

April 2023

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

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The content is structured as follows:

1. Forecast Changes
2. Market Conditions
3. Historic Forecast Accuracy
4. Forecast Methodology & Products
5. Sector Reforecast Schedule 2023/24

1. Forecast changes

The overall average change in new car forecasts for ALL cars between March and April is approximately -0.6% at 36/60, which is broadly in line with the normal expectation of the seasonal change for full year forecasts at this time of year.

Sector reforecasts

This month, we publish new reforecasts for the SUV sector. As previously communicated, this was brought forward by a month, with Convertibles, Sports and Supercars moving to April review for May book.

At this review, there are some minor changes to the phasing of deflation, with an improvement of +1.5% in year 1 offset by an increase in predicted deflation of -1.25% in year 3. This results in minimal impact in overall deflation from 36 to 60 months, but slightly less deflation at 12 and 24 months.

Average forecasts movements are displayed in the table below.

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| SIZE & FUEL TYPE | UNDERLYING FORECAST CHANGE | SEASONAL ELEMENT | OBSERVED CHANGE MARCH TO APRIL |
|----------------------------------|----------------------------|------------------|--------------------------------|
| Small SUV Diesel | +1.1% | -0.6% | -0.5% |
| Small SUV Electric (BEV) | -7.1% | -0.6% | -7.6% |
| Small SUV Hybrid (HEV) | -2.0% | -0.6% | -2.6% |
| Small SUV Petrol | +0.1 % | -0.6% | -0.5% |
| Small SUV Plug-In Hybrid (PHEV) | -0.4% | -0.6% | -1.0% |
| Medium SUV Diesel | -0.3% | -0.6% | -0.9% |
| Medium SUV Electric (BEV) | -4.0% | -0.6% | -4.6% |
| Medium SUV Hybrid (HEV) | -0.4% | -0.6% | -1.0% |
| Medium SUV Petrol | -0.1% | -0.6% | -0.7% |
| Medium SUV Plug-In Hybrid (PHEV) | -0.5% | -0.6% | -1.0% |
| Large SUV Diesel | -0.1% | -0.6% | -0.7% |
| Large SUV Electric (BEV) | -3.4% | -0.6% | -4.0% |
| Large SUV Hybrid (HEV) | -2.0% | -0.6% | -2.6% |
| Large SUV Petrol | -0.1% | -0.6% | -0.7% |
| Large SUV Plug-In Hybrid (PHEV) | +0.5% | -0.6% | -0.1% |
| Overall Average | -0.9% | -0.6% | -1.5% |

Clearly, battery electric models have again fared worse than other fuel types. The various models have been subject to some well publicised reductions in used values and (as outlined elsewhere) there have been further significant falls across the spectrum of BEV models. Our forecasts have previously included significant negative editorial adjustments for many of these ranges - the recent reductions in used values had been expected for the models which had seen low levels of used volume or where used retail values were over cost new, however the speed of the reductions has been greater than anticipated and in some cases we have been forced to take additional action via our Interproduct reporting (as outlined below). There has also been some evidence of discounting on new cars at the end of 2022 which has clearly fuelled further used value price falls and the timing, manner and extent of Tesla's list price cuts was certainly an additional negative influence. Our expectation is that there are further adjustments to come for some models, but that the rate of price falls will now slow; some models already appear to have bottomed out and are now cheaper than ICE alternatives. In some cases, we have applied small positive editorial adjustments under an assumption that used values will increase at some stage to bring the BEV closer to traditional fuel types. In general, models which experience significant reductions usually reach a point where they once again become attractive in the used market and values flatten out, or even rebound a little.

It is again worth pointing out that in March book, 12 month used values for BEV IDs were still above our forecasts from a year ago, by an average of 3.9%. During March there have been further price drops and some models will now have used values below our previous forecast at 12 months, but used values for many ranges remain higher than our forecast level from last year.

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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 (or too close to) the latest used value position. This month 77 ranges were considered, but in most cases, it was decided to make no changes to the forecasts.

In some of the ICE 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. Many of the battery electric ranges had seen extreme movements in used values (in several cases approximately -25% since last review and including around -10% over the last month) and we were forced to re-evaluate our position.

Interproduct Reporting Changes

BMW 5 SERIES (16-) DIESEL
CITROEN C4 (20-) Electric
FIAT 500 (20-) Electric
HYUNDAI IONIQ (19-) ELECTRIC
MERCEDES-BENZ A CLASS (19-) Hybrid
MERCEDES-BENZ CLS (18-)
MINI COOPER (18-)
MINI COOPER (19-) Electric
NISSAN LEAF (17-)
PEUGEOT 208 (19-) Electric
RENAULT ZOE (19-) ELECTRIC
SMART FORFOUR (20-) Electric
SMART FORTWO (20-) ELECTRIC
VAUXHALL CORSA (19-) ELECTRIC

As a result of our used Interproduct reporting, we also reforecast the following ranges:

KIA SOUL (14-19) ELECTRIC
RENAULT ZOE (13-20) ELECTRIC
SEAT MII (19-22) ELECTRIC
VOLKSWAGEN UP (13-22) ELECTRIC

Other Forecast Changes

BENTLEY BENTAYGA (15-)

Premium for 6.0 engine removed and facelift premium increased from £7,975 to £16,000, resulting in forecast decreases for pre-facelift derivatives.

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

Battery electric vehicles

The used market for BEVs remains extremely challenging. There had been signs since October that used volume for BEVs was increasing and concerns that not all of these vehicles were being effectively remarketed. However, demand for BEVs had been exceptionally strong and increasing through most of 2022, with no indication of the kind of

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reductions we have seen in recent weeks. Dealer sentiment turned negative for a while, with several organisations persisting with buying bans on BEVs and auction conversion rates remained lower than normal. Although it is impossible to isolate the impact of Tesla's well-publicised list price reductions, they came at a time when used values were already coming down and nearly new values were already under increased pressure, following discounting and other new car activity at the end of 2022. Although Tesla product was initially hit the hardest and will probably never recover the premium it once attracted, their models are benchmarks for many and have undoubtedly dragged the rest of the BEV market down with them.

Volume will continue to increase in the coming months, but several models already appear attractively priced following the recent reductions and we expect the rate of used car price falls to slow. Buyers are back in the used marketplace and although some remain selective, demand is certainly better than it was a matter of weeks ago. Some BEV models appear to have plateaued and look good value against ICE competitors, with used values for many battery electric vehicles now below conventionally fuelled versions of the same model (where both fuel types are available). Conversion rates are expected to continue to increase with many vendors now more realistic with their expectations on these vehicles. It would appear that the select few vendors who were selling heavily discounted batch deals to dispose of volume a couple of weeks ago have ceased this practice and the market looks more rational.

Following the downward movement in prices, nearly new used values for most BEVs are now back below cost new but some models have further to fall, as indicated by our continuing negative editorial adjustments in our forecasts. However, in some cases we have now applied small positive adjustments in the expectation of a modest recovery in values and a realignment against ICE equivalents. Supply and demand for BEVs will continue to wax and wane over the longer term, but electricity prices are expected to reduce, consumers retain the desire to reduce emissions and despite the higher capital outlay (in many cases), the cost of ownership situation will remain favourable under any sensible charging regime. There is also the prospect of new clean air zones and updates and extensions to the existing schemes, further fuelling demand for lower emission vehicles.

Remainder of the market

The strong market in February persisted into early March, but is now showing nascent signs of slowing. Concerns about future stock shortages are continuing to ease for many, with the increased new and used car supply still expected to be matched with core demand from 'needs purchasers'. The ongoing cost-of-living squeeze is likely to continue to make itself felt for several more months, but many customers are buying out of necessity and the economic situation impacts on what they buy and not whether they make a purchase.

Even in months where values have reduced at 36/60 during the past eleven months, those decreases have generally been better than expected for the time of year and remain significantly better than the normal expectation – quite remarkable in the circumstances. Retail prices for some used cars remain priced above cost new and there are still a small number of cases where the trade value significantly exceeds list price.

We expect the re-pricing of aged stock to continue and growth in demand to be limited by the cost-of-living squeeze. 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 – we are now three years on from the first UK impacts of Covid-19.

There are ongoing Covid-related impacts all across the supply chain and global supply chains remain fragile. Semiconductor supply remains constrained, but availability for several manufacturers has improved and is expected to result in continued improved new car registration performance through 2023. 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, but the level of disruption is expected to be less than seen over the past two to three years.

Prices have continued to soften for many of the elements which had been driving inflation, including fuel, gas and electricity and it is hoped that this will feed through into food prices over the coming months; the increase in CPI this month should be seen as a 'blip' – petrol prices for example are likely in April to be -10% lower than a year ago, increasing to -25% or more by the end June. Container prices and shipping costs remain well below their previous

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highs, but 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. We expect a reduction in inflation in the coming months to be a (direct or indirect) result of lower fuel and energy costs.

The Spring Budget was relatively uneventful compared to previous announcements. The continuation of the Energy Price Guarantee for domestic supply was welcome (and expected), although extended support for business energy bills would have helped to further stem inflation. The UK government's resistance to inflationary pay rises in the public sector seems to be waning and could also fuel further increases to CPI, but the resolution of several of the long, drawn-out disputes should boost productivity and prevent the situation from worsening in the NHS.

In summary, our view is that:

- Several battery electric models have now stabilised or appear to be close to a plateau following very large decreases in used values in recent months, whereas some appear to still have some way to fall. Many are now looking good value compared to ICE equivalents or competitors and although there is potential for some to increase from their current used value position, we have generally assumed that we will see further deflation in future and have applied negative editorial or future trends adjustments in most cases. There are small positive adjustments for the handful of models which have seen the heaviest falls.
- The used car market in April is expected to be relatively strong, especially compared to last year, continuing along the lines of the overall strength seen so far this year, albeit with a continuation of the differences seen by age, price point and fuel type. Easter this year falls in mid-April and may delay the traditional turning point until then. Retail demand will remain constrained over the short term as the reality of the cost-of-living squeeze continues to make itself felt and concerns remain over the impact of increasing interest rates on mortgage costs. 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 show modest negative movements for the next few months, although this is slightly favourable to typical seasonality, with dealers continuing to pay good money for the best condition cars and for those at an attractive price point for a quick retail sale. Battery electric models are all currently frequently re-assessed on an individual basis for short term forecast.
- As mentioned in our customer webinars, the negative economic impact of any potential recession is expected to be outweighed by the reduction in used car supply already guaranteed by the lower new car registrations from the start of the pandemic onwards. Used car prices are not generally correlated with GDP growth, partly because there is a substantial element of core "needs purchases" and also because reductions in consumer confidence and disposable income result in changes of used car buying, rather than preventing it; buyers may turn to older/smaller/higher mileage cars or turn to the used market instead of buying new.
- 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 the remainder of 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 range, or individual options which continue to be difficult to obtain.
- One-year-old vehicles will remain in relatively short supply for the foreseeable future. However, now that leadtimes for the majority of models have reduced, fewer consumers are willing to pay a premium for a used vehicle over the new car. However, despite the prolonged shortages of nearly new stock, the trend until recently had been for 3-year-

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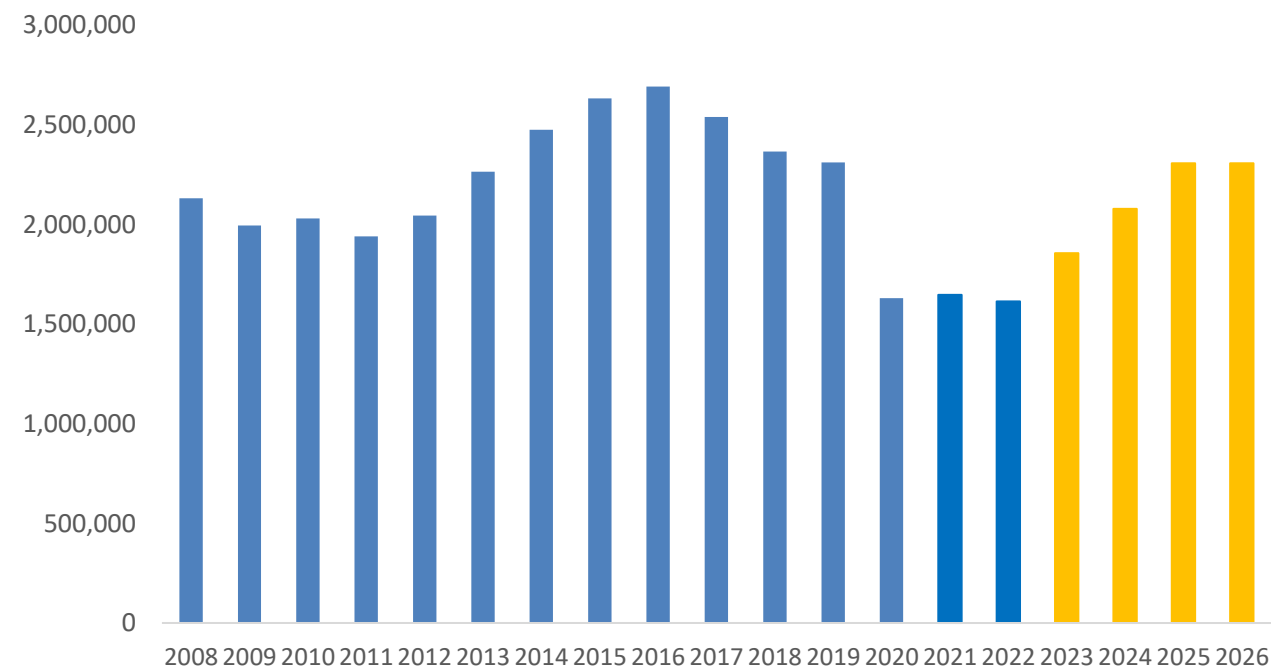
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- old cars to outperform the 1-year-old market and they did not increase by as large a proportion, therefore deflation is expected to be less than for 3-year-old cars during the market adjustment.
- From the second half of 2023 onwards, we will start to see the positive impact of reduced used car supply as a result of more than 2 million fewer cars registered through the course of the pandemic, particularly from fleets.

Supply side factors

Our original forecast for 2022 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 final forecast for 2022 was reduced to 1.63 mm in July, -1.2% down on 2021. The SMMT forecast reduced to 1.60mm In August and was then further reduced to 1.566mm in November. The final new car registration result for 2022 was just over 1.614mm.

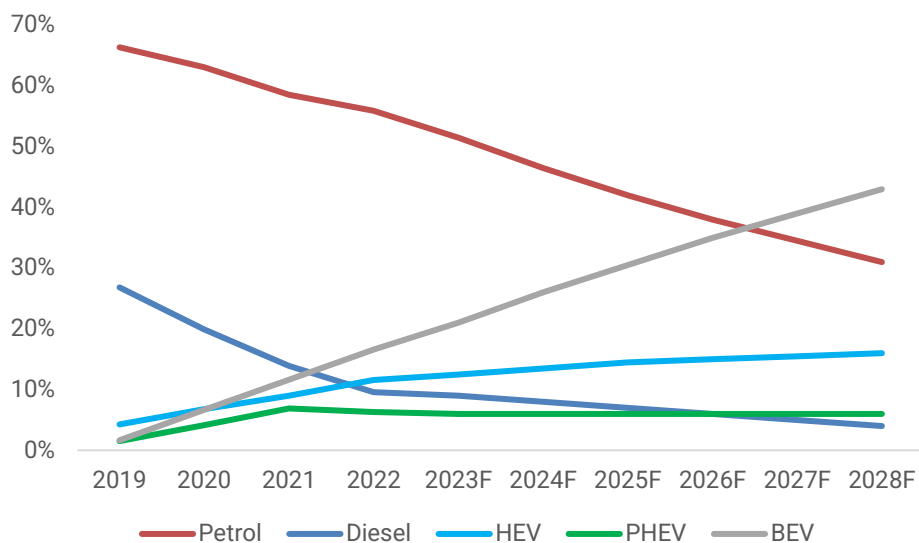
Our revised forecast for 2023 is 1.856mm (up +15% vs. 2022, but still almost -20% down on 2019). We expect that registrations will gradually increase to a pre-pandemic level of 2.3 million registrations by 2025 (a year later than previously expected), but not returning to the peaks seen between 2014 and 2018



The chart below shows our latest 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. The timing of the eventual disappearance of diesel from the new car market will depend on when manufacturers cease to make individual models available to the UK market.

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Growth will continue to be led by battery electric vehicles (BEVs) which became the dominant AFV type towards the end of 2022 as we expected and is forecast to be the largest fuel type in the market by the end of 2027. Post-Covid driving patterns (shorter and fewer 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. The main difference to our previous forecast is a reduction in PHEV volume in the outer years as OEMs look to be changing future product plans, in some cases introducing self-charging hybrids to ICE ranges instead of PHEVs to conserve precious battery supplies.

Demand side factors

Latest medium-term independent forecasts for the UK economy were published in February and the new forecasts showed no change in the outlook for GDP for 2023 (-0.7%) but a downgrade for 2024 to +0.9% (compared to +1.4% in November), with another slight downgrade for 2025 (2.0% down to 1.8%) and 2026 stable at +1.8%. (OBR forecasts are -1.4% and +1.3 for 2023 and 2024). The Bank of England estimate for 2023 is similar to the OBR at -1.5% but assumes deflation decreasing more quickly than the independent forecasts and being back below target by the end of 2024.

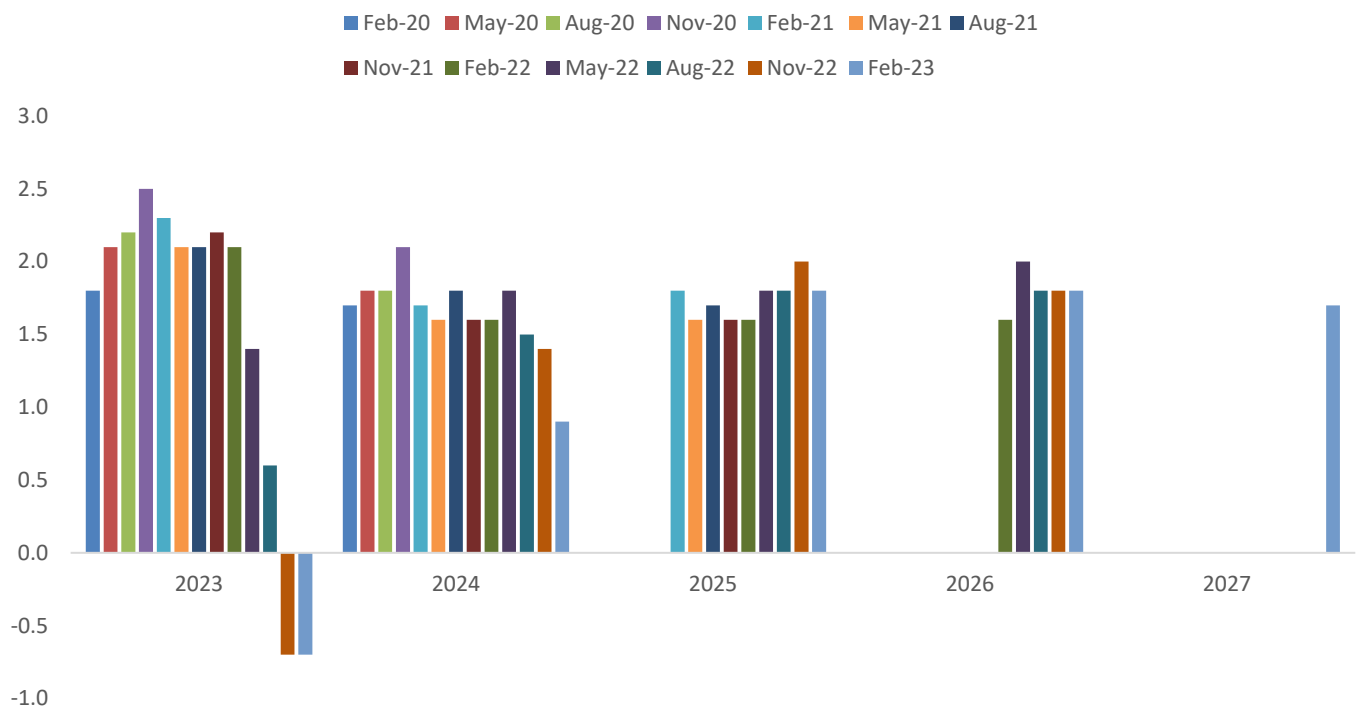
The new independent forecasts therefore continue to imply a shorter and shallower recession than that previously suggested by the OBR and the Bank of England, although it is increasingly looking like a technical recession could now be avoided. However, from a practical perspective, it matters little whether the UK officially dips into recession or not; growth will be low by historic standards and a reduction in CPI inflation is a world away from prices actually reducing.

The chart below shows the latest GDP forecasts to 2027, alongside previous forecasts.

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Independent GDP Forecasts



The latest independent unemployment forecasts are reasonably flat for the next few years, peaking at 4.4% in 2024.

Despite the surprise uptick in inflation, now +10.4% (from +10.1% last month and a peak of +11.1%), the BoE expect it to come back below target before the end of 2024. The previous increases were driven by a combination of increased fuel and energy costs, everyday household goods, food and clothing, and ongoing labour market imbalances. As expected, base rates increased by a further 25 basis points to 4.0% in March and although they may increase again in the first half of 2023, we are likely to be very close to the peak. Although they are still forecast to remain low by historical standards, today's ratio of household debt to wages means that serious problems will be caused at a much lower base rate than was true in the past. There are also concerns that raising rates too quickly could make any recession worse, particularly since the persistent high inflation has been 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 continue to be cautious about their future economic stability and others have reduced financial circumstances.

The Bank of England survey shows a continued trend for precautionary saving, but it is very unclear whether amounts built up during the pandemic are now being spent to fend off the cost-of-living situation or whether continued saving will add to what has already been accumulated, with no intention of spending until forced to do so.

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 have 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 predicted. Diesel forecast accuracy has historically been within target, while petrol forecast accuracy fell outside of target during this period of strong values.

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There was a brief deterioration in accuracy in 2020 when business resumed after the first lockdown and values benefitted from the release of pent up demand, but we were back on target as the market readjusted. In 2021, our historic forecast accuracy was severely impacted by the strength of the used market after dealerships re-opened in April as COVID restrictions started to be lifted. The record-breaking strength in used values on resumption of business (at a time when we would normally expect to see depreciation in each month) resulted in a significant shift in accuracy. For longer forecast durations, this will have an impact for a long time to come.

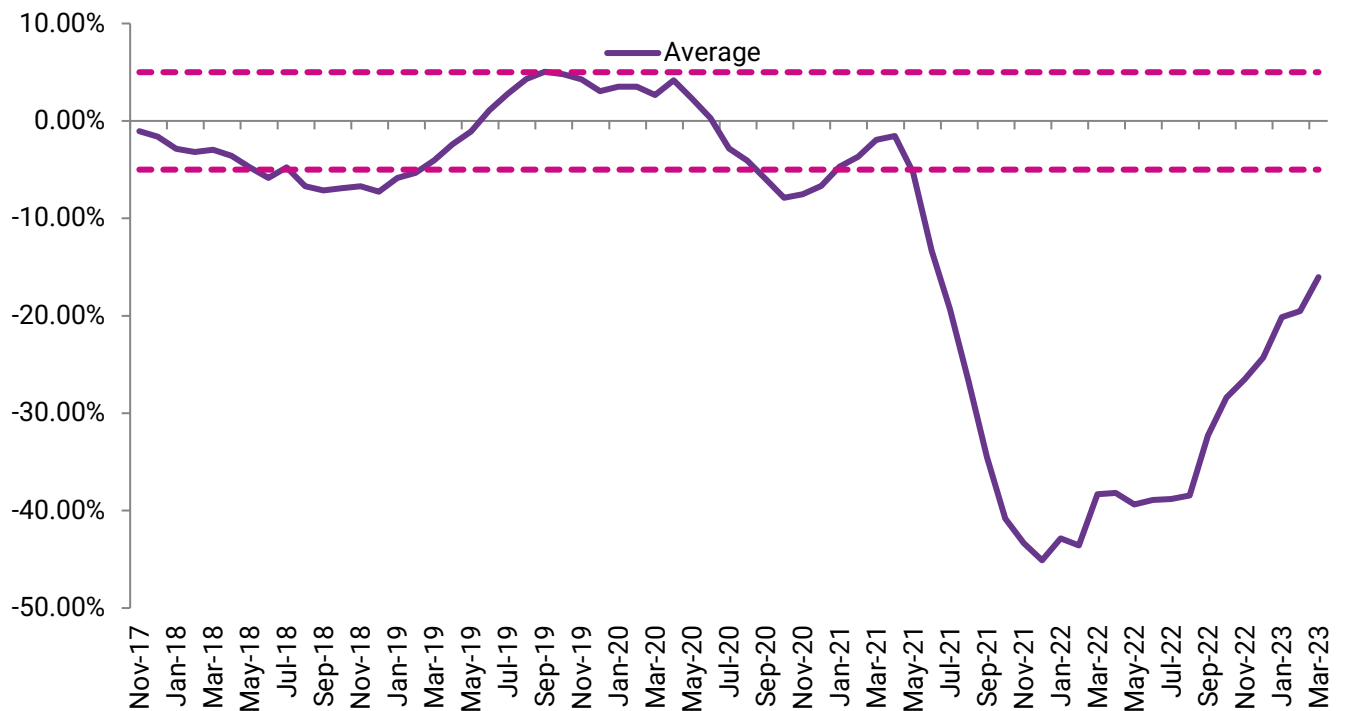
Therefore, the tracking charts below all show the same general patterns, with the difference to target being less for 12-month forecasts (reforecast most recently); and being more for longer term forecasts (reforecast less recently).

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 -8.0% less than used values across all vehicle ids, and the most recent results show March 2022 12/20 forecasts being -16.1% less than March 2023 12/20 used values.

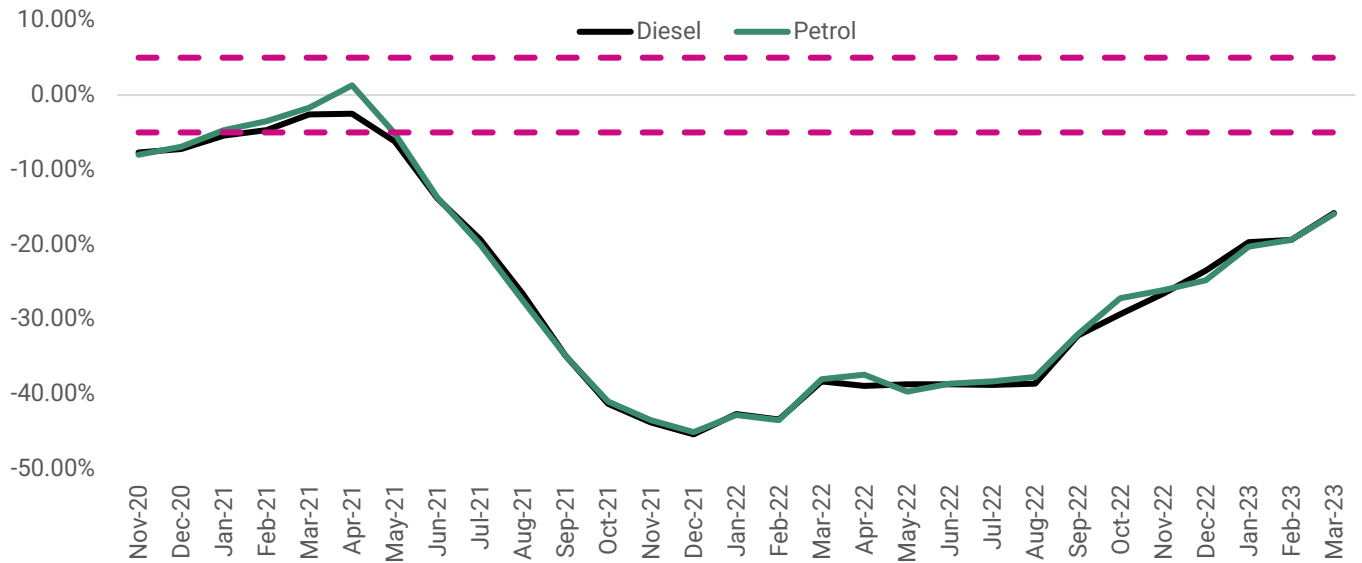
Overall results:



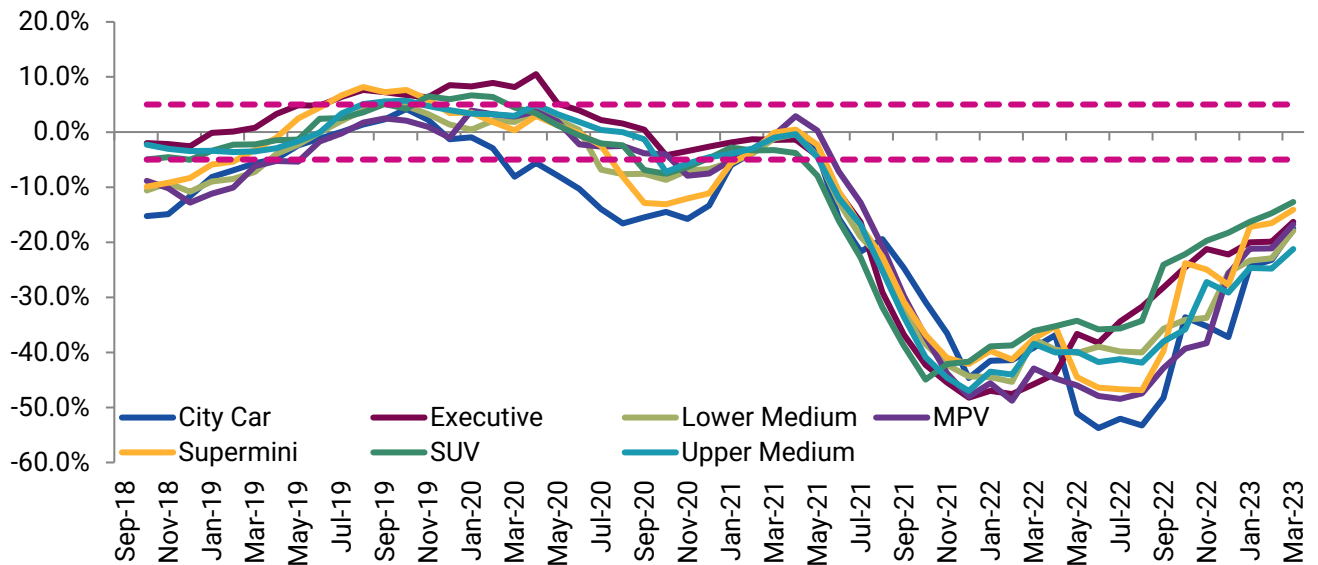
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Fuel type results



Sector results



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

| March 23 | Average of Diff (%) |
|--------------------|---------------------|
| City Car | -17.5% |
| Executive | -16.3% |
| Lower Medium | -17.9% |
| MPV | -16.8% |
| Supermini | -14.1% |
| SUV | -12.7% |
| Upper Medium | -21.2% |
| Grand Total | -16.1% |

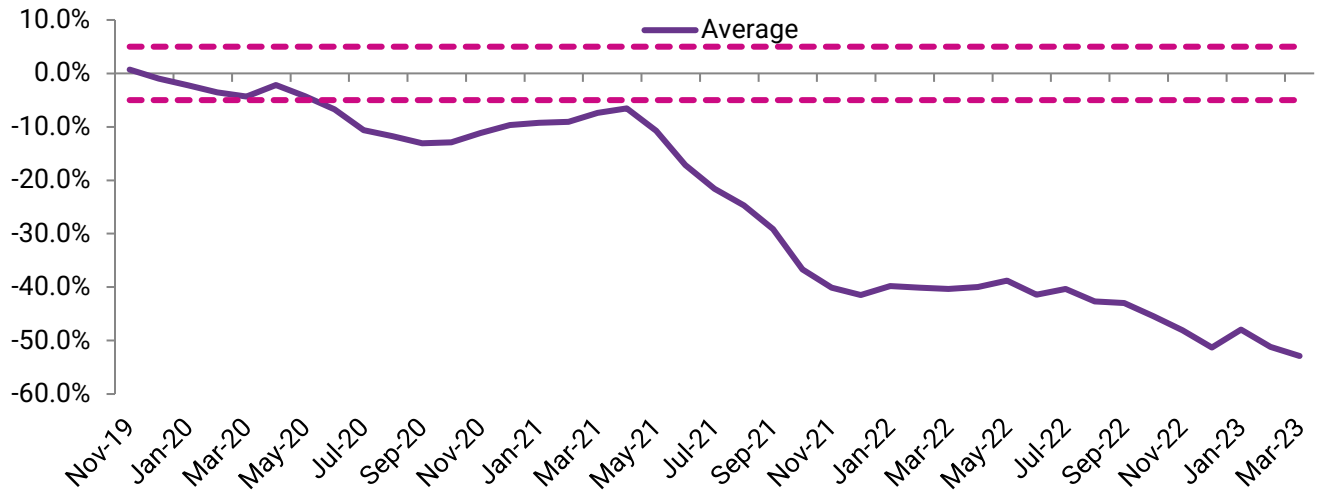
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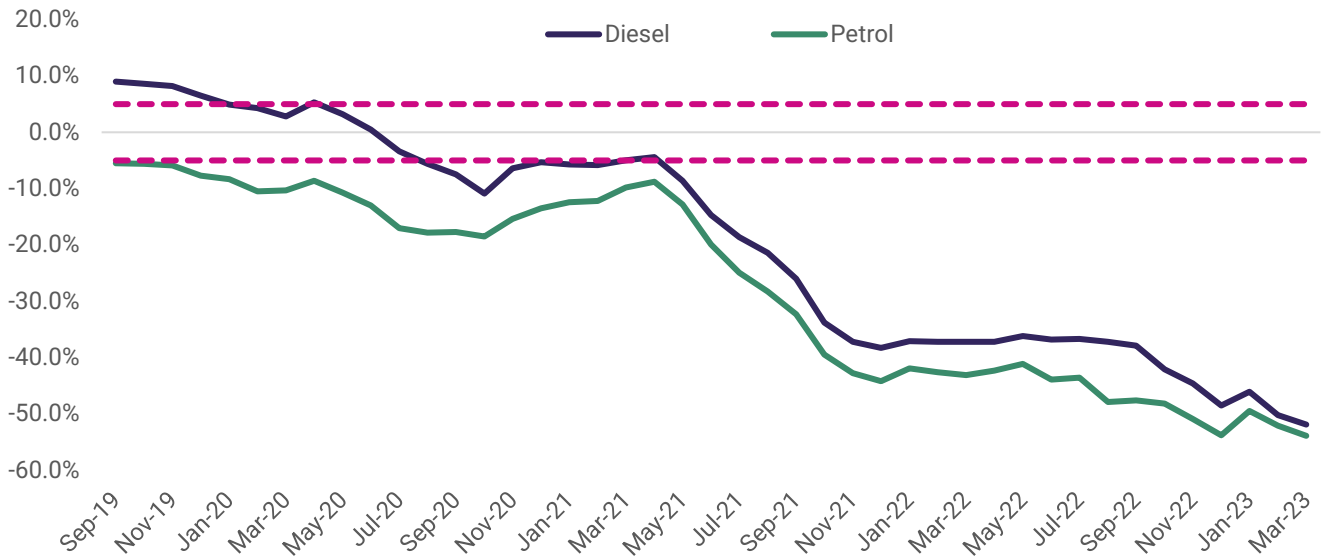
36-month results

Since measurement started our 36 month used forecasts have averaged -15.1% less than used values across all vehicle ids, and the most recent results show March 2020 36/60 forecasts being -52.9% less than March 2023 36/60 used values (unsurprising given record-breaking increases in used values through 2021).

Overall results:



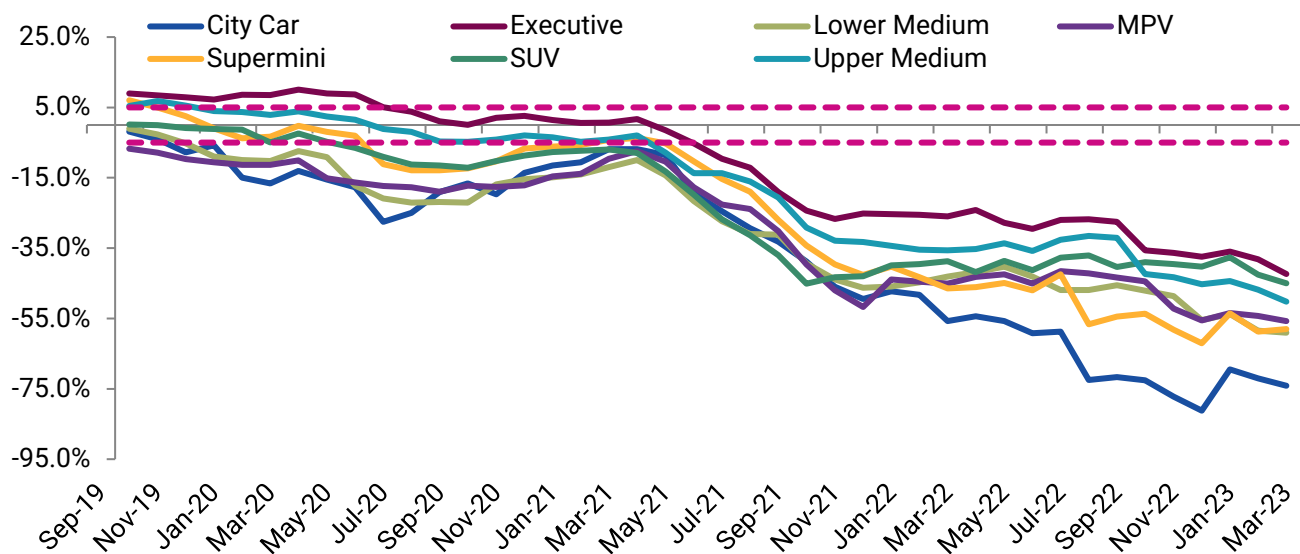
Fuel type results:



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Sector results:



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

| February 23 | Average of Diff (%) |
|--------------|---------------------|
| City Car | -74.1% |
| Executive | -42.4% |
| Lower Medium | -59.0% |
| MPV | -55.7% |
| Supermini | -58.0% |
| SUV | -45.0% |
| Upper Medium | -50.2% |
| Grand Total | -52.9% |

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 Interproduct analysis with our used value colleagues exactly as before.

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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 2023/2024

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 |
|-----------------|--------------|-----------|-----------------|------------------|
| May-23 | Convertible | Sports | Supercar | |
| 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 | | | |
| Nov-23 | City Car | Supermini | | |
| Dec-23 | Upper Medium | Executive | Large Executive | Luxury Executive |
| Jan-24 | Lower Medium | MPV | | |
| Feb-24 | Convertible | Sports | Supercar | |
| Mar-24 | SUV | | | |
| Apr-24 | City Car | Supermini | | |