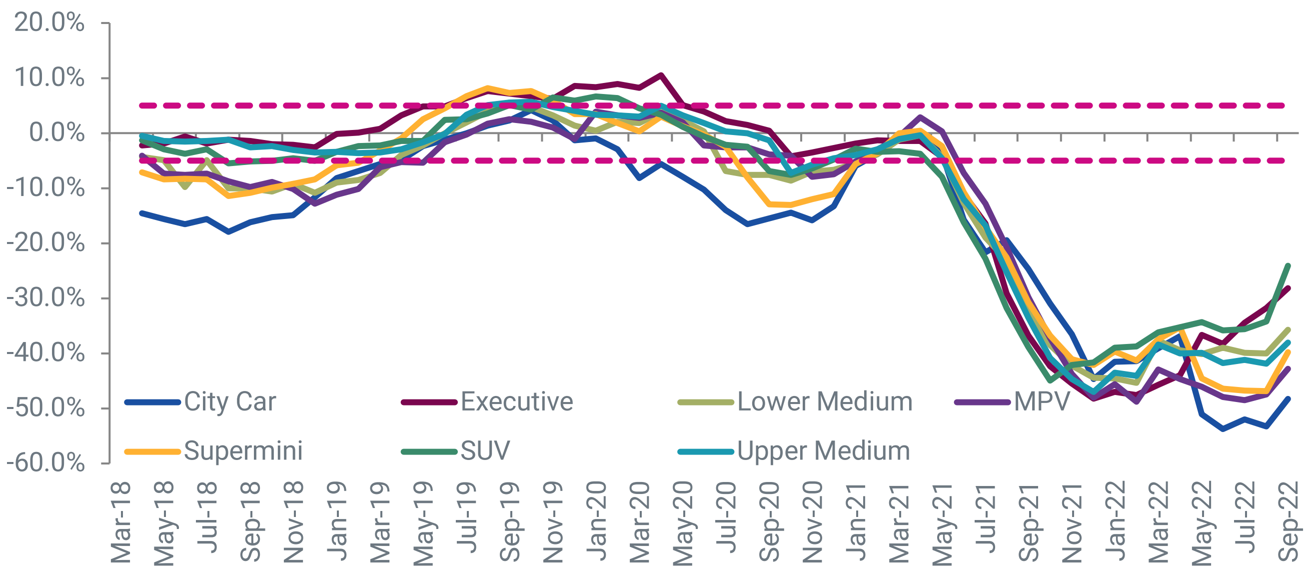
Overall results:



Fuel type results



Sector results



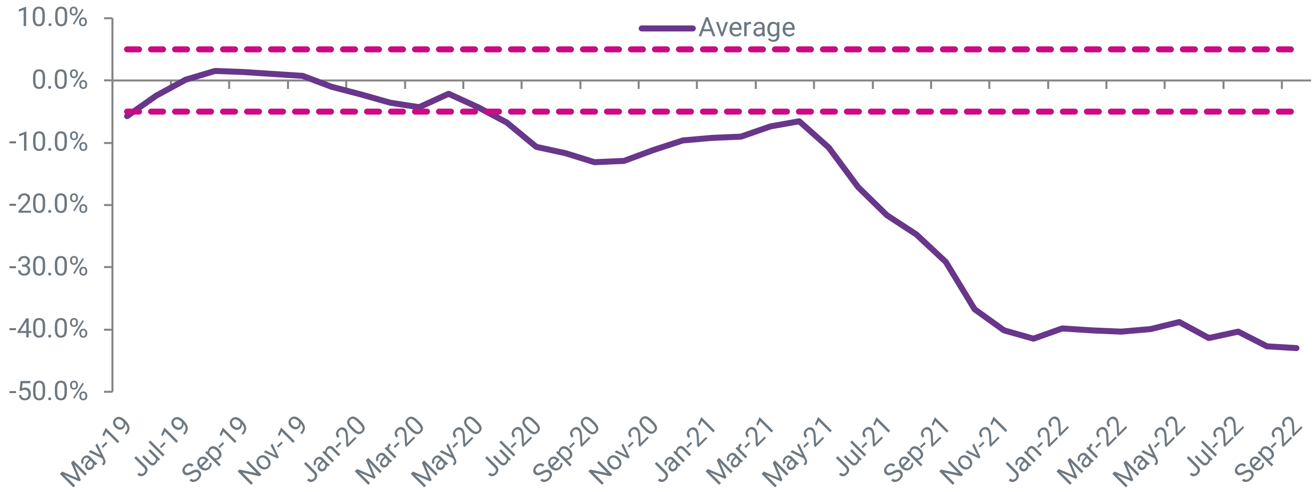
The most recent results for the main sectors are as follows:

September 22	Average of Diff (%)
City Car	-48.3%
Executive	-28.2%
Lower Medium	-35.7%
MPV	-42.9%
Supermini	-39.8%
SUV	-24.1%
Upper Medium	-38.1%
Grand Total	**-32.3%**

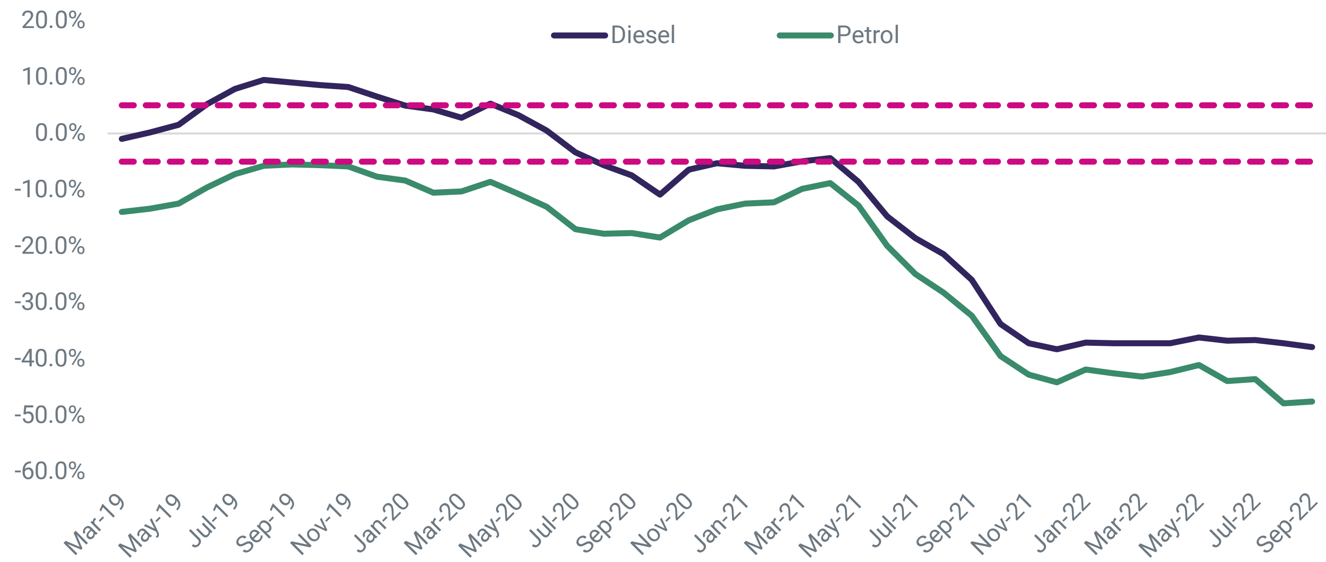
36-month results

Since measurement started our 36 month used forecasts have averaged -12.2% less than used values across all vehicle ids, and the most recent results show September 2019 36/60 gold book forecasts being -43.0% less than September 2022 36/60 used values.

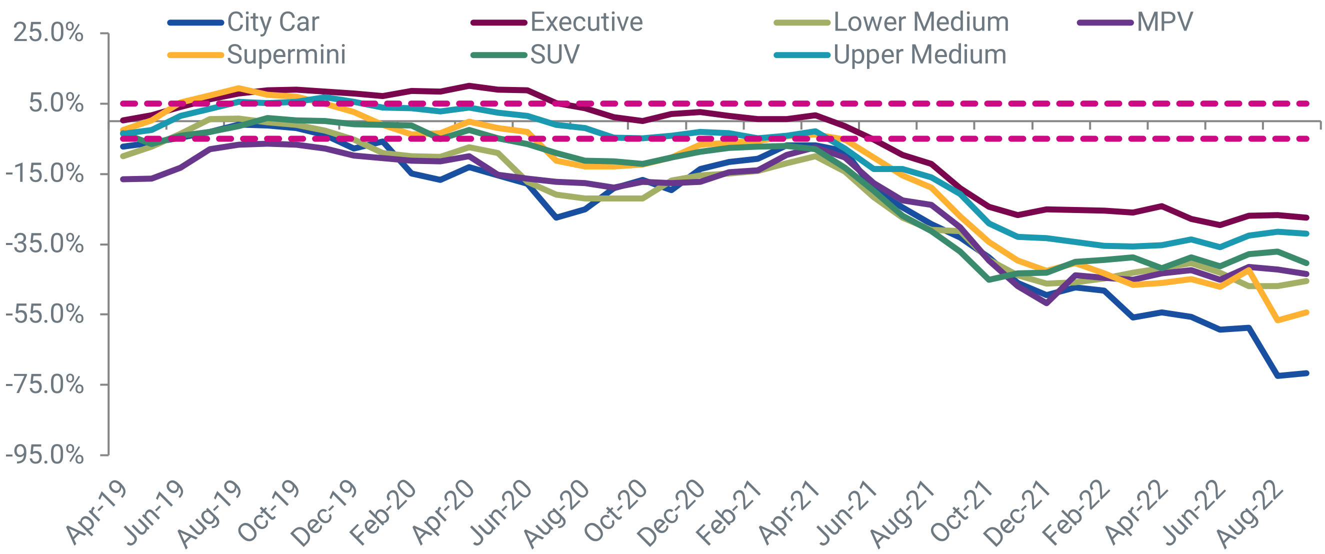
Overall results:



Fuel type results:



Sector results



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

September 22	Average of Diff (%)
City Car	-71.7%
Executive	-27.5%
Lower Medium	-45.5%
MPV	-43.4%
Supermini	-54.4%
SUV	-40.4%
Upper Medium	-32.1%
Grand Total	**-43.0%**

4. Forecast methodology and products

Overview and 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. Values are for a "naked" vehicle and do not reflect any added option content.

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 2022/23

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
Nov-22	Convertible	Sports	Supercar	
Dec-22	SUV			
Jan-23	City Car	Supermini		
Feb-23	Upper Medium	Executive	Large Executive	Luxury Executive
Mar-23	Lower Medium	MPV		
Apr-23	Convertible	Sports	Supercar	
May-23	SUV			
Jun-23	City Car	Supermini		
Jul-23	Upper Medium	Executive	Large Executive	Luxury Executive
Aug-23	Lower Medium	MPV		
Sep-23	Convertible	Sports	Supercar	
Oct-23	SUV			