Supply of road fuel in the United Kingdom market study

Final Report

3 July 2023

The Competition and Markets Authority has excluded from this published version of the market study report information which it considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure). The omissions are indicated by [✂]. Some numbers have been replaced by a range. These are shown in square brackets. Non-sensitive wording is also indicted in square brackets.

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Annexes (published in a separate document)

Executive Summary

Overview

1. Over the past year the CMA has carried out a market study on the supply of road fuel in the UK. Using our statutory information gathering powers we have been able to access information on the financial performance, strategic planning and ongoing operations of refiners, wholesalers and retailers to understand developments in this market. While a large majority of the fluctuation in petrol and diesel pump prices has been due to movements in the crude oil price, driven by global factors, the importance and cost of fuelling vehicles in the lives of millions of UK drivers means that it is vital we understand whether any deficiencies in how the UK market is working may be adding further to these cost of living pressures.

2. We have found problems in relation to three aspects of the retail market: national, local and motorway.

3. At the national level, we have found that:

    - Competition between retailers has weakened in recent years. Retail margins in fuel retail have risen significantly since 2019, with each of the supermarkets following a similar trend.

    - Competition in this market has generally been led by certain low-cost supermarkets setting the pace at which other retailers (supermarkets and non-supermarkets) follow.

    - The historic price leaders in the retail market, primarily Asda but also Morrisons to some extent, have been taking a less aggressive approach to pricing by significantly increasing their internal margin targets for fuel over recent years, with the largest increase coming in 2022-23.

    - Asda took a decision in 2022 to achieve higher margins by reducing prices in some of its PFSs more slowly than would previously have been the case as wholesale prices fell (ie “feathering” prices), with other retailers pricing by reference to them following a similar pricing path.

    - The potential profitability of any move by a retailer to increase their margins will depend on the response of their competitors. In this case, other retailers, including the two other supermarket fuel retailers, Sainsbury’s and Tesco, have maintained largely passive pricing policies, pricing by reference to local competitors rather than responding promptly to cost movements and/or trying to win market share, and have therefore followed the same trend in prices and margins.

- As a result of these factors drivers have been paying more than would otherwise have been the case. We estimate that the financial impact of the 6 pence per litre (ppl) increase in average supermarket fuel margin from 2019 to 2022 results in a combined additional cost of around £900m for customers of the four supermarket fuel retailers in 2022 alone, which is equivalent to approximately £75m a month for this period.

- In 2023, the impact of increased margins has been felt more heavily on diesel than petrol. We estimate that increased margins on diesel in 2023 have led to diesel drivers across all retailers paying on average 13ppl more for diesel from January-May 2023.

- We have observed significant drops in the price of fuel shortly after our previous publications (urgent review in July 2022, initial update report in December 2022 and cost of living update in May 2023), indicating that there was room for retailers to reduce prices.

4. However, the national picture is only an aggregation of competition going on in multiple local markets. Looking at local markets:

- We note that drivers are generally willing to travel a few miles extra to buy cheaper fuel. However, given that fuel retailers do not generally publish their prices online, they do not have access to reliable, comprehensive and real-time price information that they can use to compare prices before setting off to buy fuel.

- We see significant price differences between local areas, with lower prices typically associated with having a supermarket competitor, and particularly an Asda competitor, though this effect has weakened since January 2022.

- Where supermarkets are facing no supermarket competitors in an area, they are likely to price by reference to one of the (typically more expensive) non-supermarket retailers, meaning that prices will tend to be higher than in locations where they face supermarket competitors.

- Where there are no supermarkets, and retailers are likely to have higher costs (eg more remote areas) prices are likely to be higher;

- Local price variation has increased since mid-2022. This is consistent with the general weakening of competition we see at the national level, as retailers will be more able to earn higher margin in those areas where local competition is weakest.

- Consumers will generally be able to make savings on fuel within a reasonable drive time, but the cheapest provider is not always consistent

over time, and in some areas prices are persistently significantly higher than the national average due to the nature of local competition.

5. Finally, concerning motorways, we have found that drivers without access to fuel cards, accounting for 20-25% of fuel sales on motorways, are paying significantly more to fill up at a motorway service area than they would elsewhere: around 20p on petrol and 15p on diesel on average in 2022. This premium has grown in real terms since 2012 and price variation among retailers on motorways is low. We have not seen evidence to suggest that this premium can be explained by higher retailer costs, so our view is that this is due to limited competitive pressure.

6. Looking at the likely future path of the market, we note that the move towards electric vehicles is likely to lead to reduced demand for road fuel over the coming decades. This may increase concentration in the retail market, potentially leading to significantly reduced competition. If unchecked, this may have negative outcomes for consumers, particularly those in areas with less retail competition and those who are less able to switch to EVs.

7. Given these concerns we are today making two recommendations to the government:

   (a) The government should create, on a statutory basis, an open data fuel finder scheme. This would require retailers to share their prices on an open, real-time basis, meaning that drivers can easily compare prices in any area of the UK. In doing so, drivers will be more able to find the cheapest fuel at any given time, which in turn will increase incentives on retailers to compete hard on price and make it easier for consumers to identify where they are not doing so.

   (b) The government should create a fuel monitor function within an appropriate public body, to monitor developments in the market, both nationally and locally, as we move through the net-zero transition, provide ongoing scrutiny of prices (creating pressure for retailers to keep prices low) and consider whether further action may be needed to protect consumers.

8. In addition to the retail sector, we have also considered whether there are problems in the wholesale and refining sectors. We did not find any deficiencies that required action in relation to the functioning of the UK market.

9. This final report sets out in detail our findings in relation to the road fuel market and the actions we are recommending to improve outcomes for drivers.

Background

10. On 11 June 2022 the then-Secretary of State for Business, Enterprise and Industrial Strategy wrote to the CMA requesting that we carry out an urgent review

into whether developments in the retail fuel market had adversely affected consumer interests. He asked that we consider the health of competition in the market, geographical factors, including localised competition, and any further steps that the government or the CMA could take to strengthen competition, or to increase the transparency that consumers have over prices. He also asked that we give particular consideration to whether the government's cut to fuel duty of 5 pence per litre (ppl) had been passed on to consumers. In addition, he requested that we launch a longer-term market study.

11. On 8 July 2022 we published our Urgent Review, which considered the price of fuel over the preceding year. We found that:

- The main drivers of increased road fuel prices were the rising cost of crude oil, and a growing gap between the crude oil price and the benchmarked wholesale price of petrol and diesel – the so-called 'refining spread'.
- The refining spread more than tripled over the year to July 2022, growing from 10ppl to nearly 35ppl.
- Over the same period, the 'retail spread' (the difference between the benchmark wholesale price and the price charged to motorists) fluctuated but remained about 10ppl on average.
- On the whole the fuel duty cut appeared to have been passed on to consumers, with the largest fuel retailers doing so immediately and others more gradually.
- There were significant differences in price between many rural and urban areas.

12. Given these findings, the CMA decided to carry out a market study into road fuel, which it also launched on 8 July 2022. This would consider the development of the market over a longer period, covering the refining, wholesale and retail elements of the supply chain.

13. On 6 December 2022, we published an initial update report setting out our emerging views on the market:

- On refining, we considered that the volatility in margin we had seen was driven by global events rather than the nature of UK competition. Our analysis suggested that the higher margins in 2022 had done no more than counteract the lower margins seen in 2020 and 2021, meaning that profit had not been unusually high over the period.
- On wholesaling, we noted that our analysis was at an early stage and we would give views later in the study.

- On retail, we noted some potential causes for concern, in particular:
    - Increasing retailer fuel margins gave us reason to suspect that competition between retailers may have weakened. This concern was bolstered by our finding that some generalised rocket and feather pricing patterns appeared to have emerged in 2022.
    - Geographical pricing variations were evident, with the highest-priced PFSs typically having fewer competitors, fewer of which were supermarket competitors, fewer of which were Asda sites.
    - We also noted significantly higher prices for private consumers on motorways.

14. Alongside these factors, we noted other indications that supermarkets may be competing less hard in this market than they previously had done. We saw increases in their fuel margins in recent years; while still lower than the margins taken by large non-supermarket retailers, the gap between the two had reduced.

15. On 15 May 2023 we published an update on the market study, as part of a wider update on the action the CMA is taking to contain cost of living pressures. We noted that:

- average annual supermarket fuel margins had increased significantly from 2019 to 2022, representing a 6ppl increase over this period;
- average annual non-supermarket fuel margins on a percentage basis had increased significantly in 2020, before falling back in each of 2021 and 2022, though still remaining above pre-2020 levels;
- we had found no evidence that these increasing fuel margins could be explained by increasing costs in the supermarkets' fuel retailing business; and
- we had seen evidence from internal documents indicating that at least one supermarket had significantly increased its fuel margin targets since 2019 and that other supermarkets had recognised this change in approach and may have adjusted their pricing behaviour accordingly.

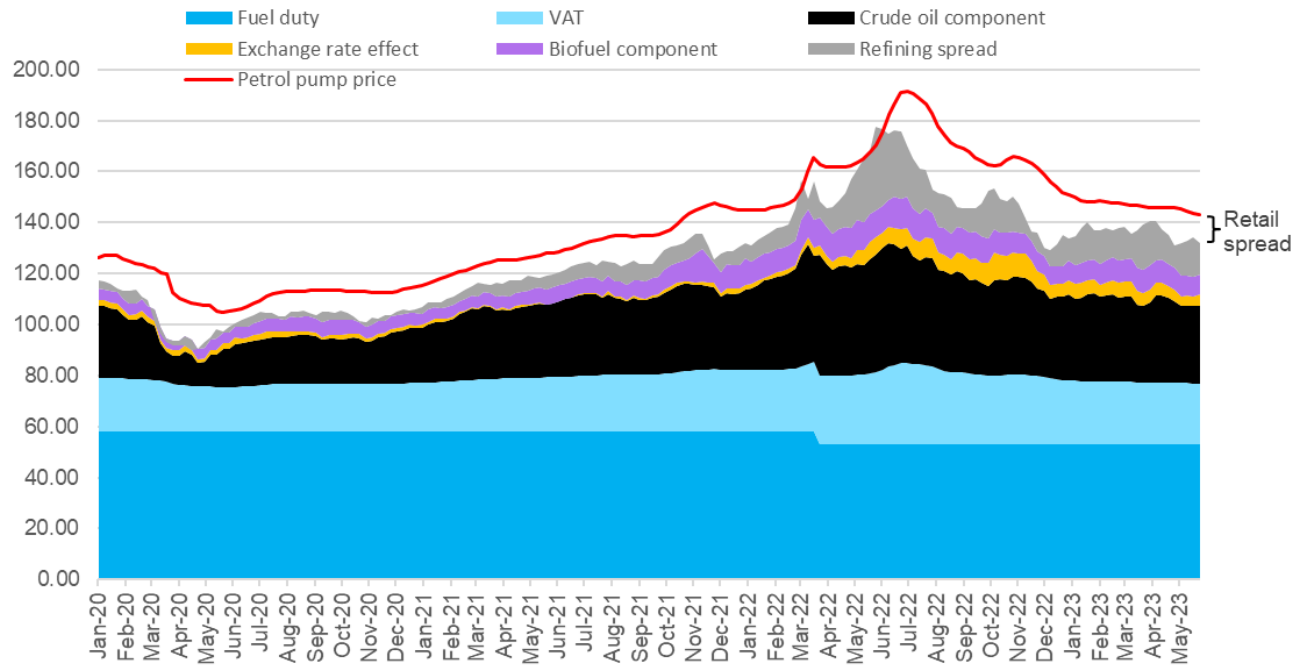
16. We considered that, taken together, this indicated some weakening of retail competition in the UK road fuel market, leading consumers to pay higher prices at the pumps than would otherwise have been the case. We also noted that we would be conducting formal interviews with representatives of the supermarkets to ensure we got to the bottom of these issues.

17. Having completed our evidence-gathering and analysis, we are now able to set out our full views on the road fuel market in this final report.

Petrol and diesel prices

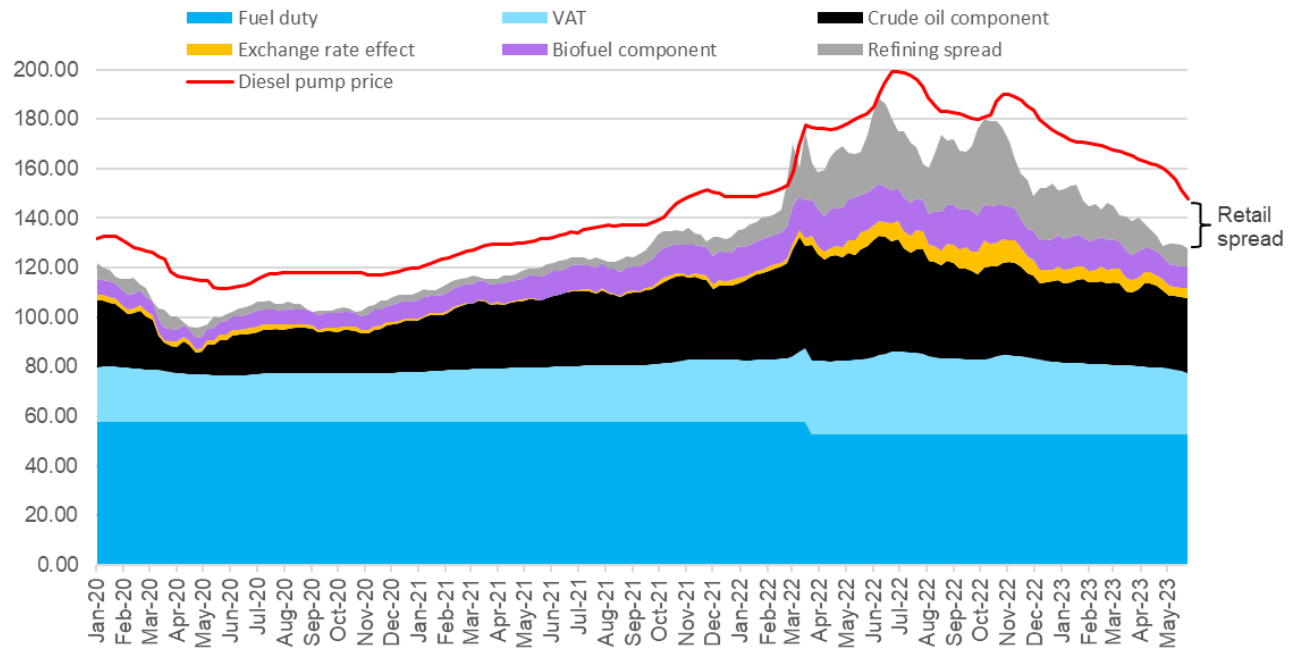
18. We have continued to monitor the pump prices for petrol and diesel since the publication of our initial update report, as well as the relative contribution of different components that make up the pump price over time. This is set out for each type of fuel in the charts below.

Figure 1: Petrol pump price with components, January 2020 – May 2023



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

Figure 2: Diesel pump price with components, January 2020 – May 2023



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

19. The above charts show that:

- Both petrol and diesel pump prices have fallen since their peaks in July 2022. For petrol, this fall has been relatively steady, with the exception of a small upward movement in prices close to the end of 2022. For diesel, on the other hand, the peak in July 2022 was higher, and the decline from this peak has been both slower and less steady, with a bigger uptick at the end of 2022. The pace of the fall in diesel prices increased in May 2023.

- Refining spread has generally reduced since peaking in June 2022, although again, this process has been both more pronounced and steadier in the case of petrol than for diesel. Petrol saw a small uptick in refining margins around October-November 2022, while diesel saw a larger uptick in October-November 2022, as well as one in August-September 2022. During April 2023 the diesel refining spread fell below 10ppl for the first time since the Russian invasion of Ukraine, and has been lower than the petrol refining spread for the first time since May 2022.

- In line with these findings, the retail spread (the difference between the average benchmarked wholesale price of fuel and average pump price) has reduced in petrol, holding fairly steady since the start of 2023 and standing at 10.8ppl at the end of May 2023. For diesel, however, while the retail spread fell to very low levels as refining spreads increased in Autumn 2022, over the whole period since the July price peak it has often been at a historically high

level and has declined more slowly than the retail spread for petrol. From January to May 2023, diesel retail spread averaged 24.3ppl, significantly above its historic level. Diesel spread has been falling during May, standing at 20.0ppl at the end of the month, though still remaining higher than the petrol spread.

- We have continued to see an inverse relationship between refining spread and retail spread. While the combined size of the two spreads has returned towards trend level for petrol, it remains well above for diesel.

- Since late 2022, for both types of fuel the cost of the biofuel component has held steady, while the exchange rate effect and the price of crude have both declined.

20. A notable feature of the market has been the different paths taken by petrol and diesel. Prior to March 2022, the pump prices for the two types of fuel, and the relative contributions of the components of pump price, moved in similar ways. However, since March 2022 the two have become increasingly divergent, only recently starting to come back together in May 2023.

21. During the second half of 2022, average refining spreads for diesel were considerably higher than for petrol. While the refining spread for diesel has been significantly below peak levels since late 2022, the retail spread, and hence the price, has remained persistently high. As a result, the differential between the prices of diesel and petrol has been much higher since summer 2022 than previously.

Retail sector

National retail competition

22. As is clear from the section above, movements in the pump price are not, in themselves, a good indicator of the level of competition in the retail market. Prices are in large part driven by the cost of refined petrol and diesel, which is not within the control of retailers. However, if competition is not working well in the retail market this could be adding additional cost for consumers, making retail prices higher at any given level of wholesale fuel cost.

23. Looking first at the pattern of price competition, we found that supermarkets remain, on average, cheaper than other types of retailer. Outside of brief periods of disruption associated with Covid and Russia-Ukraine-related supply issues, the pricing gap between supermarkets and other types of retailer has remained constant at around 4-6ppl since 2017, with the exception of the pricing gap between supermarkets and dealers on diesel, where supermarkets have been on average only around 2ppl cheaper during 2023.

24. Despite this overarching trend, however, we have noted an increase in the extent to which individual non-supermarket retailers are pricing more cheaply than the supermarket national average price. Prior to January 2020, apart from a short period on diesel in spring 2019, there were no periods when significant numbers of non-supermarket PFSs were cheaper than the average supermarket price. However, since January 2021, there have been several periods when significant numbers of non-supermarkets (1000+ PFSs) have been cheaper than the average supermarket price or even cheaper than 75% or 90% of supermarket locations.

25. Among supermarkets, we previously noted that Asda has typically been the cheapest on fuel. However, our analysis shows that this position has been less consistent since the beginning of 2022. While Asda had been the cheapest supermarket in 89% of weeks for petrol and 94% of weeks for diesel between January 2019 and December 2021, this declined to 76% and 70% respectively between January 2022 and May 2023. We also found that Morrisons, prior to 2022, had typically been the second or third cheapest supermarket, but from 2022 onwards it has most often been in fourth place (ie been the most expensive supermarket), having been overtaken by both Sainsbury's and Tesco.[1]

26. We have also observed an increase in price dispersion between sites for both Asda and Morrisons since spring 2022; that is, we have seen a greater difference, on average, between the most expensive and the least expensive sites within each of their PFS estates. Prior to spring 2022, where we saw differences between PFS sites owned by one of these supermarkets, this was mainly due to sites being priced cheaper than the average. After then, however, we see greater deviation from the average price among those sites priced more expensively than the average. For Sainsbury's and Tesco there has been no obvious trend, although we do observe an increase in sites being priced cheaper than the average from late 2022.

27. Turning from prices to margins, as set out in our May update, we have seen a clear trend of increasing margin being earned by retailers since 2019; in other words, petrol and diesel retailing has become more profitable over this period.

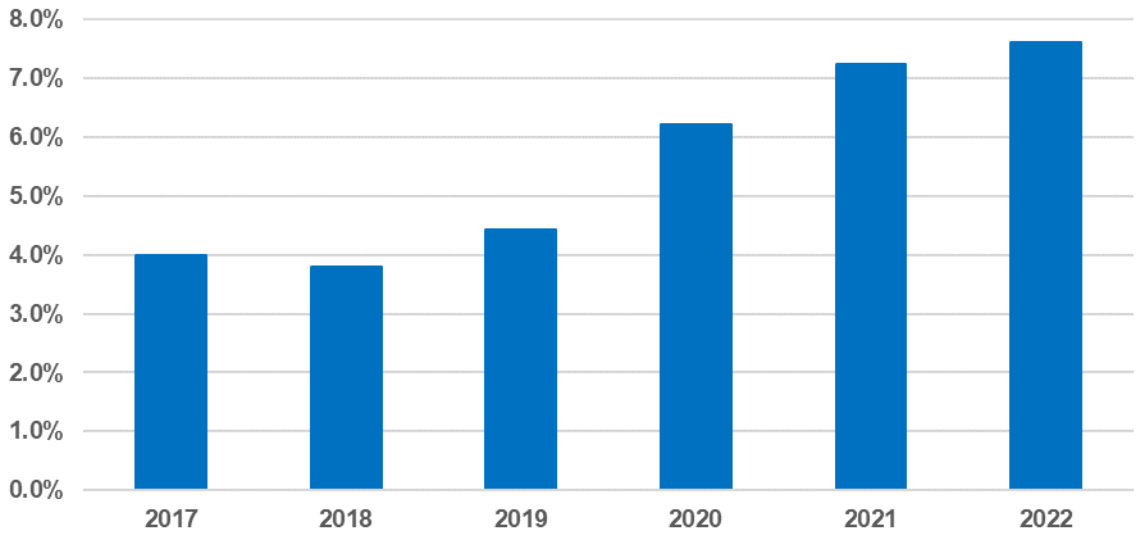
28. In supermarkets, average annual fuel margin (the difference between the price at which they buy it wholesale and sell it retail) has increased year-on-year from 4.4% (4.6ppl) in 2019 to 7.6% (10.8ppl) in 2022. While some of the ppl increase would have occurred if the same percentage margin was applied to the higher wholesale price of fuel in 2022, we estimate that in 2022 supermarket petrol and diesel prices were around 5ppl more expensive than they would have been if percentage margins had remained at 2019 levels. We estimate that the financial impact of this 6ppl overall increase in fuel margins results in a combined additional

[1] See paragraphs 42 and 43 for further discussion of these findings.

cost of around £900m for customers of the four supermarket fuel retailers in 2022 (based on the financial year of each supermarket that falls mostly within 2022).

29. Each of the supermarkets follows a similar trend to the average. We have found that supermarket operating margins in their fuel business (which, unlike fuel margins, take into account some non-fuel costs to the retailer, such as energy and some labour costs) have followed a similar trend to fuel margins, meaning that the increase in fuel margins cannot be attributed to increased non-fuel costs faced by supermarket fuel retailers.

Figure 3: Average annual supermarket fuel margins (%), 2017-2022



Source: CMA analysis based on parties' submissions

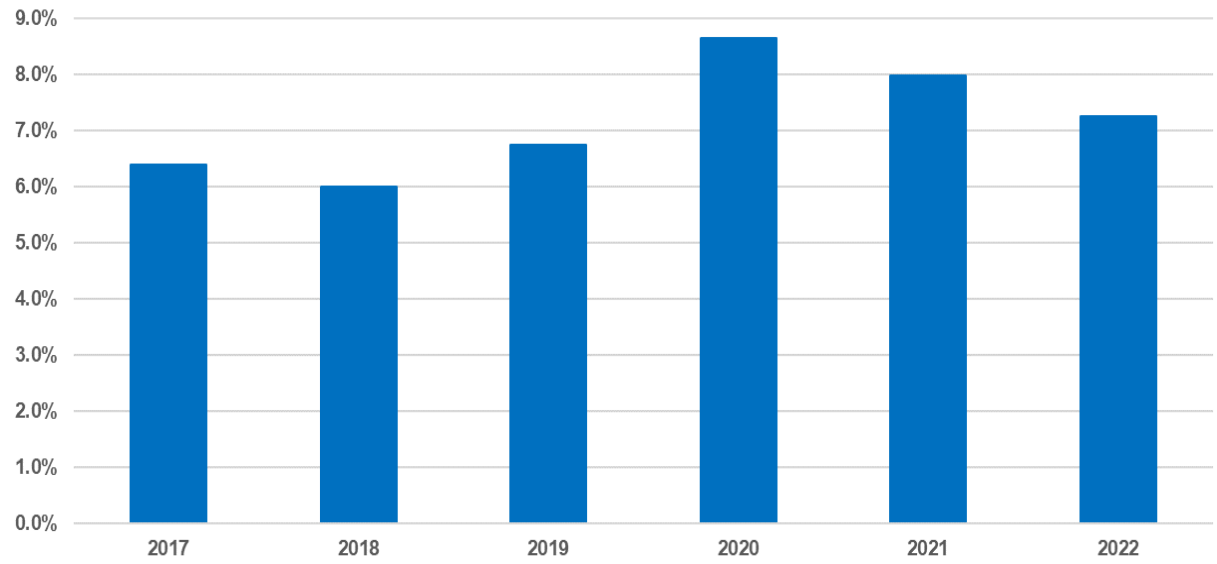
30. Some supermarkets pointed to a decline in the so-called "halo effect", by which selling fuel cheaply would attract more customers to also do grocery shopping in the supermarket, thereby providing an incentive for supermarkets to price fuel more cheaply than they would in a competitive standalone fuel market. They attributed this decline to factors including the increase in online shopping and the rise of discounter supermarkets (which do not sell fuel). However, even if we assume that the halo effect has disappeared completely, the size of the halo effect estimated in supermarkets' own internal documents is nowhere near large enough to account for the scale of margin increase we have seen on fuel.

31. Some supermarkets also told us that in recent years they had faced pressure on profits in their grocery business and had therefore looked to use increased profits from road fuel to "cross-subsidise" food prices. For the purposes of this market study, however, we are focusing on competition in the road fuel sector. We would not regard individual firms facing a tough competitive situation in one market as a good reason for the CMA to overlook weakening competition in another market in which they are active.

32. Separately to the road fuel market study, the CMA announced on 15 May 2023 that we were stepping up out work in the grocery sector to understand whether any failure in competition is contributing to grocery prices being higher than they would be in a well-functioning market. While we noted that global factors have been the main driver of grocery price increases, and that we had not seen any evidence pointing to specific competition concerns in the grocery sector, we said that it was important to be sure that weak competition was not adding to these issues. We plan to publish an update on this work later in July.

33. Among large non-supermarket retailers, average annual fuel margin increased from 6.8% in 2019 to 8.6% in 2020, before falling back to 8.0% in 2021 and 7.3% in 2022. However, due to the increasing wholesale price of fuel, ppl margin increased year-on-year across this period, rising from 6.8ppl in 2019 to 10.3 ppl in 2022. Again, we see no evidence that these increasing fuel margins can be accounted for by increasing non-fuel costs.

Figure 4: Average annual non-supermarket fuel margins (%), 2017-2022



Source: CMA analysis based on parties' submissions

34. Retailer pricing policies are central to understanding what may have driven these margin increases. All retailers told us that they set prices for individual PFSs by considering prices from competitor PFSs, usually defined by reference to distance (and sometimes categorised by competitor type), and applying a pricing rule based on either matching, or applying a plus or minus ppl to their competitors' prices. Given that supermarkets are generally the cheapest providers, this pricing approach means that it will be supermarket pricing that leads the overall market price.

35. We found that supermarket pricing policies can broadly be divided into two types: active and passive.

- Asda and Morrisons pursue active pricing policies in that they have a target margin that they aim to achieve on fuel and adjust their pricing approach within certain parameters if they are undershooting their target.

- Sainsbury's and Tesco pursue passive pricing policies in that they forecast the margin they expect to achieve on fuel, but do not adjust their pricing approach if they are not going to achieve this.

36. Given that Asda aim to be, and typically are, the cheapest retailer in the market overall, Asda's pricing decisions will have the most influence on general prices. Morrisons' pricing decisions will also have some impact, particularly in areas where Morrisons is present but Asda is not.

37. Evidence from internal documents provided by Asda and Morrisons shows that they have significantly increased their internal margin targets since 2021. Prior to that year, their margin targets were relatively stable, but both retailers decided at some point in 2021 to increase them for 2022, then increased them again in 2023. As a result, Asda's ppl target for 2023 was more than three times what it had been for 2019, while Morrisons doubled their ppl target over this period.

38. An internal document from a competitor notes changes in Asda's and Morrisons' pricing approach and attributes this to "planned or completed changes in ownership". Asda and Morrisons were both purchased by private equity in 2021, the same year they each made a decision to increase their target margin on fuel.

39. Along with these increasing margin targets, we have seen a decline in the intensity with which Asda and Morrisons act as price leaders in the market:

- As set out above, Asda has less consistently been the cheapest supermarket since 2022, and Morrisons has moved from generally being 2nd or 3rd cheapest, to most often being the most expensive of the four supermarkets.

- Asda has significantly reduced the frequency of its public price cut announcements since 2020, and its only two price announcements in 2022 followed shortly after CMA interventions: the publication of our urgent review findings in July 2022 and the publication of our initial update report in December 2022.

- Evidence from Asda internal documents shows that in the second half of 2022 it identified and implemented an opportunity in [125-175] sites (those situated more than [✂] miles from a supermarket competitor) to reduce prices more slowly than they typically would as wholesale prices fell.

40. Taken together, this evidence indicates a significant weakening of competitive pricing from Asda and Morrisons, the supermarkets with active pricing policies, in this market since 2022.

41. In a market where competition is working well, when a price leader attempts to compete less hard, we would expect other competitors to take market share from the former market leader thereby increasing competitive pressure. However, given the largely passive pricing policies of other major competitors (Sainsburys, Tesco and the large non-supermarket retailers) we would expect this impact to be lessened in the road fuel market, and the margin increases we have seen among retailers in the rest of the market suggest that this has indeed been the case.

42. As a result of the change in approach by Asda and Morrisons, Sainsbury's' and Tesco's overall pricing positions have improved somewhat in relation to Asda and Morrisons. Asda is less frequently the cheapest overall supermarket and Morrisons more often the most expensive of the four supermarkets.

43. However, based on what Sainsbury and Tesco told us, namely that they have not changed their passive pricing approaches in any relevant respect this improvement in their overall pricing position appears to be, in large part, an "estate effect", comprised of the overall changing dynamic across all stores, including where they do not compete directly with an Asda or Morrisons site.

44. If Sainsbury's and Tesco were to change to a more active pricing policy, this could exert competitive pressure on Asda and Morrisons to lower their prices or risk losing market share. The same argument applies to non-supermarket retailers. Given that they have not yet done this, remedy action that could increase the incentive for them to do so would be beneficial; we consider this in our remedies thinking, as set out below.

45. Our analysis of market share data (by volume) also supports this, showing that Asda and Morrisons have been able to keep their market share broadly stable across this period, though there is indication of Asda losing market share in recent months. Based on what we have been told by rival supermarkets, we do not believe that there has been a national change in their pricing policies focused on winning market share from Asda (for instance no one other than Asda told us they were aiming to be the cheapest). However, the nature of their local pricing rules and decision making means that there may be local areas where rivals are now price leaders. Notwithstanding this, however, without a change in rival supermarkets' pricing rules, resulting in their prices being more often below Asda's where they are directly competing, there is a risk that price increases will continue being generally accommodated and higher margins become entrenched.

46. Overall then, we see a situation where:

- Competition between retailers has weakened in recent years. Retail margins in fuel retail have risen significantly since 2019, with each of the supermarkets following a similar trend;

- Competition in this market has generally been led by certain low-cost supermarkets setting the pace at which other retailers (supermarkets and non-supermarkets) follow;

- The historic price leaders in the retail market, primarily Asda but also Morrisons to some extent, have taken a less aggressive approach to pricing by significantly increasing their internal margin targets for fuel over recent years, with the largest increase coming in 2022-23;

- Asda took a decision in 2022 to achieve higher margins by reducing prices in some of its PFSs more slowly than would previously have been the case as wholesale prices fell (ie "feathering" prices), with other retailers pricing by reference to them following a similar pricing path. Given the movements in the wholesale price of the two grades of fuel, this impact of this has been felt more heavily on diesel than petrol.

- Other retailers, including the two other supermarkets, have maintained largely passive pricing policies, pricing by reference to local competitors rather than responding promptly to cost movements and/or trying to win market share, and have therefore followed the same trend in prices and margins.

- As a result of these factors drivers have been paying more than would otherwise have been the case. We estimate that the financial impact of the 6ppl increase in ppl fuel margin from 2019 to 2022 results in a combined cost of around £900m for customers of the four supermarket fuel retailers in 2022 alone.

- We have observed significant drops in the price of fuel shortly after our previous publications (urgent review in July 2022, initial update report in December 2022 and cost of living update in May 2023), indicating that there was room for retailers to reduce prices.

Weaker competition on diesel than petrol

47. Given the divergence in the price of petrol and diesel since March 2022, as set out in paragraphs 10-11 above, we have also considered whether there is a difference in the level of competition we have seen in the supply of diesel, compared to petrol. While we would not necessarily expect the prices of these two types of fuel to move in parallel, given they are subject to different supply and demand constraints, it is notable that the retail spread for diesel has been well above historic norms during 2023, despite a falling wholesale price over this time.

48. When we asked Asda to account for this, they told us that following the volatility in diesel wholesale prices in 2022, they saw and pursued an opportunity to "take

price" and grow their margin on diesel. They did this by reducing diesel prices more slowly than wholesale prices fell, while still aiming to be generally the cheapest retailer in the market.

49. This explanation is supported by our further analysis of potential "rocket-and-feather" pricing patterns in the market. We have extended our analysis to include data from 2023. While this does not show significant further evidence of rocket and feather activity in petrol, it clearly does so in diesel. This is true on both sides of the equation – wholesale price increases were passed on more quickly and wholesale price reductions were passed on more slowly in 2023. This result holds for each of the supermarkets.

50. Given the evidence from Asda's internal documents and statements to us, our understanding of the passive pricing policies of other competitors, and the results of our rocket and feather analysis, we conclude that the high retail margins were driven by Asda's decision to reduce diesel retail prices more slowly as wholesale prices fell, facilitated by the lack of any major competitor attempting to systematically undercut them. We estimate that this elevation of the diesel spread resulted in consumers paying an average of 13ppl more for diesel from January-May 2023, compared to the price if margins had been at their 2017-22 average.

Local retail competition

51. However, the national picture is only an aggregation of competition going on in multiple local markets.

52. Drivers are generally willing to travel a few miles extra to buy cheaper fuel. This leads to local markets, and geographic variations in price. However, given that fuel retailers do not generally publish their prices online, they do not have access to reliable, comprehensive and real time price information that they can use to compare prices before setting off to buy fuel.

53. We have considered the extent of price variation across different localities, as it is an issue we have received numerous questions and queries about from members of the public and elected representatives, and an obvious concern for those consumers living in higher-priced areas.

54. We have found that with the exception of Northern Ireland (which is in a geographically unique position, due to the Irish border) differences in average prices between the regions of the UK are relatively small. Rural PFS fuel prices are on average 1.2ppl higher than urban prices, for both diesel and petrol. However, we found that there was much wider variation within the rural and urban categories than between them.

55. We have found that price dispersion within and between local areas is common. The key differences we found were that the highest-priced PFSs faced fewer competitors nearby, were less likely to have a supermarket competitor and were significantly less likely to have an Asda competitor, which has been the historical price leader.

56. While we have seen evidence that some of this variation is likely explained by differences in costs, with businesses needing to charge higher prices to remain profitable when they have higher costs, it is also clear that a significant part of it is due to the pricing rules retailers follow, which tell them to match or price close to their cheapest rivals in an area.

57. This means that if there is only one of the cheapest retailers – supermarkets – in an area, they are likely to price close to one of the more expensive retailers, and differently from their other sites where there are more and lower-priced competitors.

58. Competition in local areas typically takes place within local areas determined by how far motorists are willing to travel to purchase fuel. Retailers typically told us this was in the region of three miles, while some said between 10 to 25 minutes drive time.

59. It is therefore the case that competitive conditions can vary materially between PFSs beyond these distances, and we consider this is likely to explain a significant proportion of price differences between different towns or cities within regions or sub-regions.

60. We generally found that the pattern of price dispersion within local areas has been fairly steady between 2017 and 2023, with some upward drift. However, in some of the areas we analysed we see a more pronounced increase in price dispersion from mid-2022. This is consistent with the weakening of national competition we have observed at the national level; where retailers are looking to raise their overall margins, this is likely to be disproportionately achieved at sites where they are facing lower competitive constraints, as seen in Asda's move to reduce their prices more slowly in some sites as wholesale prices fell.

61. We found that at a local level consumers will generally have access to cheaper fuel within a reasonable drive time, but the extent to which non-supermarket PFSs switch their relative competitiveness over time may make it hard for consumers to identify the best deals at any point in time, increasing search costs to find the best prices.

62. We also found that there will be some areas where there are no generally lower-priced retailers ie supermarkets, and retailers are likely to have higher costs, for example in more sparsely populated or remote areas, and so these areas are likely to have higher prices.

63. Considering the factors associated with pricing levels, we found that prices tend to be lower in PFSs that have more competitors, particularly when at least one of those competitors is a supermarket and especially when one of those is an Asda. However, in line with our wider finding of weakening competitive intensity from the supermarkets, the impact on prices of having a supermarket, or Asda, competitor has declined since in the period after January 2022, compared to the period before.

64. In summary, therefore:

- We see significant price differences between local areas, with lower prices typically associated with having a supermarket competitor, and particularly an Asda competitor, though this effect has weakened since January 2022;
- Where supermarkets are facing no supermarket competitors in an area, they are likely to price by reference to one of the (typically more expensive) non-supermarket retailers, meaning that prices will tend to be higher than in locations where they face supermarket competitors;
- Where there are no supermarkets, and retailers are likely to have higher costs (eg more remote areas) prices are likely to be higher;
- Price dispersion has increased since mid-2022, consistent with the weakening of national competition we observe;
- Consumers will generally have access to cheaper fuel within a reasonable drive time, but the cheapest provider is not always consistent over time.
- Given these findings, we consider that consumers can gain from shopping around, and the more effectively they are able to do this, the more they will be able to incentivise retailers to compete hard on price to win their business. However, the impact of this may be more limited in some areas compared to others, due to the underlying nature of local competition (eg how many competitors there are or whether supermarket PFSs are present). Given the nature of the industry, barring radical intervention to change it (which may have negative consequences for consumers overall), some degree of local price variation is inevitable, but measures to address the points set out above could moderate them. We therefore consider these factors when we come to remedies, below.

65. We also note that the Rural Fuel Duty Relief scheme is an example of the government taking action on tax to provide support for drivers in those local areas where fuel prices may be higher for structural reasons, but we do not consider the design or impact of this scheme further in our report.

Future trends in the market

66. Looking at the future prospects for this market, the most important foreseeable future trend is the move away from internal combustion engine (ICE) vehicles – the vast majority of which run on petrol or diesel - associated with the government's intention that no further new ICE vehicles should be sold in the UK after 2030. In common with industry participants and observers, we expect that this will lead to a significant reduction in demand for road fuel over the coming decades. While the timing and impact of this are highly uncertain, we expect that this will lead to a reduction in the number of PFSs, which in turn could lead to reduced competitive intensity in more local areas.

67. One particular concern related to this is the distributional impact on consumers. First, we expect less well-off consumers to be slower to move away from ICE vehicles, as they are less likely to purchase new cars. As a result, they will be buying road fuel further into the future and so will be more exposed to the negative impacts of any reduction in competition over time. Second, we would expect a future decline in the network to impact more on particular geographical areas, as more low volume or otherwise marginal PFSs close, and the impact of losing any one station on competition is likely to be more significant in areas that have fewer PFSs to begin with. The impact of this could be to create more areas with particularly weak local competition, exacerbating existing geographical disparities.

68. Given that we see a market where fundamental change is clearly coming, the timing and exact impact of which is uncertain, but it likely to have significant distributional impacts, it is important that policymakers and regulators are well-placed to understand these changes as they occur and react to them as necessary. We consider how this might be achieved as part of our remedies thinking, as set out below.

Motorway fuel pricing

69. Finally, we have looked at motorway fuel pricing. At motorway service areas (MSAs) typically around 75% of fuel purchased is done so by business customers using a fuel card.[2] These are typically products available to commercial customers who can use them to purchase fuel at a price which is similar whether they are at an MSA or at a non-motorway PFS.

70. For those customers who do not have access to a fuel card and so must pay the pole price to make a purchase, prices at an MSA are significantly higher than at a non-motorway PFS. We have found that, for these customers, pump prices at motorway PFSs were, on average, around 20ppl higher for petrol and 15ppl for

[2] This excludes fuel cards (such as Allstar) where the customer pays a price linked to the pole price at the PFS where the fuel is purchased.

diesel during 2022, with much less variation within the motorway PFS group, compared to non-motorway PFSs. This price gap with non-motorway sites has grown; our predecessor, the OFT, found a gap in its 2012 study that would equate to 9.5ppl for petrol and 10.5ppl for diesel at 2022 prices. This motorway premium is reduced only slightly when we compare motorway PFS prices to those of non-motorway PFSs on the strategic road network (ie major trunk roads). We also find that the profit margin earned by selling fuel to these consumers is significantly higher than at non-motorway PFSs.

71. Given the composition of the motorway PFSs' customer base, however, with only 25% of fuel purchased at these higher prices, the impact of this is diluted. Overall margins earned on fuel sales at MSAs are not materially higher than those made by non-motorway MSAs, because they sell to a greater proportion of fuel card consumers, from whom they earn a very low margin.

72. Motorway PFSs are able to charge such high margins for private customers (ie those who do not use fuel cards available to business customers) due to a lack of competition. For regulatory and planning reasons, motorway PFSs are placed at some distance from each other, and opening new sites on existing stretches of motorway is generally unlikely. Motorists using the motorway will often be unaware of alternative PFSs located close to motorway exits, as these are not signposted from the motorway. With a small number of exceptions, consumers do not see the price of fuel at an MSA until they have turned off the motorway. In addition, the supply of fuel at MSAs is concentrated, further reducing the incentive for them to compete with each other.

73. The higher fuel price at MSAs reduces the amount of fuel that private customers buy there – private customers drive 18% of their miles on the motorway network but make only 1% of their fuel purchases (by value) at an MSA.

74. Overall, therefore, our view is that non-fuel card consumers are paying high prices for fuel at MSAs due to a mixture of regulatory barriers to competition, a concentrated market and low ability of consumers to observe prices and shop around. Remedies that aimed to tackle these issues could therefore have a positive effect on consumer outcomes by incentivising lower prices.

Conclusions on the retail sector

75. In summary, therefore, we see evidence to support three areas of concern in the road fuels retail sector:

    (a) Competition on fuel prices has weakened since 2019, due to a decision by the traditional price-leaders to compete less hard, and a lack of active competitive response to this by other retailers. As a result, consumers are paying generally higher prices than prior to this date, for any given level of

wholesale prices. During 2023, competition has been significantly weaker on diesel than on petrol.

(b) While this weakening of competition appears to have affected pricing in different parts of the UK in a similar way, longstanding patterns of variable pricing between different local areas remain, meaning that consumers in some areas can pay significantly more for fuel than in others.

(c) Separately, competition remains weak between MSA PFSs, meaning that customers without access to fuel cards pay significantly more to buy fuel on the motorway than off it.

76. These three concerns sit against the backdrop of an expectation of reduced levels of competition in this sector over the coming decades (though exact timing is uncertain), which without intervention is likely to have a more significant impact on those who are less well off, and those who live in areas where levels of retail competition are already lower.

Remedies

77. Given this assessment of the market we have considered a range of remedial options to address these concerns. We are recommending two measures: an open data fuel finder scheme and an ongoing fuel monitor function. If taken forward, these two measures will work in a mutually reinforcing way to increase incentives on retailers to price more competitively on fuel.

Open Data fuel finder scheme

78. First, and building on the recommendation we made in our Urgent Review, we are recommending that the Government implements an open data “fuel finder” scheme for prices in the retail road fuel sector, and places this on a statutory footing so that retailers are required to share their prices.

79. A fuel finder scheme would encourage other services – such as fuel comparators and navigational apps – to provide easily accessible, comprehensive and up to date pricing information to consumers to help them find cheaper fuel, at the best location, without them having to drive around to observe prices from the road.

80. We recommend that government takes forward this recommendation as soon as practicable - and consider that the Data Protection and Digital Information Bill is the most appropriate vehicle through which to do this - to ensure that consumers obtain maximum benefits in as timely a manner as possible, especially as they continue to face cost of living pressures.

81. Effective competition relies on consumers being able to compare accurately the price and quality of products in a way that drives good decisions. They need to be

able to do this easily, and to act on it. While real-time fuel prices are prominently displayed at forecourts, they are not provided by retailers online, and, in the absence of high-quality collated data, consumers have to drive around to find cheaper fuel.

82. In many other markets, since use of the internet has become widespread, retailers have displayed their prices in real time online as a matter of course. In road fuel, however, this is not the case. The nature of competition, particularly the fact that competition is driven by several large competitors, competing separately in a large number of local markets, prevents the same incentives from working to encourage retailers from sharing their pricing data on a voluntary basis.

83. This lack of real-time, comprehensive and easily-accessible pricing data means that consumers do not have access to the tools they need to drive competition as effectively as possible, by seeking out and buying from the cheapest possible retailer within those areas where it would be make economic sense for them to buy fuel. Many consumers in this market are savvy and engaged, using their own observations of price, sharing information on social media or using online pricing tools to seek out the best prices in their area. However, these consumers are clearly using second-best options when compared with using a more comprehensive and real-time dataset.

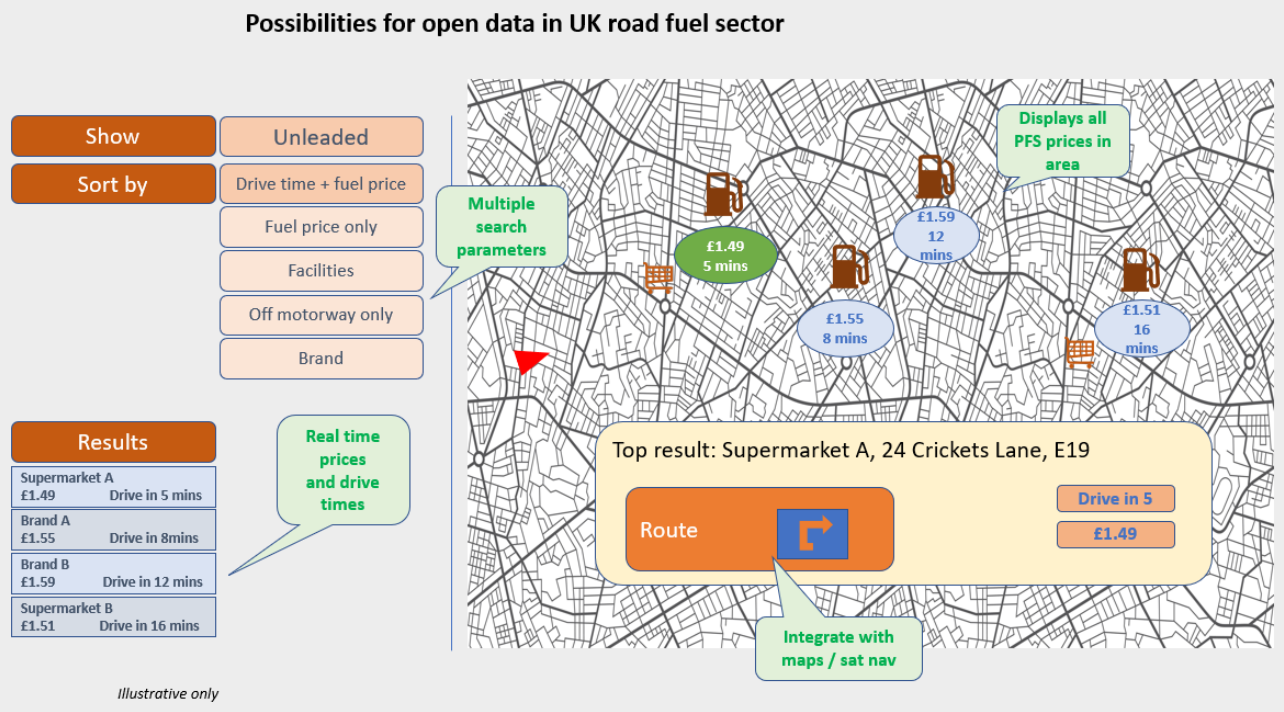
84. Given the apparent lack of incentive for retailers to publish these prices of their own volition, and the important role that the availability of this information could play in helping consumers drive greater competition in the fuel retail market, at a time when it seems to have declined, there is a strong case for measures which would make prices more observable in real time. Without this, consumers cannot be expected to be able to drive effective competition and with the weakening of competition we have identified, particularly in relation to supermarkets, it is essential that they do.

85. We have already recommended in the July 2022 Urgent Review an open data scheme through which individual forecourt prices are collected and made freely available. Since then, we have developed our thinking on the benefits of such a scheme, in particular as an enabler of other services - such as fuel comparators and navigational apps – which will provide easily accessible, comprehensive and up to date pricing information to consumers to help them find cheaper fuel, at the best location, without them having to drive around to observe prices from the road.

86. In turn, we would expect this to have a moderating effect on retailers' behaviour, as PFSs would have to compete harder to attract customers, by lowering prices and/or improving their offering. In particular, we have seen evidence of weaker competition from traditional price leaders, accompanied by a lack of competitive response from other retailers. By improving consumer awareness of prices, a fuel finder scheme would increase the benefit to any firm who emerged as a local or

national price leader, as consumers would be more aware of this, and therefore more likely to switch to them, meaning that they would make a greater gain in volume for the same level of investment in price.

87. The graphic below illustrates the type of information from which consumers could benefit, for example through an app where fuel pricing and navigational data are integrated.



Source: CMA graphic.

88. We would expect a fuel finder scheme, if implemented effectively, to have a positive impact on the three concerns we have identified in the retail market.

89. We would expect this to go some way towards countering the weakening of competition in the national retail market, via the impact of consumers moving away from higher-priced operators. We would expect to see the premium that higher-priced operators can charge over local market leaders to be reduced as this premium becomes more visible, in real time, to consumers. We would expect this to lead to more intense competition and hence lower prices. In particular, it would increase the incentive on a retailer to undercut prevailing prices, because they could expect their lower prices to be clearer to the public, and therefore to gain market share more efficiently.

90. We would also expect this to address price variation between local areas, in similar ways, by increasing the pressures on retailers to reduce prices. It would also widen the effective search area for consumers in a particular local area, by allowing them to consider purchases at a wider range of PFSs, and would increase the practical search frequency, by allowing them to easily compare prices

in real-time. We would not, however, expect this to completely eradicate local price variation, as the factors that are associated with lower prices in an area, in particular the presence of a supermarket competitor, would remain the same. While we have not considered fiscal options in our report, we note that the Rural Fuel Duty Relief Scheme is an example of the government taking action on tax to provide support for drivers in areas where fuel prices may be higher for structural reasons.

91. We would also expect this to have an effect on high prices at motorway PFSs. While drivers could compare prices at different motorway PFSs, the clustering of prices we have observed at these means that they may not derive much benefit from this, limiting the competitive pressure that may be exerted in this way. A more likely route would be by making drivers more aware of fuel prices at PFSs located close to motorway exits, allowing these PFSs to exert more of a competitive constraint on motorway prices.

Ongoing fuel monitor function

92. In addition, we are also recommending that the government create an ongoing road fuels price monitoring function for the UK market, by tasking a public body with the role and providing it with information-gathering powers needed to generate insights in the complex and changing UK market.

93. The fuel monitor should report on the state of the market, the effect of open data remedies in improving outcomes for consumers, and help the government decide whether or when further intervention in this market, or support for consumers, is required, within the context of market dynamics and its wider net-zero transport strategy.

94. We recommend that the government takes this forward as soon as possible. The government would have a number of options for where this function could be situated. One option would be to give this function to the CMA; we would be well-placed to observe developments in the market, following on from our market study. Alternatively, the government may prefer to situate this function within a body with wider responsibilities for the net-zero transition in transport, which may be well-placed to consider market issues in the context of wider environmental objectives.

95. We believe that our recommendation of creating a fuel finder scheme will have a positive effect on competition in fuel retailing, for the reasons set out above. However, there are two significant reasons to consider that this alone may not be sufficient to deliver ongoing strong competition in the market in the longer-term.

96. First, the expected future path for this sector during the transition away from ICE vehicles points to worsening competition in the remaining fossil fuel-based road fuels market. This is likely to occur over an uncertain time period, and is likely to

be felt particularly by less well-off consumers and by those living in local areas where competition is already more limited.

97. Second, while we believe it will have a positive effect on the market, the exact impact of our price transparency measures is also uncertain, being dependent on speed of roll-out, take-up of the tools it would enable, and the impact of these tools on competition.

98. Given these factors, we believe that a monitoring function could have a positive impact on the sector in two ways.

99. First, it would act as a deterrent to individual firms taking actions that would further weaken competition in this market. Where firms are aware that they are under scrutiny, they will know that the reputational risk of raising margin targets or applying rocket and feather pricing will be increased. We note that the updates we have provided during this market study have been followed soon after by price cutting announcements, and/ or notable retail price falls. While this shows correlation rather than clear causation, it suggests to us that public scrutiny or monitoring may help reduce prices and so benefit consumers.

100. Second, it would allow for an ongoing assessment of the effectiveness of competition in this market, and whether we have reached the point where further intervention in the market is required, as the market becomes much smaller over time. In order to do this effectively, it is vital that policymakers, stakeholders and motorists have a clear view of what is happening in this market. Without a dedicated monitoring body, getting this clear view would not be straightforward; this study has illustrated the complexities of understanding competition in this market in recent years, which will only be amplified by the great changes the market will experience as we move through the net-zero transition.

101. It is important to note, however, that the monitoring function in itself would not solve the problems associated with long-term structural decline of the industry associated with the move away from ICE vehicles; this may require new policy and regulatory interventions. What a monitoring function would do, however, is help ensure that policymakers and regulators can consider the case for such interventions in a timely and informed manner, as issues develop.

102. Finally, we also note that monitoring functions exist and play a valuable role in a number of other jurisdictions around the world, often run by counterpart agencies of the CMA. For example, the Australian Competition and Consumer Commission monitors retail prices of unleaded petrol, diesel and LPG in Australian capital cities and in more than 190 regional locations. They produce quarterly reports monitoring prices, costs and profits related to the supply of petroleum products, as well as providing consumers with accessible information on price trends and patterns in Australia's larger cities. The German Market Transparency Unit for

Fuels, sitting within the Bundeskartellamt, also provides an annual report on the road fuel market.

Remedies we are not proposing to take forward at this stage

103. Beyond the price transparency and monitoring remedies set out above, we have considered a range of other remedies, which we are not proposing to take forward at this stage.

104. We considered whether measures to make it easier for new retailers to enter the market, or for existing retailers to open new PFSs, would help address the concerns we have identified. While we did hear that there are barriers to opening new PFSs, in particular the availability of suitable land with potential for building new sites, we note that the expected decline in demand for petrol and diesel in the coming decades would in any case seriously limit the incentive to open new PFSs. We therefore do not believe that such measures to remove barriers to creating new PFSs would have a significant impact on the number of PFSs, and therefore on the concerns we have set out about the market.

105. We also considered whether acting to directly control prices or margins would be an effective and proportionate way of addressing the concerns we have in this market. Having considered various options, however, we do not believe it would be feasible to do this in a way that would be likely to improve overall outcomes for consumers, and doing so could in fact risk worsening them. A price regulator would need to estimate competitive price levels for thousands of individual PFSs with varying cost bases and sales volumes, applied to products with widely varying wholesale costs over time. Any price set may be unsustainably low for some areas, leading to withdrawal from the market and the creation of fuel deserts; gains for consumers on price could therefore be wiped out by the cost and inconvenience of having to travel further to buy fuel. At the same time, the price could be higher than the current competitive price in some other areas, potentially providing a new, higher benchmark for local retailers to price up to; consumers in these areas would then be paying more. We would expect these effects to ratchet down the level of competition remaining in the market over time, leading to regulated prices having to be priced higher and higher to maintain sufficient supply in the market. Given that there are still clear competitive pressures existing in this market, and the potential for these to be enhanced further by the measures we are proposing, we do not believe it would be appropriate to pursue this type of remedy at this stage.

106. Finally, we considered whether there were options to fundamentally change the structure of the industry that could effectively and proportionately address the concerns we have observed, for instance by creating regulated monopolies on a franchised basis or publicly-owned retailers in areas of lower competitive intensity. While these options would allow for greater visibility of costs to policymakers and

regulators, and so aid with price-setting, this would come at an even greater cost to the market pressure for cost reduction that comes from market competition. There would also be significant cost involved in making the transition to any such new structure. As a result, there is again a significant risk that this would result in consumers in general paying more than they would without this intervention. Again, we do not believe it would be appropriate to pursue this type of intervention at this stage.

107. Our decision to reject price or margin controls and fundamental structural reform of the industry is essentially based on cost-benefit considerations; while road fuel retailing has become less competitive, we do not think that this has progressed to the point where the expected benefit to consumers of taking one of these more interventionist approaches outweighs the expected costs to consumers of doing so. As the industry adapts in response to the expected decline in demand for road fuel in the coming years and decades, however, this calculus may shift. An important element of the monitoring function we are proposing is to provide accurate information to allow policymakers to determine whether this is the case.

Wholesale and refining sectors

108. Beyond the retail sector, we have also considered the two other major parts of the domestic supply chain:

- The wholesale sector, which involves the selling of refined product to retailers; and
- The refining sector, which involves the transformation of crude oil into refined petrol, diesel, and other petroleum products.

109. In the wholesale sector, taking into account all the evidence, including from wholesale suppliers, retailers and our analysis of margins, we do not consider that there are any general deficiencies in the competitive dynamics of this market that require remedial action. We have, however, raised some concerns about the way the biofuels benchmark is used in the industry, which may be adding additional costs for consumers. We also share some findings in relation to wholesale pricing benchmarks.

110. In relation to the UK refining sector we said in our initial update report that despite the spike in refining margins we had seen in 2022, we did not think that UK motorists had faced negative outcomes arising from deficiencies in competition. We also found that, looking at the period since 2020, UK refiners had not made high profits, as low or negative margins during the initial period of the Covid pandemic effectively cancelled out the high margins caused by the Russian invasion of Ukraine.

111. Since our initial update report we have not received any representations from parties wishing to challenge our reasoning, nor have we become aware of any relevant information that would make us change our view. As noted above refining spreads have remained at more normal levels, apart from the spike in October/November 2022. We therefore remain of the view that there are no deficiencies in competition in the UK refining market that are leading to unnecessary costs for consumers.

Next Steps

112. If implemented, we believe that our proposed remedies will work to both improve the functioning of the road fuel retail market and guard against negative consequences arising from the repetition of some of the problems we have recently seen in the market and the emergence of new pressures as we move through the net-zero transition.

113. We will therefore engage with policymakers to explain our findings and recommendations, encourage the UK government to accept them and, if it does so, work with government to develop the most effective policy approach to empower motorists to get the best possible deals, and protect them from any ongoing or emerging deficiencies in the functioning of this market.

1. Introduction

Background to the market study final report

1.1 On 11 June 2022, the then-Secretary of State for Business, Energy and Industrial Strategy wrote to the Competition and Markets Authority (CMA) requesting that we conduct an urgent review of the road fuel market, as well as a longer-term market study into whether the retail fuel market has adversely affected consumer interests.[3] The request followed the then-Chancellor of the Exchequer's 23 March announcement in his Spring Statement that there would be a 5 pence per litre (ppl) reduction in the rate of fuel duty which would take effect from 6pm that evening.

1.2 On 13 June 2022, the CMA launched a short and focused review of the UK retail road fuel market with the aim of providing advice to the government on steps that might to be taken to improve outcomes for consumers across the UK (Urgent Review).[4]

1.3 On the publication of the result of the Urgent Review, and in the light of concerns that it identified, the CMA immediately launched a market study to examine the road fuel market in more depth. We issued an Invitation to Comment on the areas for focus in the market study on 8 July[5] and published the responses to that on our case page.

1.4 Using our statutory information-gathering powers we issued requests for information to refiners, wholesalers and retailers operating in the road fuel sector. We met with several parties and stakeholders with an interest in the road fuel sector to develop our understanding of the sector, and the specific issues we were examining in the market study.

1.5 On 6 December 2022 we published our Initial Update Report on the market study,[6] setting out our emerging analysis and views on the market and inviting comments on these.

1.6 On 15 May 2023 we published an update on the market study, as part of a wider update on the action the CMA is taking to contain cost of living pressures.

1.7 Between 16 and 24 May 2023 we conducted formal interviews with four supermarket fuel retailers' senior management to further develop our understanding of issues in the road fuel sector.

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[3] Letter from Business Secretary Kwasi Kwarteng to the Competition and Markets Authority, June 2022.
[4] CMA Road Fuel Review ('Urgent Review'), 8 July 2022.
[5] CMA Supply of road fuel market study invitation to comment, 8 July 2022.
[6] CMA Supply of road fuel in the UK initial update report, 6 December 2022.

1.8 This final report sets out our findings on the road fuel market, and our recommendations in response to those findings.

Areas we have considered in the market study

1.9 On conclusion of the Urgent Review, which focussed on the retail supply of road fuel, we identified three further areas at the retail level of the supply chain that merited further investigation in the market study. We also said we would expand our focus to the wholesale and refining levels of the supply chain.

1.10 We identified the following areas of focus at the launch of the market study:[7]

(a) **Retail – The relationship between wholesale and retail prices**: investigating further how retailers determine the prices they set at the pump, in particular whether and to what extent retail prices track movements in wholesale prices ('rocket and feather pricing').[8]

(b) **Retail – Local and regional variations in price:** undertaking further analysis to better understand the factors that drive local and regional variations in prices.

(c) **Retail – The role played by major supermarkets**: further examining the role played by major supermarkets in the fuel sector, including whether recent merger activity in the PFS sector has had an impact on pricing practices.

(d) **Wholesale –** analysing the terms and impact of any long-term supply agreements between independent retailers and wholesale suppliers and developing our understanding of the relationships between wholesale suppliers and retailers and their impact on market outcomes, including reviewing evidence on margins being earned by wholesalers.[9]

(e) **Refining –** assessing why refining spreads examined in the Urgent Review were so high, and what, if anything, ought to be done to bring them down.

Additional areas of focus in the market study

1.11 During the course of the market study we have also focussed on the following issues affecting the wholesale market, given their potential to impact on prices paid at the pump:

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[7] See CMA Fuel Pricing Review; CMA Road fuel market study invitation to comment, 8 July 2023 and CMA Supply of road fuel in the UK market study initial update report, 6 December 2022.
[8] The concept of rocket and feather pricing for fuel involves retailers quickly raising pump prices when the price of crude, or the wholesale price rises, but being slow to pass on decreases.
[9] For the purposes of the Urgent Review analysis, the margin applied by independent wholesalers was included as part of the "retailer spread".

(a) **Use of price assessments as benchmarks** for the price of refined petrol and diesel.

(b) **The pricing of biofuels in road fuel contracts** to explore concerns that retailers, and therefore consumers, are being charged a price that does not accurately reflect the cost of biofuels components.

1.12 In addition we have considered:

(a) **The future of the road fuel sector**, and in particular the potential impact on competition and outcomes for motorists given the Government's policy objective to ban the sale of new petrol and diesel cars from 2030, and the complete ban on internal combustion engine (ICE) vehicles in the following years, alongside the transition to electric vehicles (EVs).

Structure of the final report

1.13 The remainder of this final report on the market study is structured as follows:

- Section 2 sets out some background information on the UK road fuels market.
- Section 3 gives an overview of the road fuel production and value chain.
- Section 4 explores how prices and costs have changed across the value chain since 2015.
- Section 5 sets out our findings on the retail sector, at both the national and the local level.
- Section 6 sets out our findings on the retailing of fuel at motorway service areas.
- Section 7 sets out our findings on the wholesaling sector.
- Section 8 sets out our findings on the refining sector.
- Section 9 explores the potential future path of the overall road fuels sector.
- Section 10 sets out the remedies that we consider appropriate to address the problems we have found in the road fuels market.

2. Background

2.1 The road fuel sector in the UK has evolved over time, and will inevitably continue to do so, as technologies and behaviours change, and wider factors exert their influence upon it.

2.2 The UK and countries around the world have recently been through a series of global shocks, in particular from the Covid pandemic and the Russian invasion of Ukraine, which have affected supply and demand for road fuel.

2.3 Even before this, however, the UK road fuel sector was undergoing significant change, with a number of long-term trends visibly transforming the sector.

2.4 The pressures of climate change will be a major force in these trends going forward, as shown through the commitments the UK government and devolved administrations and others around the world have already made with respect to the transition to low or zero carbon vehicles. This will have an impact on both the demand and supply side of the road fuel market over time, but it is not possible to predict with any certainty how this will impact on prices over the longer term.

Recent global shocks

2.5 The global markets for road fuel and refined products are historically volatile and subject to significant price movements. Since 2020, however, the UK fuel sector has been affected by several significant global supply and demand-side shocks, which have been the key driver of variations in pump prices experienced by UK consumers.

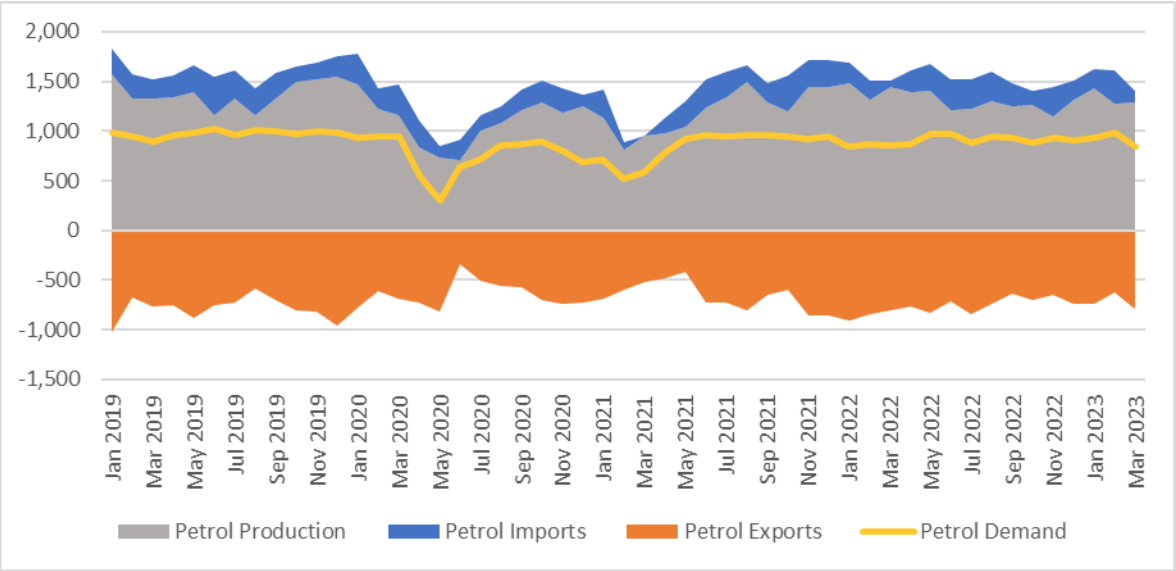
2.6 The Covid pandemic and associated lockdowns have had a clear impact on the market for road fuel in the UK. Reflecting a global trend,[10] demand for road fuel in the UK was much reduced through 2020,[11] with demand for petrol falling to its lowest level since 1963, and down by 22% on 2019. Diesel demand also fell by 17%, and prices for both were lower than in 2019.[12]

2.7 Refineries in the UK (in line with refineries around the world) reacted to lower demand by slowing production of petroleum products, from 60 million tonnes in 2019 to 50 million tonnes in 2020.[13] There was also a sharp fall in net imports of petroleum products, dropping to 6.0 million tonnes (from 12.1 million tonnes in 2019).[14]

[10] Short-Term Energy Outlook - U.S. Energy Information Administration (EIA).
[11] Digest of United Kingdom Energy Statistics (DUKES) 2021: Chapters 1 to 7.
[12] BEIS - Weekly Fuel Prices.
[13] Supply and use of petroleum products, Energy Trends September 2022, published by BEIS.
[14] Digest of United Kingdom Energy Statistics (DUKES) 2021: Chapters 1 to 7

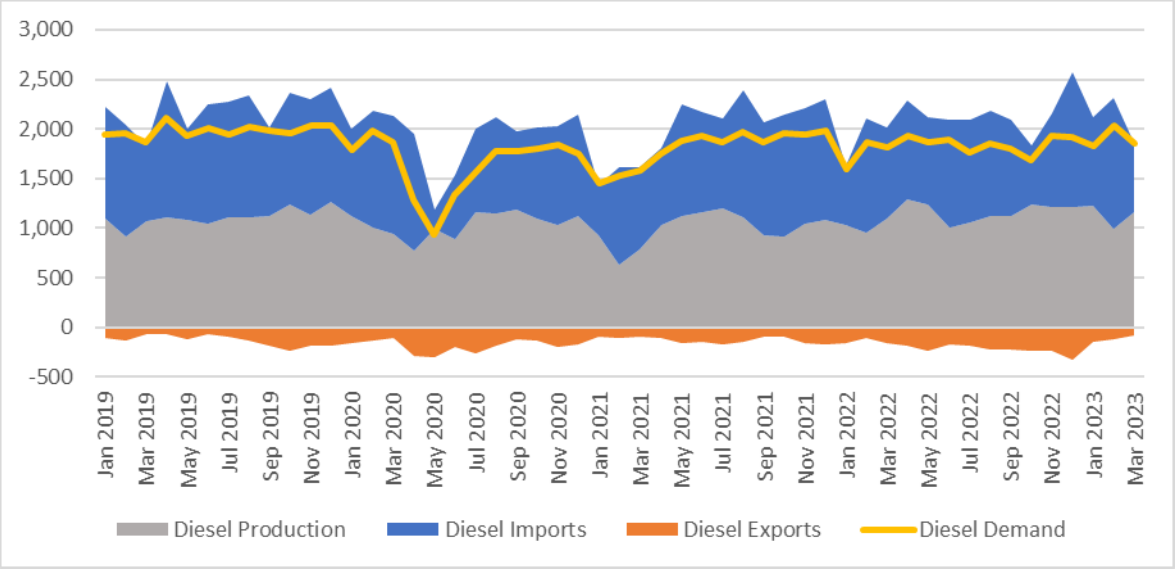
2.8 The recovery from Covid saw demand for road fuel rise sharply in the UK, as can be seen in figures 2.1 and 2.2, showing reduced demand in 2020 followed by an increase throughout 2021.

Figure 2.1: UK monthly petrol production and demand (thousand tonnes)



Source: Energy Trends March 2023, published by BEIS and CMA analysis.

Figure 2.2: UK monthly diesel production and demand (thousand tonnes)



Source: Energy Trends March 2023, published by BEIS and CMA analysis. (Note: these figures only include that of road diesel)

2.9 The Russian invasion of Ukraine caused a significant global shock in February 2022, as sanctions limited the availability of Russian-refined product all over the world, including to the UK. The ensuing volatility was a key driver of increased pump prices in 2022, which have since declined from their peak through the latter part of 2022 and into 2023.

2.10 OPEC agreements on oil production levels among its members play an important market role. In 2020, OPEC and its allies agreed to limit crude oil production in response to the Covid pandemic.[15] In October 2022, OPEC+ nations agreed a reduction in supply of crude oil of two million barrels per day, equivalent to 2% of global production.[16] In April 2023, OPEC+ announced a further cut to supply of 1.66 million barrels per day.[17] These reductions to the global oil supply naturally feed through the supply chain and result in higher prices for consumers.[18]

2.11 Oil and wholesale fuel are traded in US dollars. The weakening of the pound against the US dollar in 2022 translated to increased costs for UK fuel retailers and subsequently increased prices for the consumer[19] though this effect has weakened as the pound regained strength against the dollar at the end of 2022 and into 2023.[20]

2.12 Although the Covid pandemic has now become a less significant driver of variations in pump prices, we can still expect global shocks to be the key driver of volatility in the future.

Developments in UK over recent decades

2.13 Taking a step back from recent and current global shocks, a number of long-term trends have been present in the UK market over recent decades.

2.14 A significant aspect of the sector in the last two decades has been the growth of the major supermarkets in the retail supply of road fuel. Over this period the number of UK petrol filling stations (PFSs) has continued to decline. Total UK road fuel demand has remained constant, while the number of vehicles on the road has increased. Road fuel blenders and importers in the UK wholesale sector continue to play an important role in the supply chain, while the number of UK refiners has decreased.

2.15 In 2013, the Office of Fair Trading (OFT) found that supermarkets had increased their market share of road fuel sold from 29% in 2004 to 39% in 2013. Since then, the big four supermarkets[21] have increased their share of the road fuel sold in the UK to 44% in 2021.[22,23]

2.16 At the same time, the OFT identified in its 2013 report *UK petrol and diesel: An OFT Call for Information* a decline in the number of PFSs, falling from 10,867 in

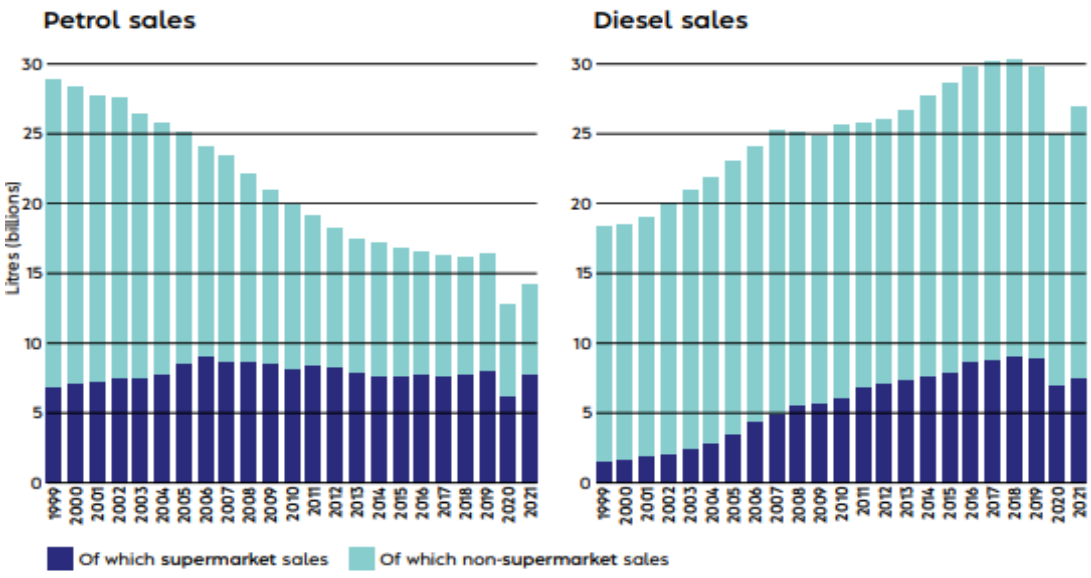
[15] OPEC 2020 Annual Report
[16] OPEC 33rd OPEC and non-OPEC Ministerial Meeting
[17] OPEC 48th Meeting of the Joint Ministerial Monitoring Committee
[18] RAC - OPEC+ announce oil production cut - what it means for drivers
[19] October 2022: monthly exchange rates
[20] May 2023: monthly exchange rates
[21] Tesco, Asda, Morrisons and Sainsbury's.
[22] UK petrol and diesel sector An OFT Call for Information January 2013 OFT147
[23] Petrol Retailers Association – Market Review 2021

2004 to 8,677 in 2012.[24] This decline in the number of PFSs appears to have slowed and stabilised in the period since 2012, with the number of PFSs in 2022 only slightly lower at 8,365.[25]

2.17 Total demand for road fuels has been relatively stable over the last two decades at an average 37 million tonnes per annum.[26] The size of the UK vehicle fleet has increased nearly every year since the end of World War II, and by 2018 had grown by more than a quarter compared to the end of 2001 and now stands at 39.4 million vehicles.[27]

2.18 Demand for petrol had until recently decreased each year since 2000, whereas demand for diesel has been increasing. Demand for diesel was around twice that of petrol by 2018, not least as commercial fleets tend to use diesel-engine vehicles.[28] Figure 2.3 below shows petrol and diesel sales over the period from 1999 to 2021 by billions of litres. Figure 2.3 shows that petrol sales in 1999 exceeded diesel sales but have been consistently declining over the period while diesel sales have risen, exceeding petrol sales from 2004 onwards. The figure also shows that in 2020 there was a big reduction in sales of both petrol and diesel because of the pandemic lockdowns. Figure 2.3 shows that both petrol and diesel sales volumes recovered in 2021, though not to the same levels as the pre-2018 period and that diesel sales volumes have started to decrease from their 2019 peak of 30 billion litres to around 26 billion litres in 2021.

Figure 2.3: Fuel Sales (billions of litres)



Source: Forecourt Report 2022, Association of Convenience Stores.

[24] UK petrol and diesel sector An OFT Call for Information January 2013 OFT147
[25] PRA market review 2023
[26] Road Fuel consumption and the UK motor vehicle fleet (2020).
[27] Road Fuel consumption and the UK motor vehicle fleet (2020).
[28] Road Fuel consumption and the UK motor vehicle fleet (2020).

2.19 The number of UK refineries has decreased, with the sector experiencing reductions in both capacity and overall production. Since the beginning of this century, three UK refineries have closed. Petroplus Holdings AG closed its Teeside refinery in 2009 and its Coryton refinery in 2012.[29] Murco Petroleum Limited closed its Milford Haven refinery in 2015.[30]

The impact of decarbonisation

2.20 As well as changes in supply, demand and retailing patterns for UK road fuel, wider imperatives around the impact of fossil fuel use in vehicles are beginning to have a significant impact on the sector.[31]

2.21 The impact of the UK's net zero ambition, and our transition away from fossil fuels, will have a transformational impact on the road fuel industry. Government programmes currently in place to support the UK's commitment to reach net zero greenhouse gas emissions by 2050, most notably the UK's intention to ban the sale of petrol, diesel and hybrid (also known as 'ICE' or Internal Combustion Engine) cars from 2030, will have major consequences for UK fuel refiners, wholesalers, retailers and consumers.[32]

2.22 The shift away from ICE vehicles will be met with an increased demand for electric vehicles (EVs) and charging outlets. While numbers of petrol stations have declined over previous decades, as mentioned in the preceding section, forecasts suggest that the UK will require at least 280,000 to 480,000 public charge points by 2030, to support EV road users, as set out in the CMA's Electric Vehicle Charging Market Study.[33]

2.23 Most stakeholders we engaged with as part of our study suggested that the global net zero transition, sometimes exacerbated by geopolitical instability, is already affecting the nature of the UK's fuel industry, noting in particular:

(a) the cost and compliance burden placed on industry to meet key government requirements in the fuel sector, such as the Renewable Transport Fuel Obligation (RTFO);[34]

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[29] UK petrol and diesel sector An OFT Call for Information January 2013 OFT147.
[30] See Puma Energy buys Murco Milford Haven oil refinery site - BBC News.
[31] See 2021 UK Greenhouse Gas Emissions Provisional Figures 2021 UK greenhouse gas emissions, provisional figures, page1 (CO2 emissions from transport rose 10% in 2021). NB figure for territorial CO2 emissions by fuel type are found in 2021 UK greenhouse gas emissions: provisional figures - data tables [Excel] – Table 2. Shows petroleum made up 132.9 of the total 341.5Mt of CO2 emissions for 2021, the equivalent of 38.9%. Rise in figures between 2020 and 2021 refers to a rise in overall CO2 emissions in transport by 10% (page 11) and a rise in the UK's total petroleum emissions from 121.8Mt to 132.9Mt – the equivalent of an approx.8% rise.
[32] See Government's Net Zero Strategy: Build Back Greener, October 2021.
[33] See Final Report – Electric Vehicle Charging Market Study, July 2021, page 5.
[34] See Decarbonising Transport – A Better, Greener Britain.

(b) the increasing demand for the import and use of renewable blending products (for example, the addition of 10% ethanol (E10) to petrol);[35] and

(c) volatility in the UK Emissions Trading Scheme (ETS) and carbon prices that flowed from the Russian invasion of Ukraine.[36]

2.24 Most significantly, stakeholders expected that the transition to net zero would lead to an overall decline in the demand for petrol and diesel in the UK in the medium term, significantly reducing the overall profitability of the UK's refining sector and potentially driving a rationalisation of fuel infrastructure, distribution channels, and production capacity, across the UK and Europe.

2.25 At the same time some stakeholders saw opportunities in the UK's low-carbon future, particularly in the expected demand for energy storage and infrastructure, and the supply of products that could be used to mitigate customers' carbon emissions such as Renewable Transport Fuel Certificates (RTFCs) and carbon offsets.

2.26 Similarly, the UK's current carbon budget relies on low carbon fuels and biofuels for delivering approximately a third of the UK's domestic transport carbon savings – and the need to supply these fuels will almost certainly impact the way refiners prioritise crack and blending operations in the lead up to 2050.[37]

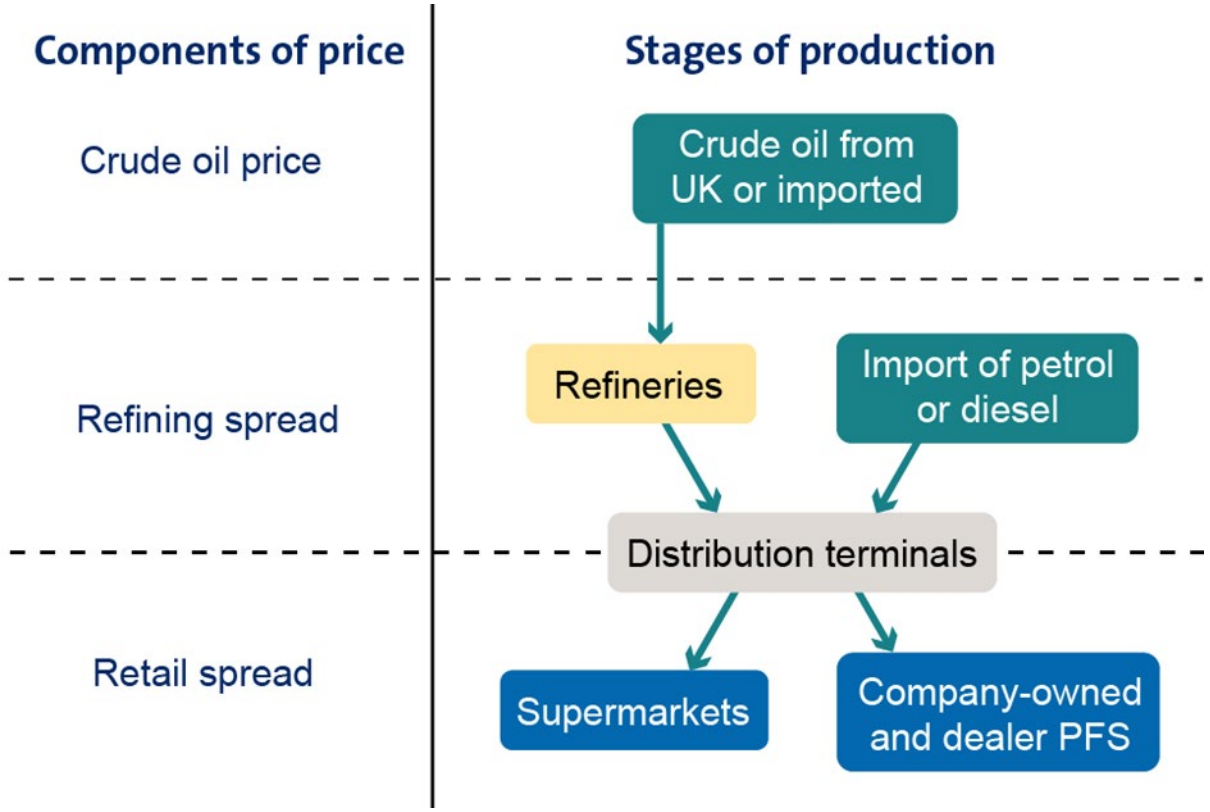
[35] See Decarbonising Transport – A Better, Greener Britain.
[36] See Russia-Ukraine conflict will boost demand for carbon offsets
[37] Decarbonising Transport – A Better, Greener Britain, page 184.

3. The road fuel value and production chain

Value chain

3.1 At the launch of our market study we said that we would consider wider elements of the supply of road fuel in the UK, looking throughout the supply chain. This includes the refining, wholesale and retail segments of the sector, which are connected as outlined in Figure 3.1 below.

Figure 3.1: Road fuel value chain



Source: CMA graphic.

3.2 We now provide an overview of each of these elements of the supply chain in turn.

Overview of refining

3.3 Petrol and diesel are produced by refining – this is the process of transforming crude oil into various petroleum products such as petrol, diesel and jet fuel. Refining can happen domestically, at a UK refinery, or it can happen overseas, with petrol and diesel then being imported. In the first quarter of 2023, around 23% of petrol and 51% of diesel used for road fuel in the UK was imported. An important change in the import market is in the origin of imported diesel; while Russian-refined diesel accounted for 34% of UK imports in each year 2019-21, this had dropped to zero by mid-2022 in response to the invasion of Ukraine. 54%

of petrol produced by UK refineries and 10% of diesel produced by UK refineries was exported over this period.[38]

3.4 There are six major refineries in operation in the United Kingdom:

- four in England: Stanlow Refinery, Cheshire, operated by Essar Oil UK Limited (Essar); Fawley Refinery, Hampshire, operated by Esso Petroleum Limited (Esso); Humber Refinery, North Lincolnshire, operated by Phillips 66 Limited (P66); and Prax Lindsey Oil Refinery, Killingholme, Lincolnshire, operated by State Oil Limited (Prax).
- one in Scotland: Grangemouth Refinery, operated by Petroineos Refining Limited and Petroineos Trading Limited (Petroineos).
- one in Wales: Pembroke Refinery, operated by Valero Energy Limited (Valero).

3.5 For domestic sales, refined products are either supplied directly from refineries or from inland terminals. A pipeline infrastructure in England and Wales, combined with railway and maritime shipping options, make it feasible for refineries to supply to other regions in the UK, although there are no pipeline connections between Scotland and England.

3.6 Over time, the UK's refining capacity has reduced, with UK refineries facing competition from overseas operations.

Overview of wholesaling

3.7 Retailers can either purchase road fuel from independent wholesalers, who themselves purchase from refiners and importers, or directly from integrated refiners and importers who have a wholesale operation.

3.8 The road fuel industry does not necessarily identify a separate wholesaling segment, rather it distinguishes between 'midstream' activity (including primary distribution and blending fossil fuel with renewables) and 'downstream' activity (including, in addition to retail, services provided by brand owners and secondary distribution). For the purposes of this report, we refer to the supply of fuel to retailers as 'wholesale supply', or the 'wholesale market', to distinguish it from the retail market where retailers supply fuel to final customers.

3.9 We have identified two principal models of wholesale supply:

[38] Energy Trends September 2022, published by BEIS and CMA analysis.

- unbranded supply, which typically covers the supply of fuel only, and where retailers sell fuel under their own brand.

- branded supply, which typically includes the supply of fuel plus a branding package and may include ancillary services, such as marketing, access to a loyalty scheme and fuel cards.

3.10 Some wholesale suppliers also operate PFSs.

Overview of retailing

3.11 Retailing is the activity of selling petrol and diesel directly to motorists, overwhelmingly at PFSs, which may or may not form part of a larger site.

3.12 As noted in the preceding chapter there are a large number of PFSs across the UK, with 8,365 present in December 2022.[39] These vary significantly in their business model and the nature of their location, and customers differ in how they pay for fuel.

Retail business models

3.13 PFSs are primarily owned and run under one of three business models:

- Oil-company-owned: these are owned by an oil company (such as BP, Shell, Esso or Murco) which brands the PFS. They may be operated by the company (or its retail subsidiary) or by a dealer, in which case it is the dealer setting the pump prices.[40]

- Independents: these are owned and operated by independent dealers which can be branded or unbranded (see Figure 3.2 below).[41] They differ significantly in size with some dealers owning a single PFS – one stakeholder told us that this is the case for 87% of independents – and other businesses such as Rontec, Motor Fuel Group (MFG) and Euro Garages operating chains of PFSs.

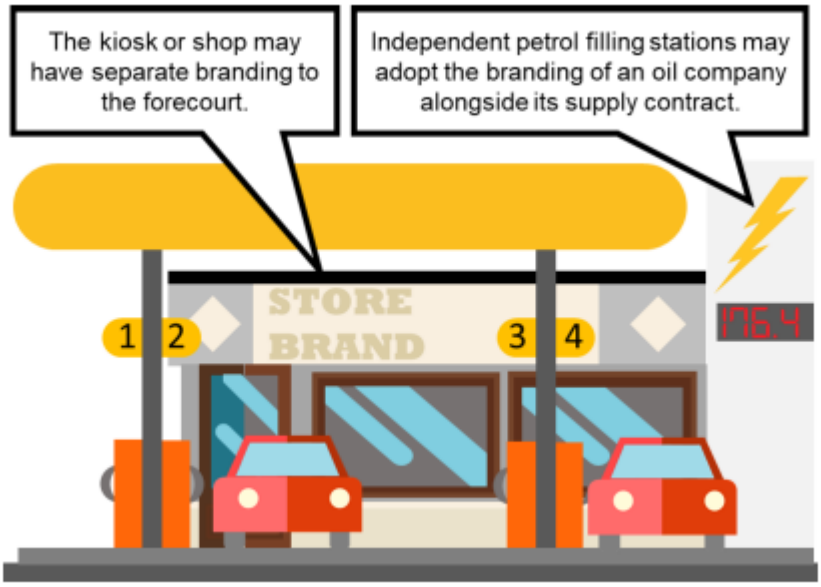
- Supermarkets: these are owned and operated by grocery retailers such as Tesco, Asda, Sainsbury's and Morrisons and are generally located next, or close, to their supermarket.

[39] PRA market review 2023, December 2022 data.
[40] The former is usually known as ‘company owned, company operated’, or ‘COCO’ while the latter is usually known as ‘company owned, dealer operated’, or ‘CODO’.
[41] These are usually referred to as 'dealer owned, dealer operated' (DODO). Independently owned PFSs are usually supplied under an agreement with an oil company whose name appears on the brand sign but also include unbranded PFSs with no oil company identification. This means that when the PFS is branded ‘Shell’ for instance, it is not necessarily operated by it.

3.14 Oil company sites represent 20% of volume and 18% of PFSs. Independents make up 37% of volume and 64% of PFSs. Supermarkets meanwhile have 43% of volume, but only 18% of sites.[42]

3.15 Fuel retailers frequently also sell food, drink and other consumer goods on the same site, through a kiosk or shop. The way in which PFSs may be branded and appear to the public is illustrated in Figure 3.2 below.

Figure 3.2: Branding of PFS: forecourt and shop



Source: CMA Analysis

3.16 Fuel retail operations vary in a number of ways across these different business models, for example with supermarkets typically having the highest sales volumes per site and making a greater proportion of revenue across their business from non-fuel sales.

Urban and rural differences

3.17 A competitive retail fuel market can be particularly important to rural communities, which tend to be more reliant on cars as a means of transport. Those living in rural villages, hamlets and isolated dwellings travel on average 2.5 miles by car for every one mile travelled by those living in urban conurbations.[43] We also noted that some remote and rural areas may not have enough consumers to support larger petrol stations and may need to charge higher prices to enable them to remain viable. Larger urban sites may be able to spread these overheads over a higher volume of fuel sales, leading to lower pump prices overall.

[42] PRA market review 2023, December 2022 data.
[43] Department for Transport, National Travel Survey, Table NTS9904

3.18 By way of further illustration of the comparative volumes being sold, the OFT found in its 2013 report *UK petrol and diesel sector* that there were wide differences in average volumes based on site location, with the average rural site selling 1.9 million litres per year, compared to 4.8 million litres at 'urban transient' sites (main roads in urban areas) and 8.9 million litres at sites on motorways.[44] In 2022, the CMA's Urgent Review found that the average volume sold by oil company owned sites was 4.8 million litres, for an independent 2.5 million litres and for a supermarket 10.6 million litres.[45]

3.19 We consider local and regional variations in prices in the UK further in Section 5.

Means of purchasing road fuels

3.20 As noted in the 2013 OFT report, there are generally two ways to purchase road fuels in the UK:

- most petrol or diesel is bought from retailers at the advertised pump price using cash or credit or debit cards.
- commercial drivers are more likely to purchase diesel and often use fuel cards, where the price paid is not the advertised pump price and is often lower than the pump price.

3.21 The OFT noted that a company may, for instance, have a fuel card that allows it to pay for fuel on a 'Platts-plus' basis,[46] or, alternatively, the agreement might be that the price is the advertised pump price minus a certain amount.[47] Business customers may therefore be paying less than non-business customers. Fuel cards are typically used to purchase up to 10% of the volume of fuel sold by supermarkets, 10% to 20% for the large retail groups and up to around 80% for motorway retailers.

3.22 We consider competition in the retail market in detail in Section 5 and 6 of this report.

[44] UK: petrol station volume by owner type 2021.
[45] PRA market review 2021
[46] 'Platts plus' refers to a type of pricing where the price paid for fuel is the value of a commodity price assessment provided by S&P Global (Platts) and an additional amount that reflects the retailers' own costs and to give them a margin.
[47] UK petrol and diesel sector An OFT call for information January 2013 OFT147.

4. Changes to fuel prices over time

4.1 In order to understand what factors have been influencing changes in pump prices, we have looked at the levels of, and trends in, prices of petrol and diesel at the pump, and broken these down into a number of components:

(a) the global price of crude oil;

(b) the pound to dollar exchange rate (as crude oil and refined fuel are traded in US dollars);

(c) biofuel prices and other costs related to the Renewable Transport Fuel Obligation (RTFO);

(d) the fuel duty charged by the government (currently 52.95ppl);

(e) VAT charged at the end of every forecourt fuel transaction (currently at 20%);

(f) refining spread (which includes refiners' operating costs and margins); and

(g) retail spread (which includes retailers' costs and margins and the cost of transportation to the PFS).

4.2 We have obtained data on pump prices, the price of crude oil, prices of biofuels, CIF[48] benchmark prices, as well as exchange rates, fuel duty and VAT for the period January 2015 to May 2023 (inclusive).[49] This has enabled us to calculate, for both petrol and diesel:

(a) refining spreads – the difference between the CIF benchmark price and the price of crude oil, calculated for the amount of crude oil contained in 1 litre of petrol/diesel sold at the pump; and

(b) retail spreads – the difference between fuel prices at the pump net of fuel duty and VAT, and estimated wholesale costs, which are based on the benchmarked cost of diesel and petrol, and the cost of biofuel.

4.3 The retail spread includes retailer costs (such as staffing and utilities), and transportation costs as well as retailer profit, and as such is not a measure of retail margins. Nonetheless, it gives an indication of retailers' financial performance and profitability and can show more up to date trends than margin data.

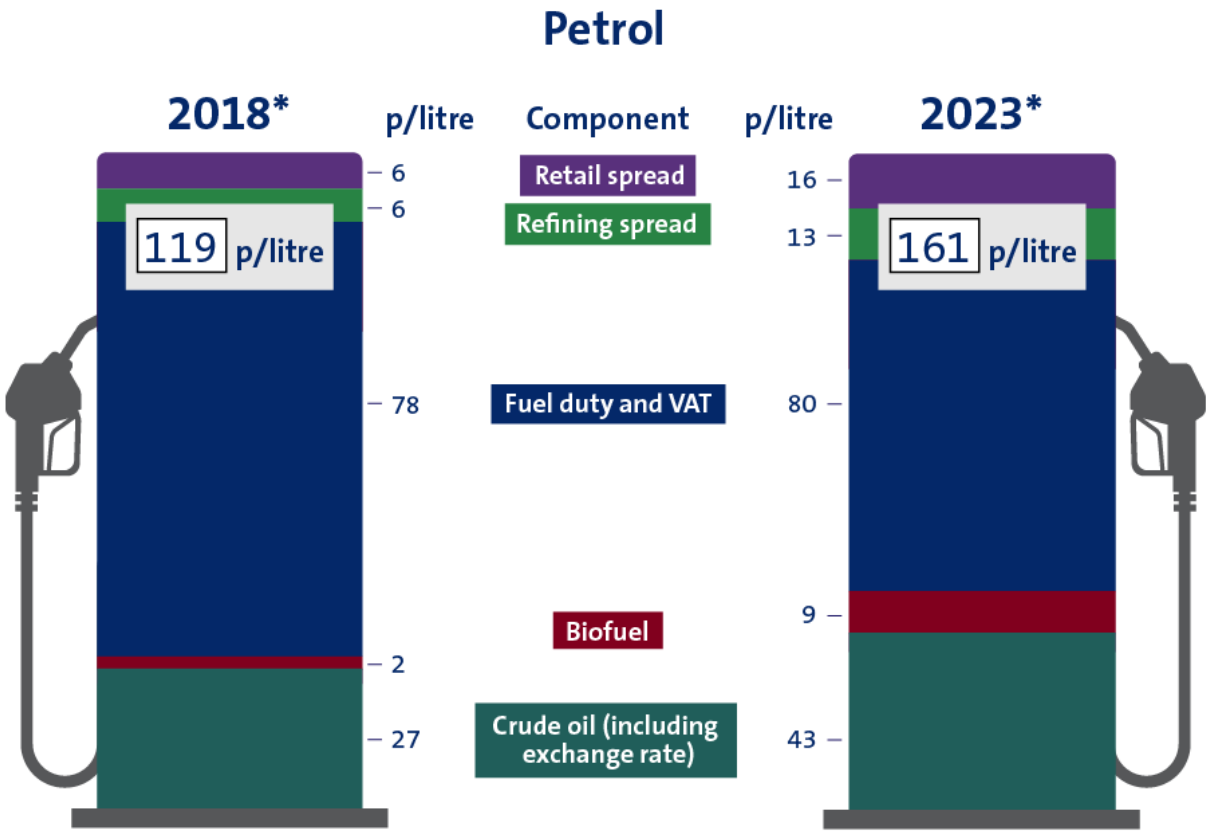
[48] CIF stands for Cost, Insurance and Freight and is a commonly used pricing standard.
[49] See Annex A – 'Description of data and spreads analysis' for more details on the data we have obtained.

Trends in retail prices and cost components

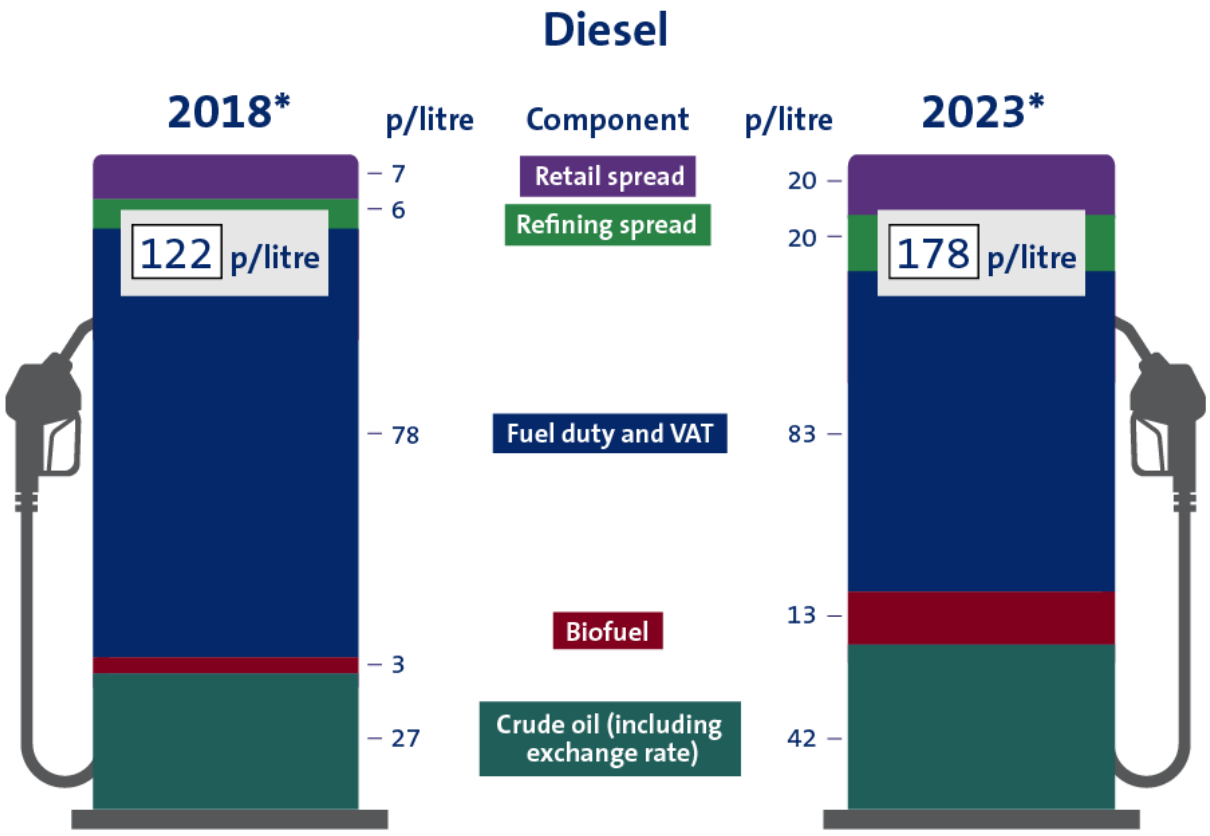
4.4 Figure 4.1 shows average prices at the pump for petrol and diesel for the years ending May 2018 and May 2023, broken down into broad component categories. As the figure shows, the crude oil, biofuel, refining spread and retail spread components have grown between 2018 and 2023 for both petrol and diesel, and each of these components makes up a greater share of the pump price in 2023 than in 2018, while the share of fuel duty and VAT has fallen between 2018 and 2023.

4.5 In this section, we are looking at nominal prices - we would expect nominal prices and costs to increase over time due to the impact of inflation.[50]

Figure 4.1: Average pump price with components for petrol (top) and diesel (bottom), 2018 vs 2023, pence/litre



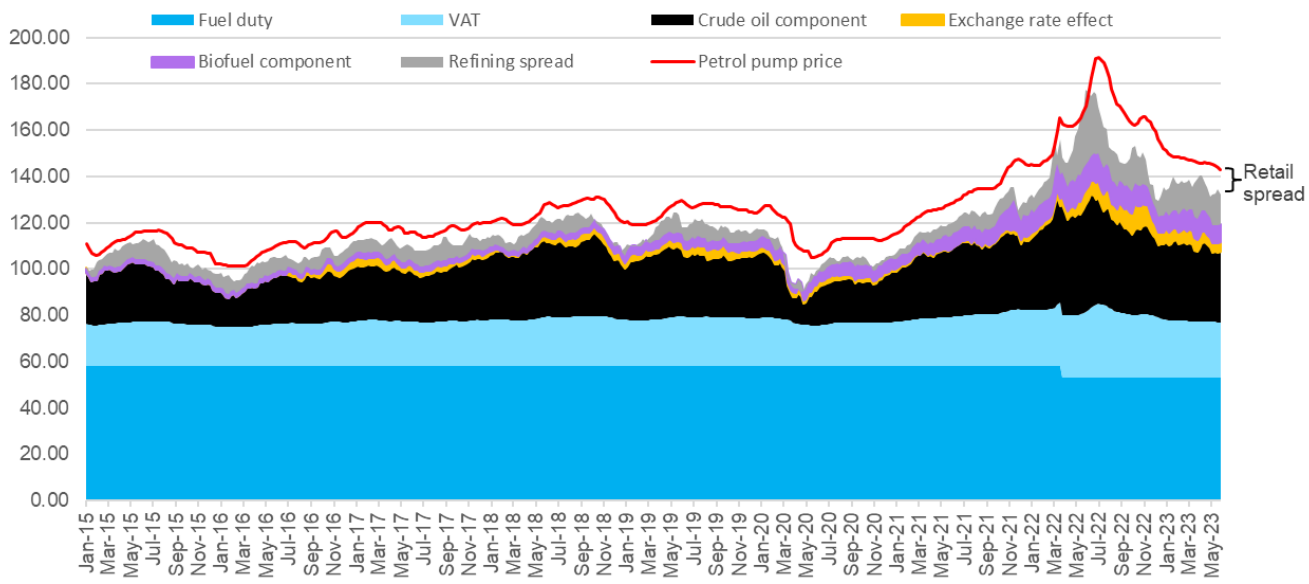
[50] In particular, £1 in May 2018 is equivalent to £1.24 in May 2023 in nominal terms. See Annex A – 'Description of data and spreads analysis' for more details on the impact of inflation on retail spreads.



Source: BEIS, Platts, Bloomberg and Bank of England data, and CMA analysis.
Note: *Data is averaged over 52 weeks as follows: 2018 includes 52 weeks in the period June 2017 – May 2018, and 2023 includes 52 weeks in the period June 2022 – May 2023.

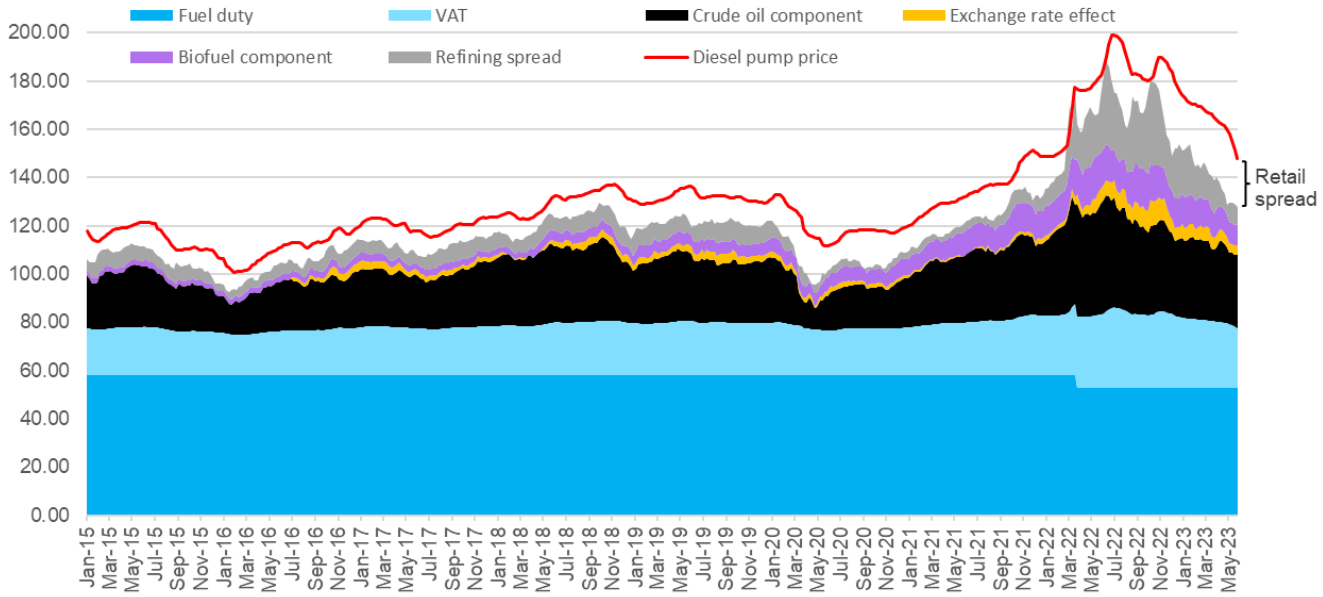
4.6 Figures 4.2 and 4.3 below show the pump price alongside its components for petrol and diesel respectively. These charts show the clear distinction between the trends for pump price components from 2015-19 versus the greater volatility in the non-crude components observed from 2020-present.

Figure 4.2: Petrol pump price with components, January 2015 – May 2023 (inclusive), pence/litre



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

Figure 4.3: Diesel pump price with components, January 2015 – May 2023 (inclusive), pence/litre



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

4.7 Petrol and diesel average retail prices were in the range 100 to 120ppl in the period 2015–2017, then increased to 120 to 140ppl in 2018–2019.

4.8 As shown in Figures 4.2 and 4.3 above, the most significant components of pump prices are the cost of crude oil (and corresponding exchange rate fluctuation), fuel duty and VAT. Of these, fuel duty is set at a fixed level, which only changed once over the period and as such, does not explain ongoing variation in retail prices. VAT is a fixed percentage which is added onto the price at point of sale, and only varies in amount when there is variation in underlying costs.

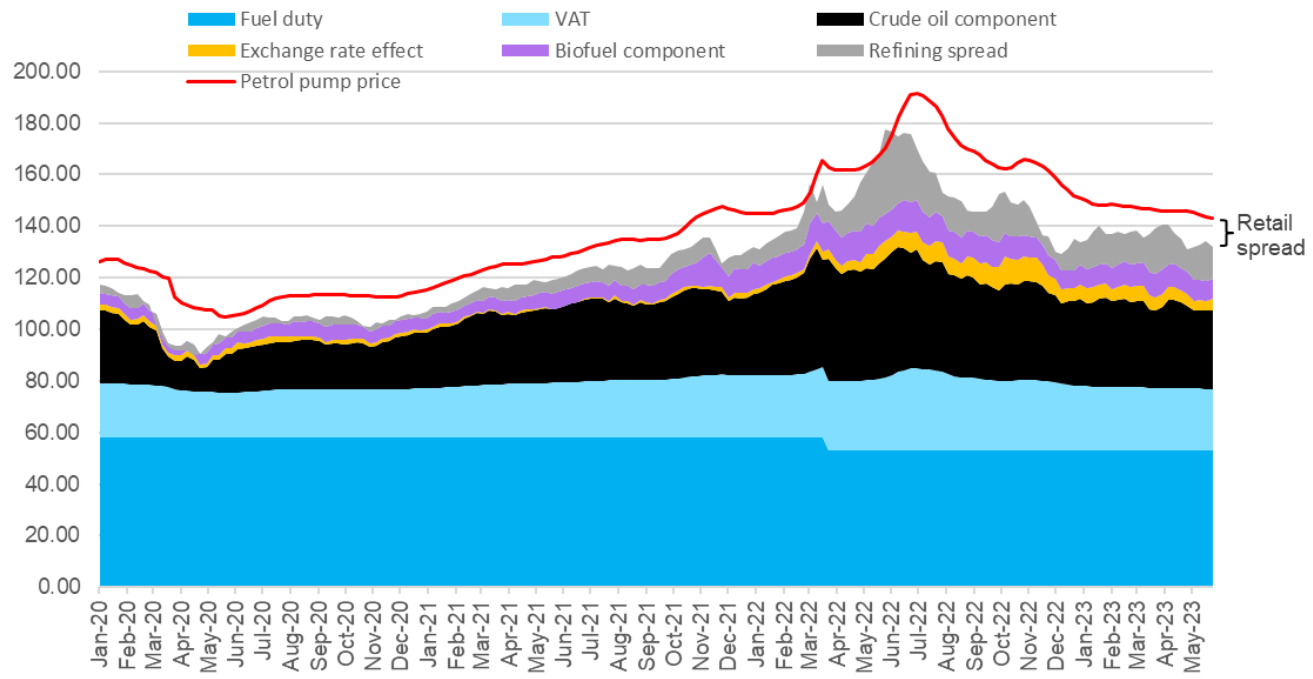
4.9 As both petrol and diesel are derived from crude oil, variations in retail prices for both are explained to a great extent by changes in the cost of crude oil as well as exchange rate fluctuations. The price of crude oil has shown significant fluctuation over the period 2015–2023, driven by global supply and demand factors. In addition, some of this variation has been exacerbated by variation in the value of the pound against the US dollar.

4.10 Figures 4.2 and 4.3 above also show that the refining spread has historically been a relatively small component of the pump price, generally below 10ppl in the majority of weeks over the period 2015–2019.

4.11 In relation to retail spreads, Figures 4.2 and 4.3 show that these have typically been a relatively small component of the pump price for both petrol and diesel, ranging from 5 to 10ppl in the majority of weeks over the period 2015–2019.

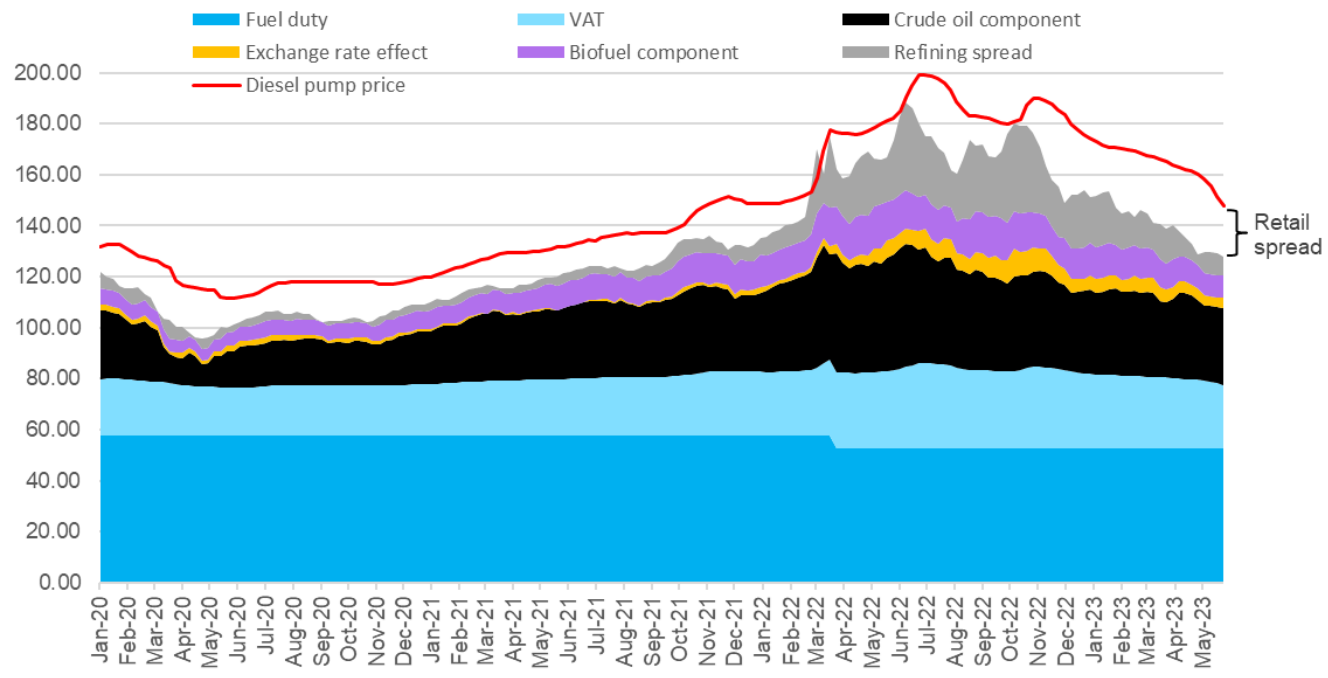
4.12 Figures 4.4 and 4.5 below show the same price component data for the period from January 2020 to May 2023, allowing us to observe in more detail the trends during this period.

Figure 4.4: Petrol pump price with components, January 2020 – May 2023



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

Figure 4.5: Diesel pump price with components, January 2020 – May 2023



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.
Note: The exchange rate effect is calculated relative to 7 June 2021, and it is negative in some periods.

4.13 Average retail prices for both grades of fuel dropped significantly in the first half of 2020 during the Covid pandemic. Prices then increased in 2021 and the beginning of 2022, reaching peaks of 190 to 200p in July of that year. Both petrol and diesel pump prices have fallen since their peaks in July 2022. For petrol, this fall has been relatively steady, with the exception of a small upward movement in prices close to the end of 2022. For diesel, on the other hand, the peak in July 2022 was higher, and the decline from this peak has been both slower and less steady, with a bigger uptick at the end of 2022.

4.14 As demand for refined product fell during the pandemic, refining spreads fell below their historic level and were below 5ppl (and even below zero in some weeks) in 2020 and most of 2021. However, refining spreads increased in early 2022 and reached record highs in the first half of 2022. Refining spread has generally reduced since peaking in June 2022, although again, this process has been both more pronounced and steadier in the case of petrol than for diesel. Petrol saw a small uptick in refining margins around October-November 2022, while diesel saw a larger uptick in August-September 2022, and another in October-November 2022.

4.15 Retail spreads increased in the first half of 2020 coinciding with the first Covid lockdown and a significant fall in both the price of crude oil and UK demand for petrol and diesel. Since the end of 2021 there has been increased volatility in retail spreads, including periods of negative values as well as record highs. Retail spreads reached record highs in August 2022, before beginning to fall. Retail spreads in petrol have been holding fairly steady since the start of 2023 and standing at 10.8ppl at the end of May 2023. For diesel, however, while the retail spread fell to very low levels as refining spreads increased in Autumn 2022, over the whole period since the July price peak it has often been at a historically high level and has declined more slowly than the retail spread for petrol. From January to May 2023, diesel retail spread averaged 24.3ppl, significantly above its historic level. The diesel spread has been falling during May 2023, standing at 20ppl at the end of the month, though still remaining higher than the petrol spread. We explore the reasons for the divergent paths taken by petrol and diesel retail spreads in section 5.

4.16 We have continued to see an inverse relationship between refining spread and retail spread. While the combined size of the two spreads has been reducing towards historic norms for petrol, it has remained well above these levels for diesel during 2023.

4.17 Under the RTFO, the required percentage of fuel that comes from renewable and sustainable sources has been increasing over time. In addition, the prices of biofuels have shown greater fluctuation and have been on an increasing trend, particularly since early 2020. This means that over the period since 2020 the cost of biofuels (and associated arbitrage and levies) has become a more significant

component of the retail price for both petrol and diesel. Since late 2022, for both types of fuel, the cost of the biofuel component has held steady.

5. National and Local Retail Competition

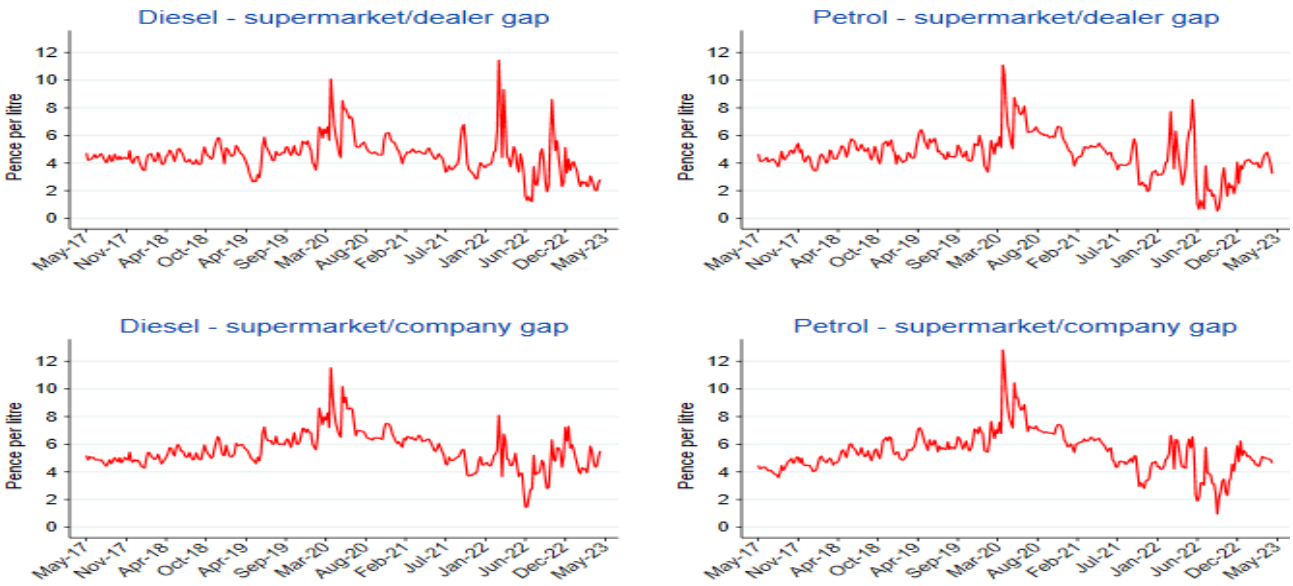
5.1 This section sets out our findings on the functioning of the UK retail market for road fuel, considering first patterns of competition at the national level, before looking at how this plays out at the local level. We consider fuel retailers at motorway service areas, which are subject to different competitive dynamics, separately in section 6.

Patterns of retailer pricing

5.2 As set out in section 4, in the years 2015-19 changes in the price of road fuel were primarily driven by changes in the price of crude oil, an internationally-traded commodity, which can fluctuate substantially in price. Since the start of 2020, however, other components of retail price have fluctuated more widely, resulting in the average retail price of petrol and diesel exhibiting significant volatility in the past three years. It fell steeply during early 2020 when the Covid pandemic began, before rising steadily from early 2021 as the global economy emerged from lockdown and oil demand grew. Then it increased steeply in early 2022 when Russia invaded Ukraine, before starting to fall again in mid-2022, with petrol falling in price faster than diesel.

5.3 In this section we focus on the pattern of pricing by different types of retailers and in particular the relative difference between the average prices that they charge. These ‘price gaps’ shown in Figure 5.1, show on average, which is the cheapest type of retailer to buy from over time.

Figure 5.1: Supermarket price gaps over time



Source: CMA analysis based on data from Experian Limited, ('Experian data')[51]

5.4 Our analysis shows that, on average, supermarkets have consistently been the cheapest type of retailer over the past six years. However, the size of the price gap has not been consistent over time so during some periods the relative saving from visiting the average supermarket versus the average dealer or company site has been bigger or smaller. Focussing on recent developments:

(a) the supermarket-dealer price gap increased dramatically in early 2022 and more so for petrol than for diesel. In contrast the supermarket-company price gap did not widen to the same extent.

(b) After the early 2022 peak, the price gap between supermarkets and both dealers and companies fell and dropped below the historic average in mid to late 2022 for both petrol and diesel.

(c) There has been a sustained increase in the volatility of the price gap since early 2022.

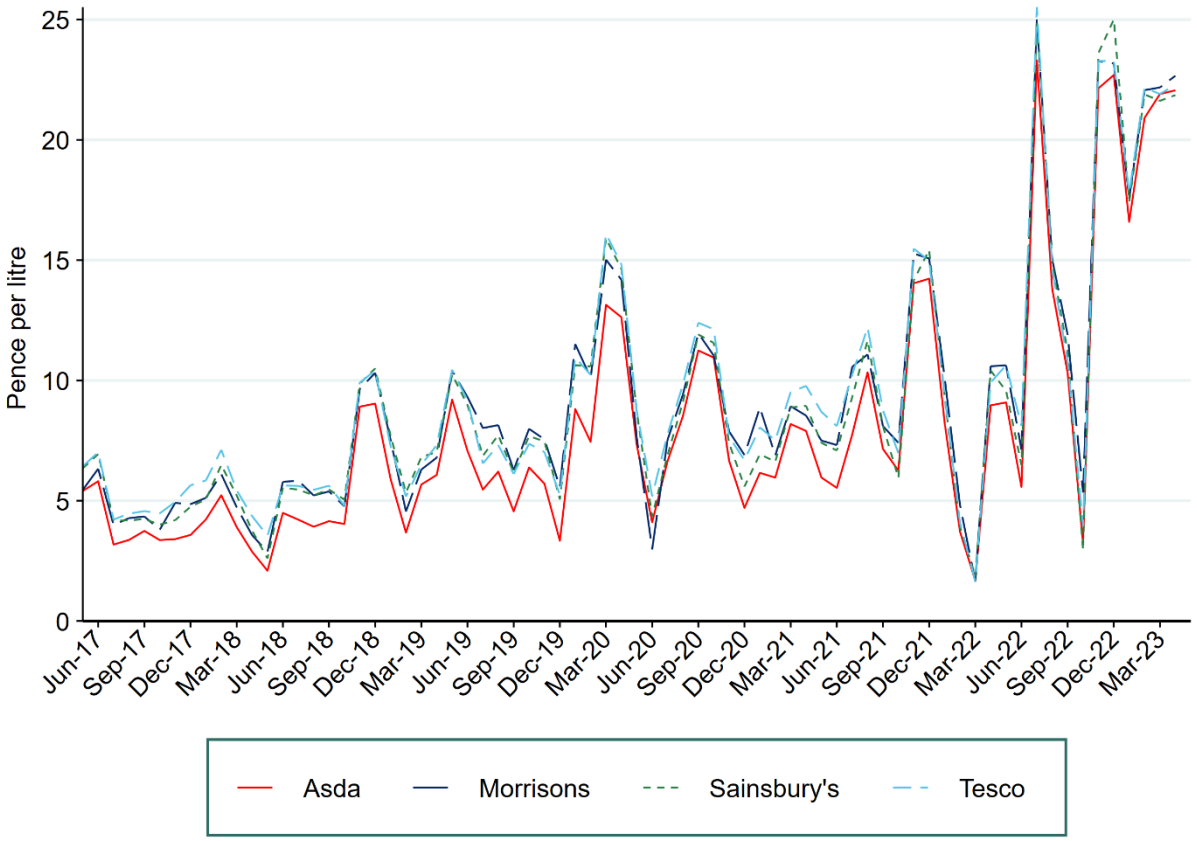
(d) In 2023 for petrol the price gap between supermarket and both dealers and company sites has been around its historic average. For diesel the price gap between supermarkets and dealers is less than its historic average (that is, supermarkets are cheaper than dealers but by less than they have been historically). However, the price gap between supermarkets and company sites is around the historic average.

[51] Experian data is based upon data which is provided by third parties, the accuracy and/or completeness of which it would not be possible and/or economically viable for Experian to guarantee. Experian does not accept liability for any inaccuracy, incompleteness or other error in the Experian data.

5.5 It is important to note that this analysis is based on average prices across different categories of PFS retailers. Since PFS pricing is set locally based on local supply and demand (see paragraph 5.145 onwards), prices will vary across the UK and the price gap between different categories of retailers could differ in different areas. Additionally, since this analysis is based on average prices, there could be local markets where either a company- or dealer-owned site is the cheapest provider, even if a supermarket is present.

5.6 Figure 5.2 and Figure 5.3 below show how the retail spread for each supermarket retailer compares to the other supermarkets, separately for petrol and diesel. We have shown retail spread here as this is the component of price that is controlled by the retailer. Each figure shows the average retail spread (the markup on the wholesale cost) of each supermarket averaged over a month. As such, what we see is the gap in retail spread between each of the supermarket retailers.

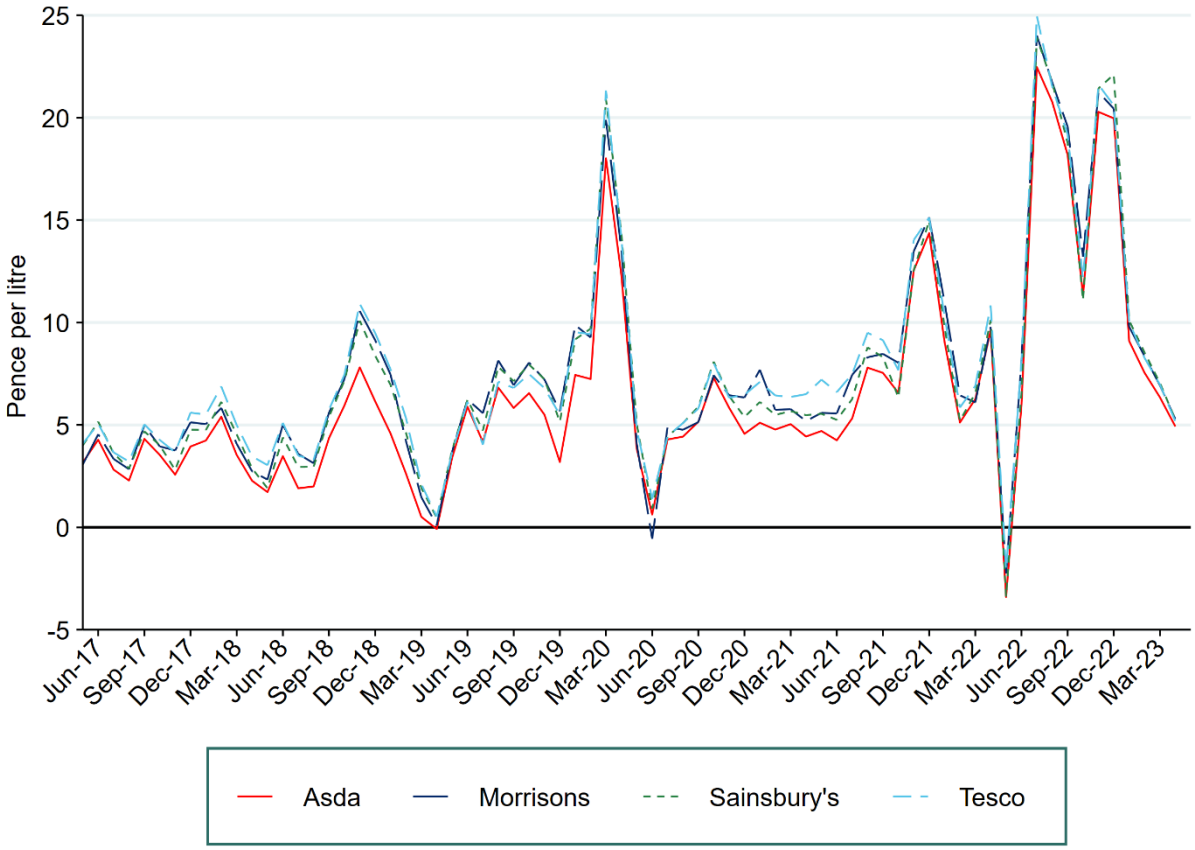
Figure 5.2: Average supermarket markup on benchmarked wholesale cost over time for Diesel, monthly



Source: CMA analysis based on Experian, BEIS,[52] Platts, Bloomberg and Bank of England data.

[52] BEIS existed until 2023 when it was split to form new departments, including the Department for Business and Trade (DBT), and the Department for Energy Security and Net Zero (DESNZ). References in the report to data supplied by BEIS cover data subsequently supplied by DESNZ when BEIS ceased to exist.

Figure 5.3: Average supermarket markup on benchmarked wholesale cost over time for Petrol, monthly



Source: CMA analysis based on Experian, BEIS, Platts, Bloomberg and Bank of England data.

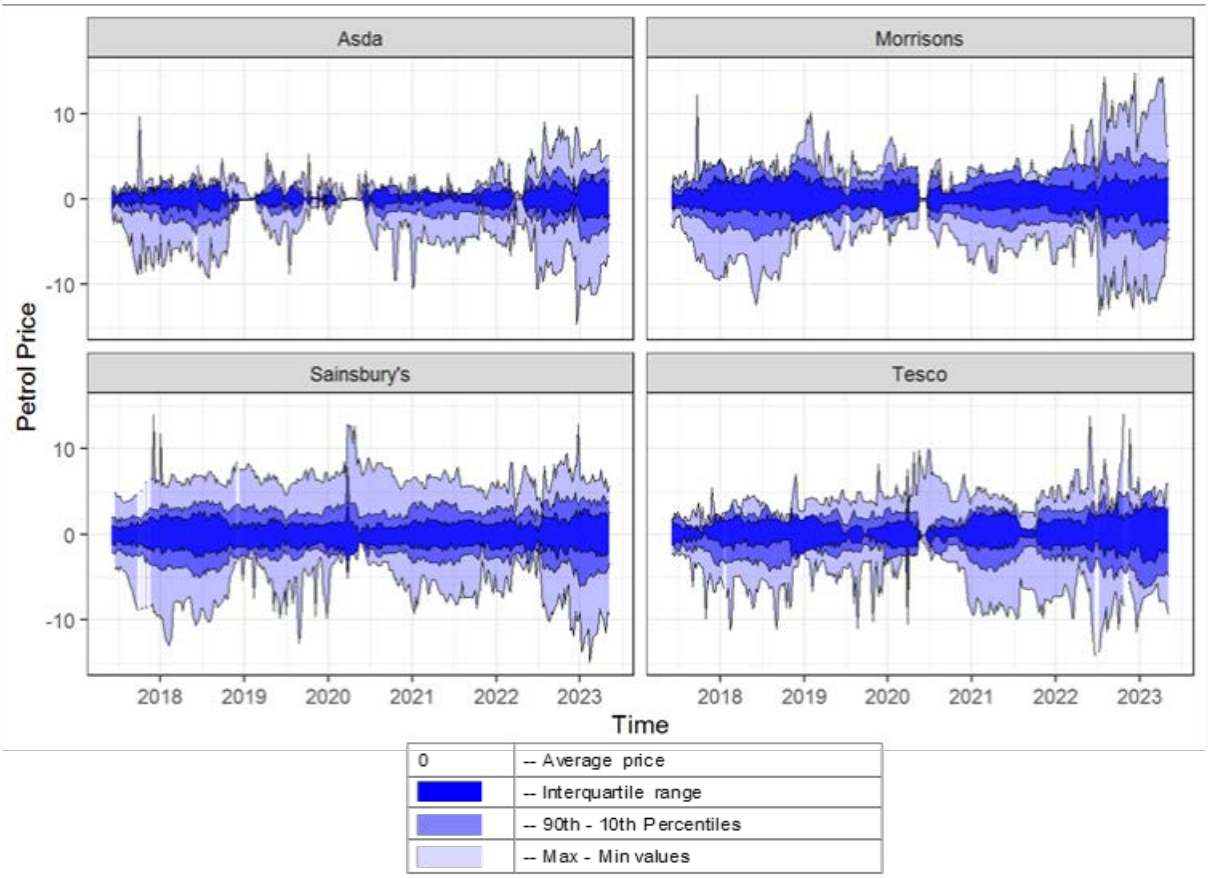
5.7 The figures suggest that the average markup for each supermarket has been on an increasing trend over time. Additionally, we note:

(a) Asda has generally had the lowest markup of the four supermarkets on average across its estate, but this gap was more pronounced prior to 2021.

(b) There has been convergence between the 4 supermarkets, with relatively little difference between the average markup in 2022 and 2023 compared with 2018 and 2019.

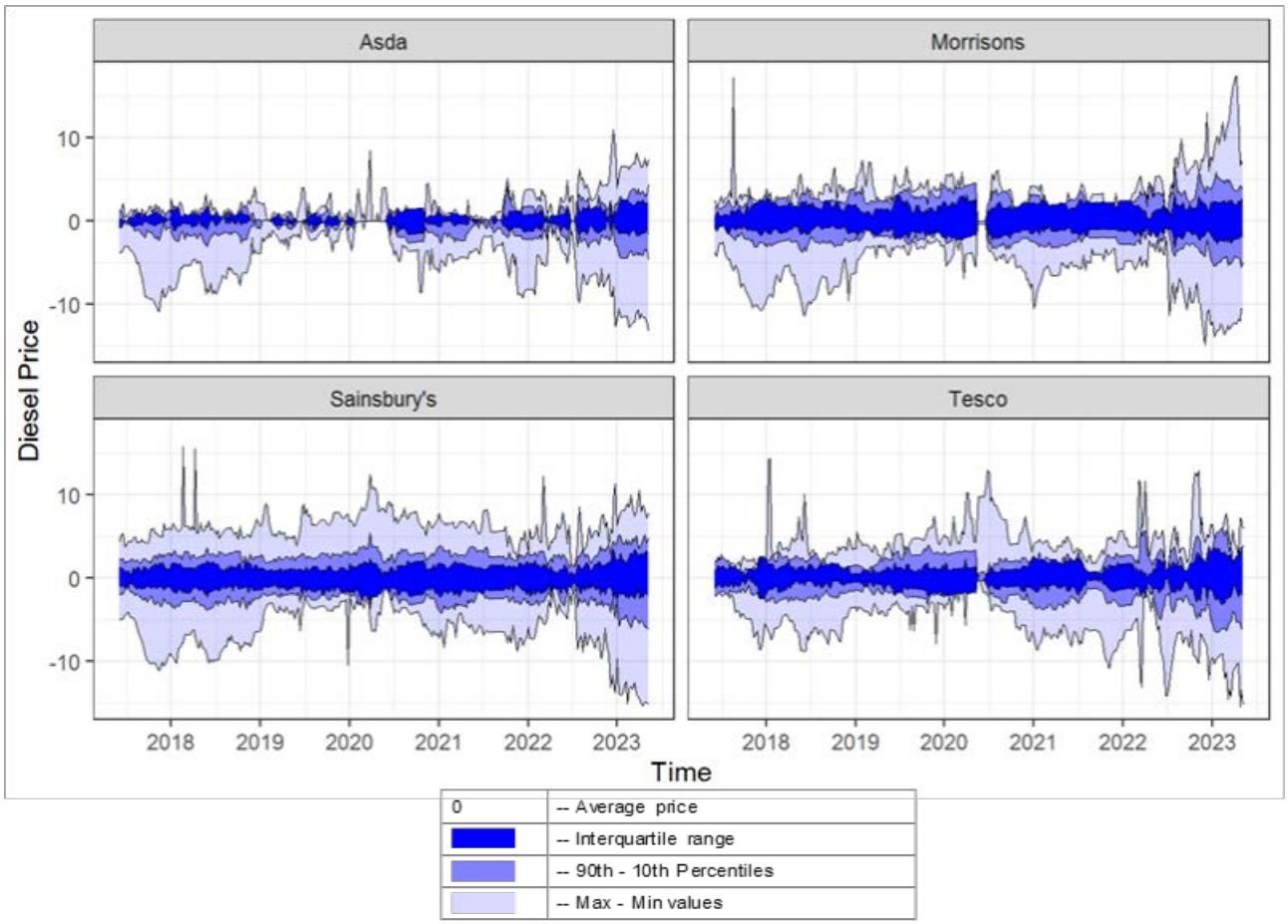
5.8 In Figures 5.4 and 5.5 we show how the dispersion of prices across the estate of each supermarket retailer has changed over time, separately for petrol and diesel.

Figure 5.4: Supermarket price dispersion over time, Petrol



Source: CMA analysis based on Experian data.

Figure 5.5: Supermarket price dispersion over time, Diesel



Source: CMA analysis based on Experian data.

5.9 The charts show that the pattern of price dispersion for Sainsbury's and Tesco has varied over time but there has been no obvious trend, although there may have been some increase in the downside dispersion for diesel in early 2023. In contrast, the charts suggest that the price dispersion for Asda and especially Morrisons has widened over time, both for petrol and for diesel. In particular for Asda and Morrisons:

(a) The increase in dispersion seems to have started in March 2022; and

(b) Prior to March 2022, the price dispersion was greatest on the downside (ie sites being cheaper than the average), since then it has been on both the down and the up-side.

5.10 By increasing price dispersion across their estates, operators with a national footprint can better exploit any areas where they have local market power. This is because they can maintain competitive prices in local markets where they face stiff competition but soften them in areas where competition is weaker. This allows them to increase their margins.

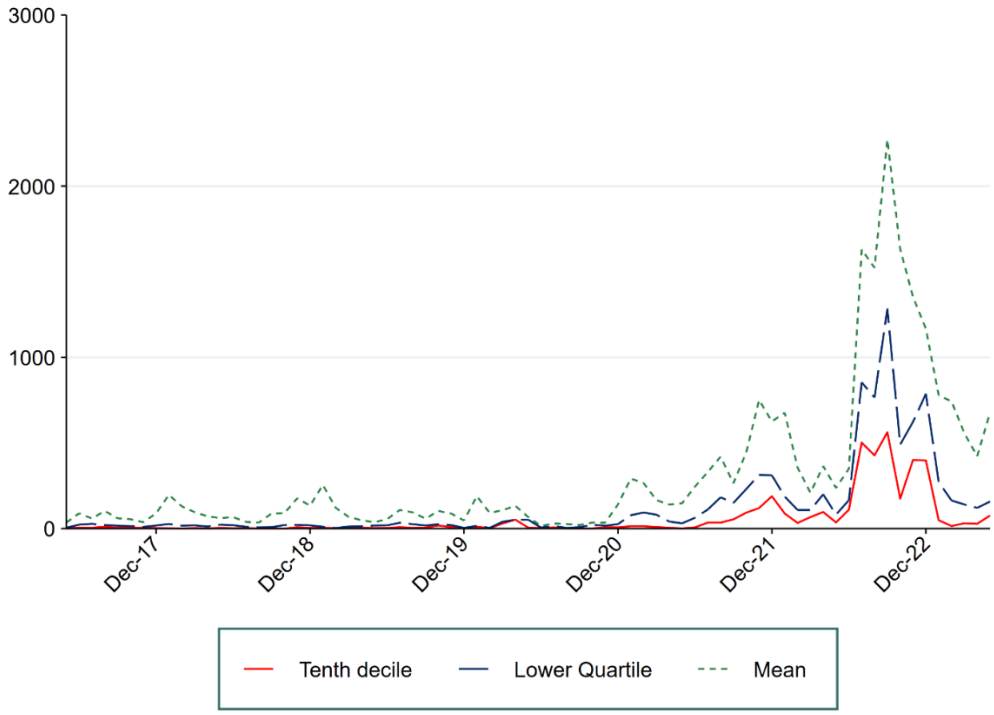
5.11 Shown in Figures 5.6 and 5.7 are the number of non-supermarket PFS sites that are cheaper than:

(a) the average supermarket price,

(b) the lower quartile supermarket price (the price below which only 25% of supermarket sites are priced), or

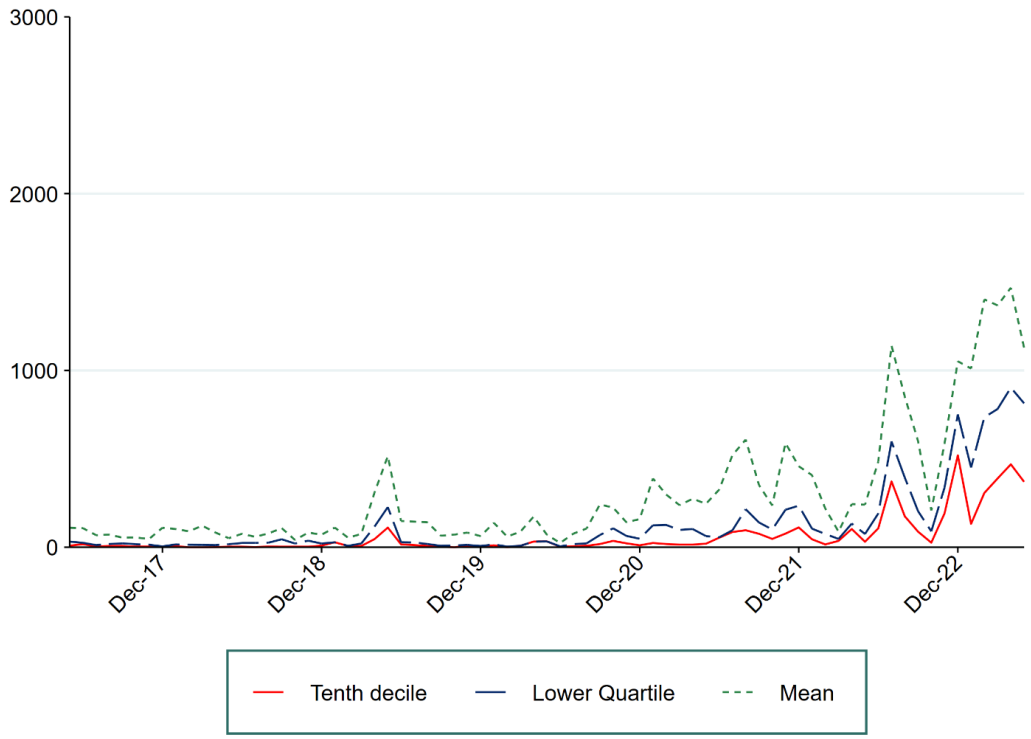
(c) the 10th decile supermarket price (the price below which only 10% of supermarket sites are priced).

Figure 5.6: Number of PFSs cheaper than supermarkets for petrol, monthly



Source: CMA analysis based on Experian data

Figure 5.7: Number of PFSs cheaper than supermarkets for diesel, monthly



Source: CMA analysis based on Experian data

5.12 The data shows that over time an increasing number of non-supermarket PFSs have been cheaper than the average prices offered by supermarkets. Before January 2020, other than one 'blip', there were no periods when an appreciable number of PFSs were cheaper than supermarkets. However, after January 2021, a significant number[53] of PFSs have been cheaper than supermarkets, based on all three measures of supermarket prices, for both petrol and diesel.

5.13 We explore supermarket pricing strategies in further detail from paragraph 5.63 onwards.

Retail margins

5.14 A key indicator of the extent of competition in a market, and whether it is strengthening or weakening, is the level of profit margin earned by firms. We have used our compulsory information-gathering powers to gather information that will allow us to assess margins in the road fuel retail sector. We set out our findings below, first for supermarkets, then for large non-supermarket retailers.

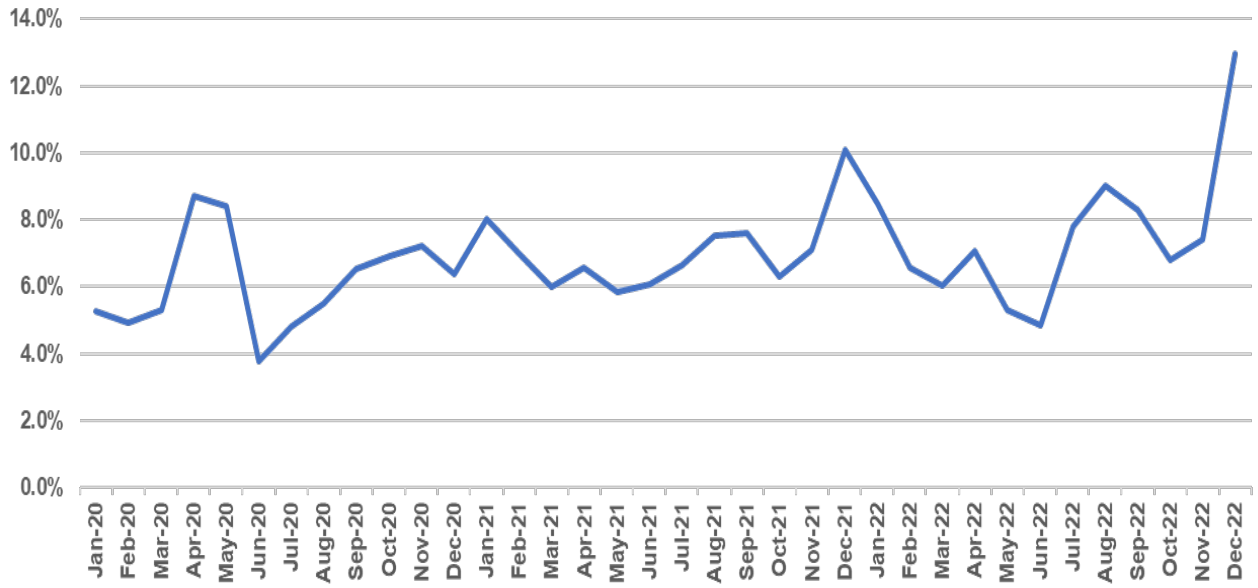
[53] At its peak in April 2023; For diesel - 10th percentile: 469, lower quartile: 903, mean: 1468, For petrol - 10th percentile: 28, lower quartile: 121, mean: 423.

Supermarket margins

5.15 In our initial update report we noted that, for the period 2017 to 2021, annual, non-weighted average supermarket fuel margin increased 3 percentage points from 4% to almost 7%. However, we also noted two reasons to withhold judgement on what this signified for competition. First, fuel margin measures the difference between what a retailer pays for fuel wholesale and the revenue it generates by selling it in the retail market. As such it does not take into account non-fuel costs, which may have changed over the period. Second, we noted that monthly fuel margins for all retailers over the period January 2020 to August 2022 had been highly volatile, and that individual spikes arising from this volatility may be having a significant impact on the annual figures. We therefore noted that in the next phase of our work we would examine further the operating costs of PFS retailers, as well as extending our analysis forward in time, in order to get a better understanding of margins over this period.

5.16 We have extended our margin analysis forward in time. Figure 5.8 below shows the updated average monthly supermarket fuel margins to December 2022. This shows that whilst margins showed some decline in the first half of the year they rose steeply in December 2022. This increase appears from the commentary in some supermarkets' management accounts to be due to an increase in the retail spread with one supermarket noting that wholesale costs had reduced more than retail prices. We note that the supply issues experienced by some supermarkets mentioned in paragraph 5.33 below may have impacted this. However, we also note that this did not appear to impact total profitability with some supermarkets reporting gross profits in excess of their budgeted figures for this period.

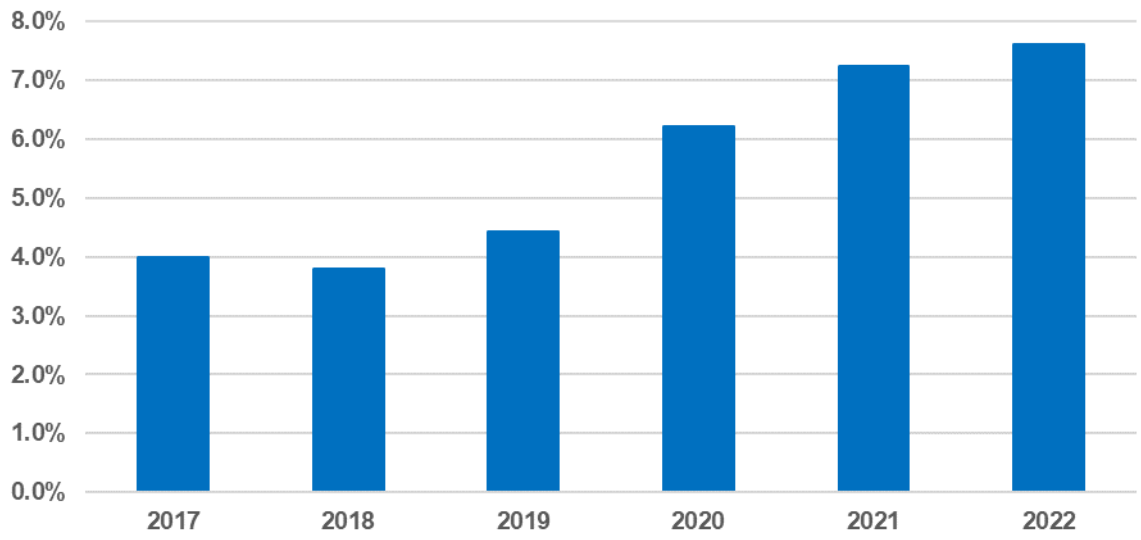
Figure 5.8: Average monthly supermarket fuel margins January 2020 to December 2022



Source: CMA analysis based on parties' submissions

5.17 Figure 5.9 below shows the updated average annual supermarket fuel margins from 2017-2022. As explained in our initial update report these figures are calculated based on the financial years of the supermarkets as opposed to calendar years, so that where a supermarket's financial year ends in March 2022 the margin for that financial year will be included in the 2021 average. In 2022 we observe a slight increase in average margin from 7.3% in 2021 to 7.6% in 2022. Over the period we see a significant increase in margin from 4.4% in 2019 to 7.6% in 2022.

Figure 5.9: Average annual supermarket fuel margins (%), 2017 to 2022

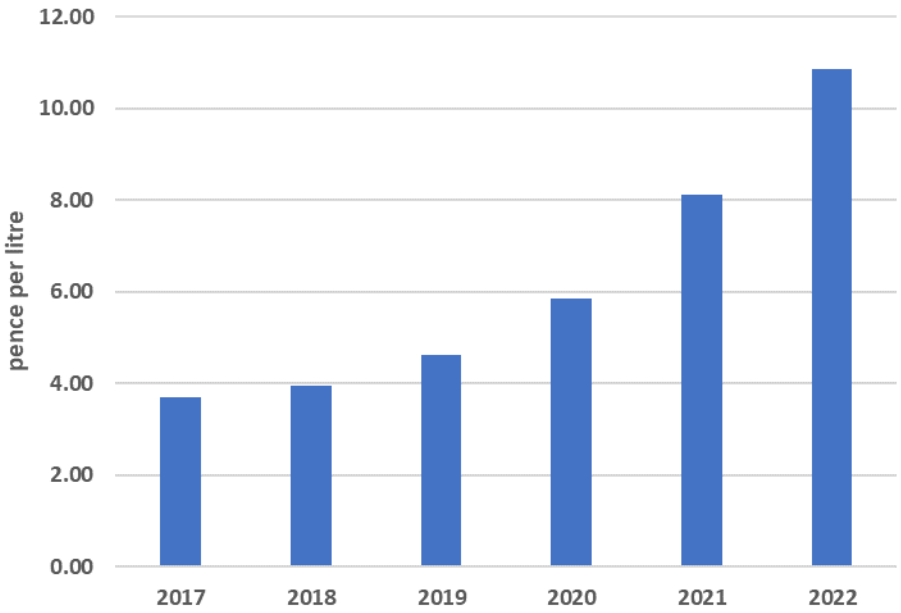


Source: CMA analysis based on parties' submissions

5.18 Figure 5.10 below shows the average supermarket annual fuel margins on a pence per litre basis (again based on financial years). This also shows a significant rise over the period with pence per litre margins increasing by 6.2p from 2019 to 2022. While the chart shows average figures, each of the supermarkets follow a similar trend. We estimate that the financial impact of this increase in fuel margin from 2019 to 2022 results in a combined benefit of c. £900m for these 4 supermarkets in 2022 alone (based on the supermarkets' financial years as per paragraph 5.17 above) which is equivalent to approximately £75m per month over this period.

5.19 Compared to average percentage margins in Figure 5.9 the increase from 2021 to 2022 is more pronounced with pence per litre margins increasing by 2.7p over this period. This reflects higher fuel wholesale prices in 2022, as a given percentage margin figure will translate into a higher absolute pence per litre figure as fuel wholesale prices rise.

Figure 5.10: Average annual supermarket fuel margins (pence per litre), 2017 to 2022

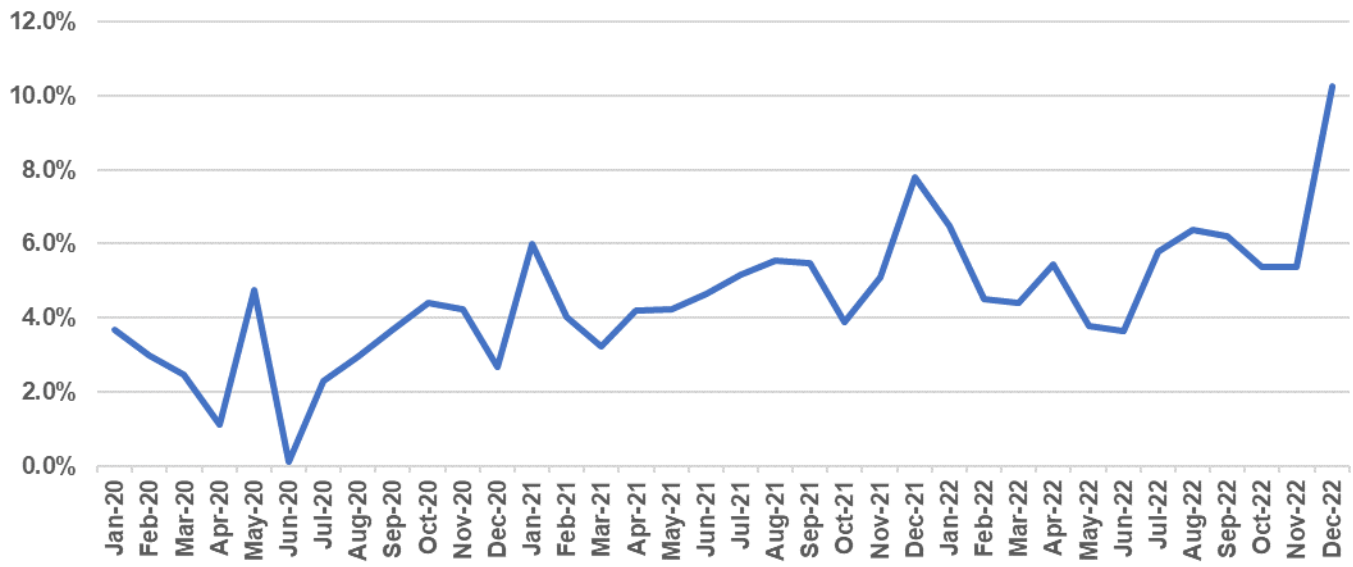


Source: CMA analysis based on parties' submissions

5.20 Since our initial update report we have also sought further financial information from supermarkets in order to update their operating margins to December 2022 on a monthly basis and on an annual basis to update their operating margins for their latest financial year. As noted in our initial update report, only three of the four supermarkets prepare management accounts on an operating profit basis. Therefore, the operating margin graphs below only include these three supermarkets and hence have a smaller cohort than the fuel margin graphs above.

5.21 Figure 5.11 below shows the monthly operating profit margins for the supermarkets' PFS businesses. This shows a similar trend to the fuel margin graph above with operating profit margins declining in the first half of the year before rising steeply in December. As set out in paragraph 5.16 above the supermarkets' management accounts suggest this is driven by a widening of the retail spread, rather than a change in non-fuel costs.

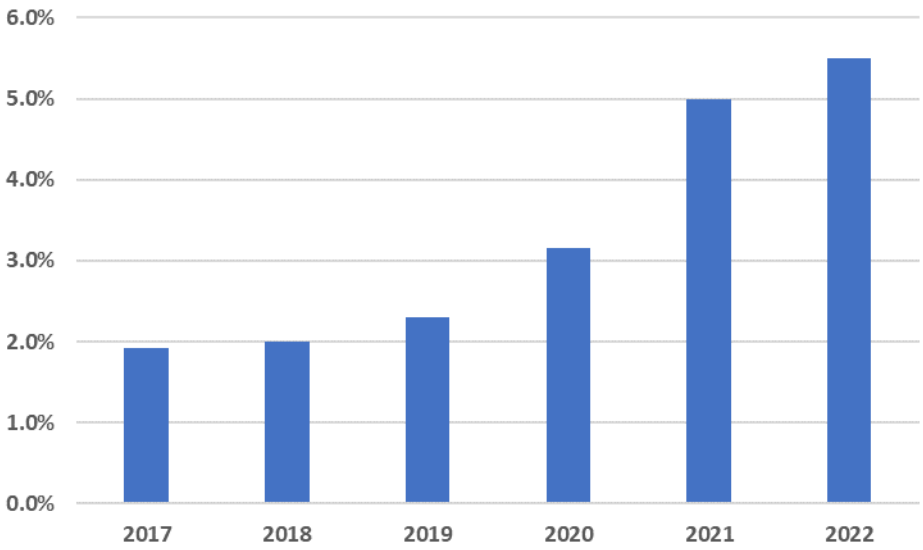
Figure 5.11: Average monthly supermarket operating margin (%), January 2020 to December 2022



Source: CMA analysis based on parties' submissions

5.22 Figure 5.12 below shows average supermarket PFS operating profit on an annual basis, from 2017-2022. As with the fuel margin trend we see a pattern of increasing margin from 2020, with average percentage margins doubling from 2019 to 2022.

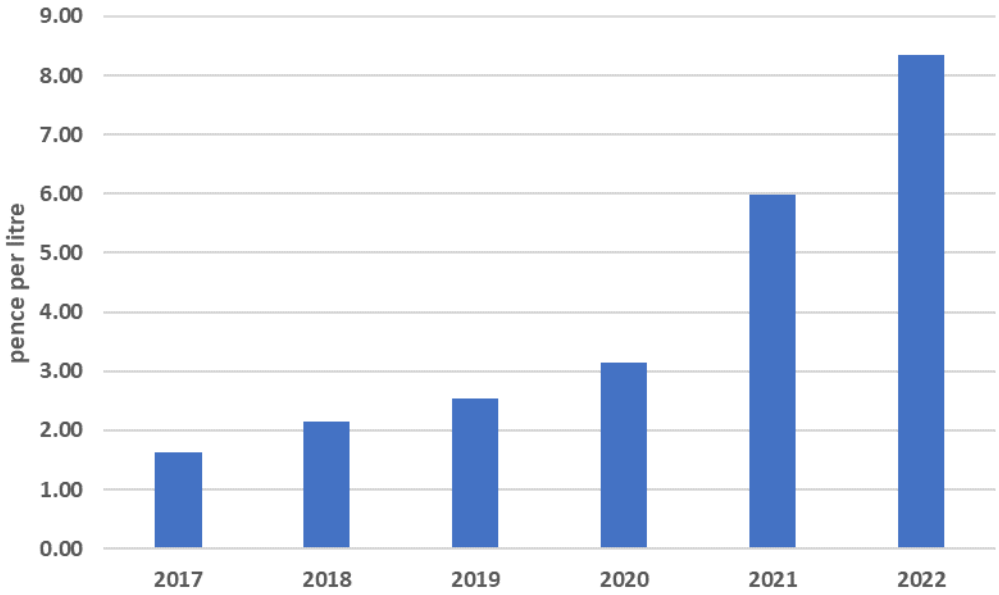
Figure 5.12: Average annual supermarket operating margins for fuel (%), 2017 to 2022



Source: CMA analysis based on parties' submissions

5.23 Figure 5.13 below shows operating margins on a pence per litre basis. Again, this shows a significant increase over the period increasing by around 6 ppl from 2019 to 2022. As explained in paragraph 5.19 above the larger increase in ppl margins compared to percentage margins from 2021 to 2022 is driven by higher fuel prices in 2022.

Figure 5.13: Average annual supermarket operating margins for fuel (pence per litre), 2017 to 2022



Source: CMA analysis based on parties' submissions

5.24 Overall, therefore, looking beyond short-term volatility, we see a trend of increasing fuel margins over the period. These do not seem to be explained by increasing non-fuel costs, but rather represent a significant increase in the supermarkets' operating margin over the period.

5.25 Following our initial update report, we asked each of the supermarkets active in the road fuel sector (Asda, Morrisons, Sainsbury's and Tesco) to explain the factors that had driven the increase in fuel margins we had observed. Between them, the supermarkets offered a number of possible explanations.

5.26 Some supermarkets told us that there had been no significant change to their fuel pricing policies whilst one said it had made relatively minor changes (see paragraphs 5.64 to 5.74 below). By this we understand that they mean the competitive positioning they aim to achieve relative to other competitors has not changed. However, as we note later in this section, we have also heard that Asda, the traditional price leader, has made a significant increase to its internal margin targets for fuel in the past two years.

5.27 Some supermarkets questioned our methodological approach, suggesting that the increase in margin we were proposing was likely to be overstated:

(a) One supermarket stated that the margin growth observed did not take account of an increase in their central cost base which is not attributed to their individual business units (including their fuel business) in the management accounts.

(b) One supermarket argued that beginning our analysis period in 2017 gave a misleading picture, as margins had been particularly low in 2017 although they acknowledged margins had risen since 2019.

(c) One also stated the particular volatility of this period (characterised by Covid and the Russian invasion of Ukraine) meant that gross margins were not a useful benchmark.

5.28 In our view none of the above representations from supermarkets sufficiently explains the margin growth over the period; nor do they provide good evidence that this is not reflective of a weakening of competition over the period. In particular we note:

(a) As we explained in our initial update report we understand that supermarkets' fuel accounts exclude certain costs incurred at the wider site or a central level and therefore the operating margins we have reported based on their management accounts may be overstated. However, we have not received evidence to show that these costs have increased significantly over the period we have examined such that they would offset the margin growth we have observed. In this respect we note the only evidence provided by the supermarket who cited this as an issue relates to labour cost growth in their most recent financial period. We also note that this evidence shows labour costs relatively static in the preceding financial periods, in which we observed significant margin growth. Furthermore, based on our knowledge of the industry and cost base we do not consider that the example of the 16% increase in some of its labour costs provided by the supermarket is likely to be material to the margin growth we have observed.

(b) The supermarket that queried the starting point for our analysis acknowledged that regardless of the starting point chosen we would still have observed margin growth from 2019.

(c) Whilst the period in which we have observed significant margin growth (2019 to 2022) has been a particularly volatile period due to Covid-19 and the Russian invasion of Ukraine these supply and demand shocks could only affect outturn margins. As set out in paragraph 5.99, we have evidence that margin targets have increased for some retailers. These are strategic profit goals for the business, set in advance, and so unexpected market volatility would not cause them to increase.

5.29 Some supermarkets accepted that margins had increased but sought to provide reasons why this may not be fully attributed to weakening competition in road fuel.

5.30 Some supermarkets told us that in 2020 higher fuel margins were offset by lower volumes as a result of the Covid-19 restrictions. One supermarket more generally noted that where volumes decline in a market resulting in some PFS becoming

unviable and leaving the market this provides scope for the remaining sites to retain existing profitability through increasing margins to offset lower volumes and cover fixed costs.

5.31 While we do observe lower sales volumes in 2020, which will have offset the impact of higher margins on absolute profitability, we note that margins have continued to rise in 2021 and 2022 as volumes recovered significantly. We also note that while it is economically rational that a business may wish to increase its margins to preserve absolute profitability as sales volumes decline, we would not necessarily expect it to be able to do so in a market where competition is working well. The fact that supermarkets were apparently able to do this in road fuel is therefore an indication that they have market power.

5.32 Some supermarkets also told us that cost efficiencies from renegotiation of wholesale contracts and one told us site efficiencies had also contributed to margin growth. In a competitive market, we would expect at least some of those efficiencies to be passed on to drivers in the form of lower prices.

5.33 Some supermarkets told us that due to supply issues at certain times they had been forced to increase prices significantly in order to conserve fuel stocks. One supermarket also told us that in their view this had had the biggest impact on their margin growth over the period. This in turn had the effect of significantly increasing margins for those relatively short periods. Some supermarkets told us that their supply issues were particularly acute over the [✂] which coincided with a number of other factors, [✂]. In order to avoid depleting stocks over what was a key trading period for them (which could, they said, possibly have triggered panic-buying) they took the decision to price higher in order to conserve stocks. One supermarket also told us that supply issues in autumn 2021 and February/March 2022 (due to the impact of the Russian invasion of Ukraine) also resulted in increased prices and margin growth, [✂].

5.34 We do not consider that these supply shocks had a significant impact on the margin growth we observed. In particular we note:

(a) Only two supermarkets stated that these supply shocks had contributed to margin growth. We note that the other supermarkets who did not cite this as a reason also showed similar margin growth over the period.

(b) One supermarket only cited a supply shock affecting 2022. However, we observed significant margin growth for this supermarket in 2020 and 2021 when no supply shocks were cited.

(c) At this time the unaffected supermarkets also reported increased margins citing wholesale costs falling lower than retail prices and showed gross profit well in excess of forecast. This would suggest that they too benefited from the spike in margin despite being unaffected by the supply issues.

(d) We note as set out in paragraph 5.99 that some supermarkets set increasing margin targets for this period in their annual plan. As these margin targets were set at the beginning of year, before any likely knowledge of supply issues in the market, we assume they were not influenced by them.

5.35 An alternative explanation offered by some supermarkets was that industry margins may be increasing due to the expected decline of the market in order to offset the reduced lifespan and decommissioning costs of sites. This is not compatible with pricing in a competitive market. We would only expect to see an impact on pricing from this if the retailers are already exiting the market and we have seen no evidence of that.

5.36 Finally, some supermarkets argued that while margins had increased in road fuel, this was offset by margins being lower in the wider grocery market than they otherwise would have been. In effect, this argument is that while supermarket competition may have weakened in road fuel, this has allowed them to compete harder on groceries than would otherwise have been the case.

5.37 The interactions between the sale of in-store groceries, general merchandise, online delivered groceries, and fuel, were recognised as an important driver of supermarket fuel pricing in *Sainsbury's/Asda* and *Asda/Bellis.* [54] In particular, attracting customers to a store to purchase one of those items, in this case fuel, gives rise to a probability that they will also make in-store purchases of other items. This may be to take advantage of increased convenience, reduced transport costs or lower search costs (the 'one-stop shopping principle') or may also arise because each transaction increases loyalty (either through explicit loyalty schemes or for non-financial reasons, such as increased familiarity with the store and its product range).

5.38 When describing the direction and the strength of that effect, one supermarket told us '*[w]e (and we assume the other major grocery retailers) were willing to accept very low profit margins (on fuel) in the expectation that this would improve our core grocery business*.'

5.39 That supermarket told us that fuel had become a focal point for supermarket competition due to it comprising a relatively large share of customers' weekly spend, its relevance to a wide section of the customer base, and its simple and prominent pricing.

5.40 As part of this aspect of competition, the same supermarket also told us that supermarkets often ran frequent and significant promotions in relation to fuel whereby in-store spend would be linked to discounts on fuel [✂].

[54] *Sainsbury's/Asda* Final Report, paragraph 8.235.

5.41 However, supermarkets also told us that this 'halo effect' between fuel and groceries had been in decline over the last five years and that since 2020 this decline had accelerated due to the impact of Covid-19. They stated that this was due to the following changes in consumer habits and the market:

(a) There has been a significant shift to online shopping. One supermarket noted that online shoppers typically have large basket sizes and therefore were exactly the type of customers that supermarkets would historically have been trying to attract through fuel pricing.

(b) There has also been a significant increase in both the numbers and use of smaller convenience stores that typically do not have a PFS. Some supermarkets told us this reflected a change in shopping habits whereby customers had shifted from driving to do a 'big weekly shop' towards more frequent 'top-up' shops using local convenience stores.

(c) The successful entry and expansion of 'discounter supermarkets' such as Aldi and Lidl in the UK. Some supermarkets noted that the discounters do not generally have PFSs on their store sites and that they had successfully grown significant market share through a focus on low grocery prices. This in turn led to the traditional supermarkets adopting a renewed focus on food as the focal point of competition and called into question the extent to which a fuel offering acted as an effective differentiator to discounters.

5.42 One supermarket noted that since 2010, the combined market share of online shopping services, convenience stores and discounters (none of which offer fuel) had grown from 26% to 45% of the grocery market. They also noted that the weakening of the halo effect had been reflected in the incremental spend uplift [✂].

5.43 One supermarket told us that, as a result of the above changes, investment that would have previously been made into fuel pricing had now shifted into grocery pricing. It stated that this was reflected in its promotional activity which had now shifted from fuel promotions to food promotions such as [✂].

5.44 Whilst not directly mentioning the halo effect Asda said '*[i]n the course of 2021 and 2022, some adjustments were made to increase the fuel contribution to Asda's overall business to cross-subsidize price reductions in Asda's groceries to counter inflationary pressures on food*.' Another supermarket noted that the possible reduction in halo may have impacted on the gross fuel margin contribution to the overall business relative to previous years but that it itself had not changed its pricing strategy on what it saw as complementary products and continued to try to be competitive on both.

5.45 Based on the current evidence, we observe that:

(a) Supermarkets provided indirect evidence to corroborate the weakening of the halo effect. One supermarket provided an estimate of the halo effect, but no supermarkets were able to provide evidence to demonstrate or corroborate the magnitude of its decline.

(b) When the CMA was investigating the proposed merger between Sainsbury's and Asda in 2018-19 the parties estimated the size of the fuel halo effect on grocery sales from opening a PFS. They found that the halo effect from grocery sales would be equivalent to earning an additional 2-2.5 ppl in margins on sales of road fuel.[55]

(c) A supermarket conducted a strategic review of its Fuel business in January 2021, which contained an estimate of the halo effect of a PFS on the grocery store, calculated by looking at the effect on sales at a grocery site when its PFS was closed for a prolonged period. This found that the halo effect equated to a sales uplift of £[✂]m at the grocery store. The ppl value of this halo effect depends on the profit margin at the grocery store and the fuel volumes at the PFS. CMA calculations suggest that it is between [0.5-2]ppl.[56]

(d) Although the arguments set out by supermarkets in paragraphs 5.41 to 5.44 suggest that the halo effect may have weakened, they have not suggested, nor have we seen evidence, that it no longer exists. Furthermore, by way of a comparison, Sainsbury's fuel margin increase from FY18 to FY22 represents a [3-8]ppl increase whilst Asda's represents a [3-8]ppl increase. These are well in excess of the totality of the estimated halo effect.[57]

5.46 Taking all of the above into account, our overall view is that supermarket operating margins in their fuel businesses have increased significantly since the beginning of the Covid pandemic. On the basis of the current evidence we do not agree with submissions from supermarkets that there has been no significant margin increase, or that any increase can be explained fully by factors that do not suggest a weakening of competition.

Non-supermarket margins

5.47 Similar to our work on supermarket margins, we also considered margins for the largest non-supermarket retailers.

5.48 We found that for this group annual fuel margins had grown over the period 2017-21, rising on average from 6% to 8%. We noted that non-supermarkets generally

[55] Sainsbury's/Asda response to Provisional Findings paragraph 824
[56] The supermarket used an operating profit for groceries of [✂]%, which gives a [0.5]ppl halo effect. In previous merger enquiries we have seen variable profit margins for grocery stores of around [✂]%, which gives a [2]ppl halo effect.
[57] CMA calculation (NB this is ppl on gross profit basis including haulage and other costs).

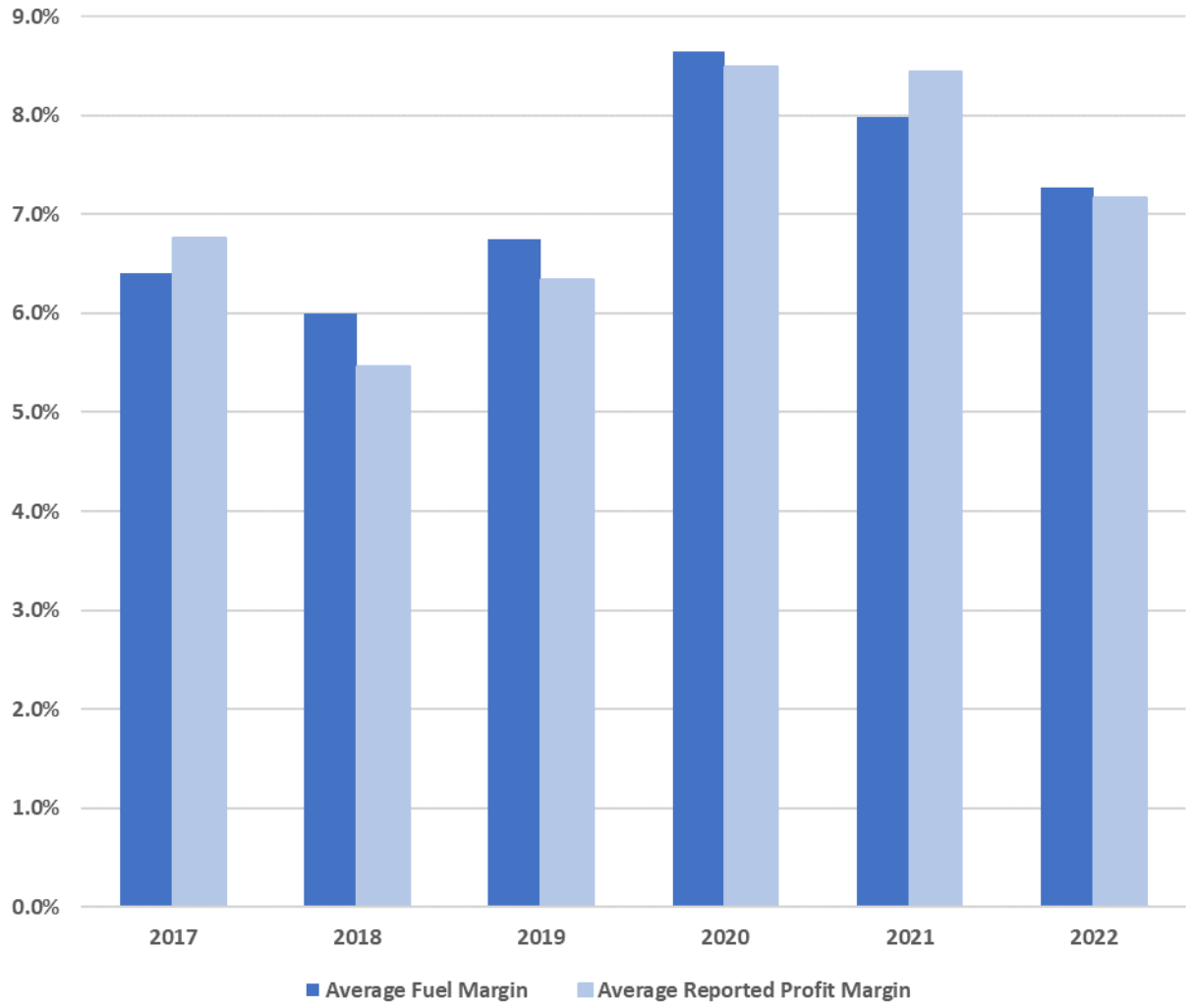
had a higher fuel margin than supermarkets across that period, but that the gap had narrowed somewhat over the period as a percentage of retail price.

5.49 Since our initial update report we have again extended our margin analysis forward in time and sought to understand the overall profitability of the non-supermarket retailers rather than just fuel margin.

5.50 While some non-supermarket retailers separate their accounts by fuel vs non-fuel sales, not all do so. For comparability, we have therefore considered overall profitability, including fuel and non-fuel sales. The measure we have used for overall profitability is EBITDA margin. EBITDA is the combination of both fuel margin and non-fuel margin, less operating costs, which include site costs (rent and utilities) and administration and distribution costs (staff wages, insurance, distribution, labour and head office expenses). We then calculated EBITDA by total PFS revenue to obtain an EBITDA margin figure.

5.51 As can be seen in Figure 5.14 below, average reported profit margin has followed a very similar trend to average fuel margin over this period. Most notably, we see a significant jump in both margin figures for 2020, with a decline since then, though margins still remain above levels seen prior to 2020. In 2022 average fuel margins of 7.3% are also now slightly below the average supermarket fuel margin of 7.6% as set out in Figure 5.9 above.

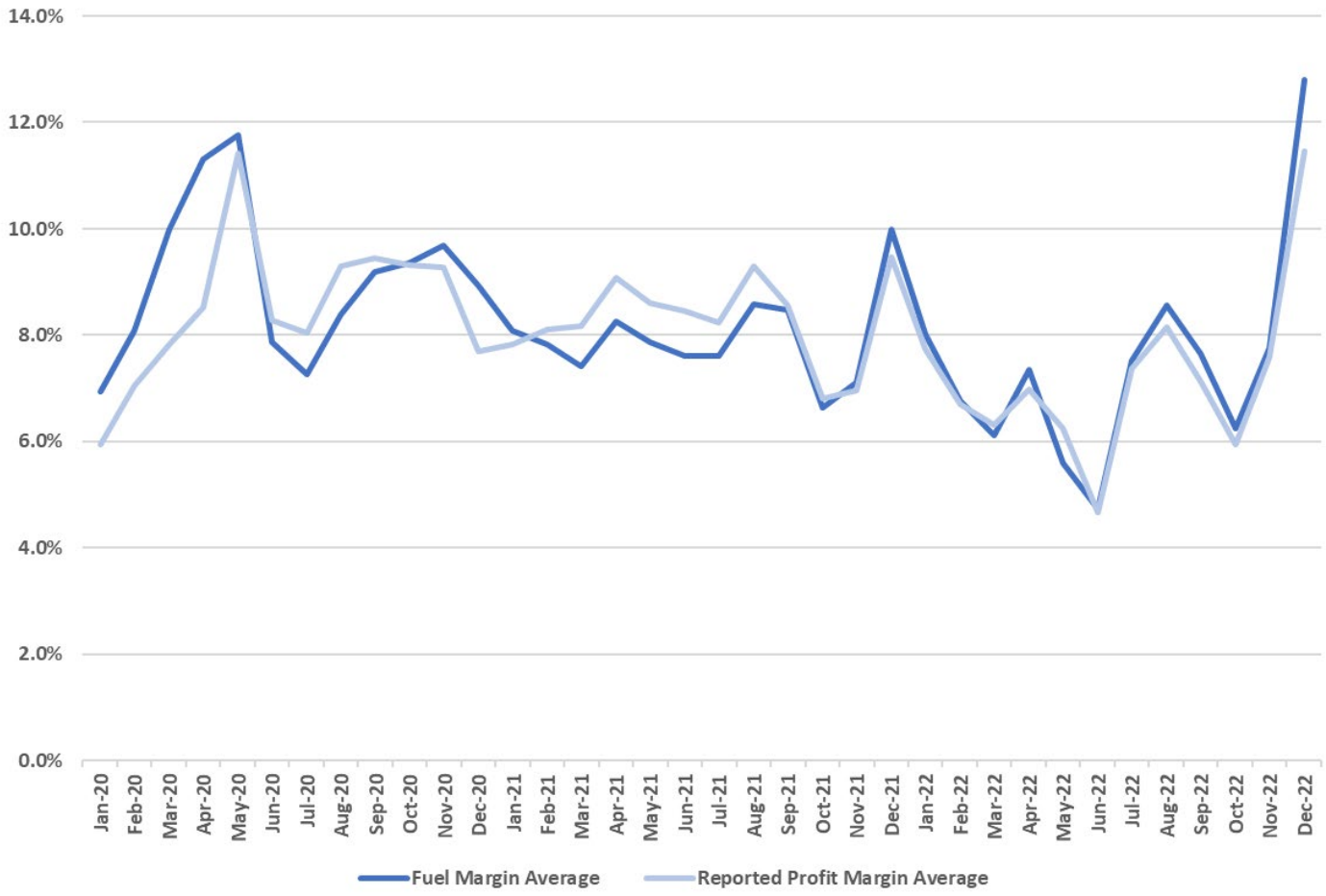
Figure 5.14: Average annual non-supermarket fuel margin vs average annual EBITDA margin 2017-2022



Source: CMA analysis based on parties' submissions.

5.52 Figure 5.15 below shows how monthly margins have fluctuated. Fuel margin reached its highest level in December 2022, while EBITDA margin recorded its second-highest reading in the same month. May 2020 was the peak month for EBITDA margin. The lowest margins occurred in June 2022. The gap between fuel and EBITDA margins reached its widest point at 3 percentage points in April 2020 when Covid-related lockdowns began, but generally they have moved according to a similar trend.

Figure 5.15: Average monthly EBITDA margin vs average monthly fuel margin Jan 20 - Dec 22

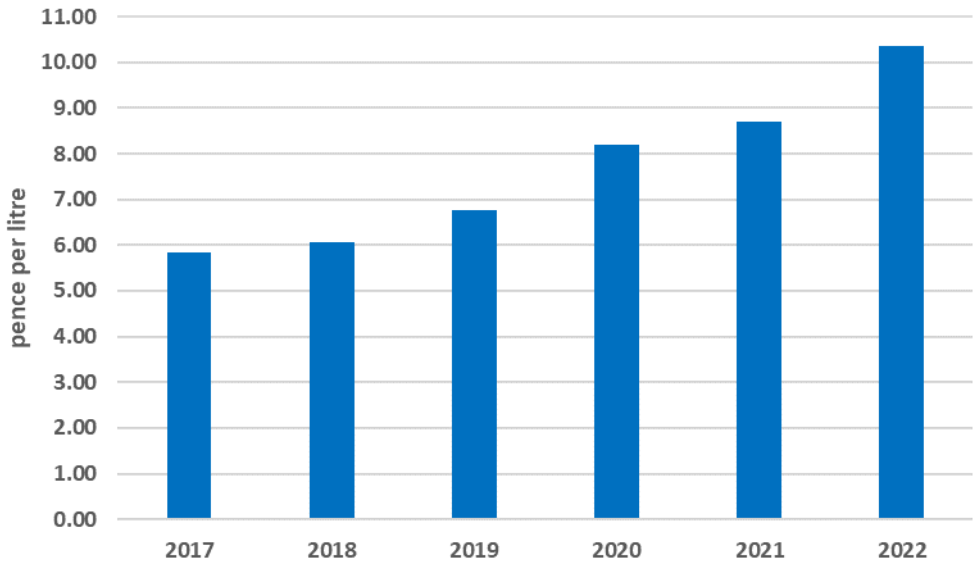


Source: CMA analysis based on parties' submissions.

5.53 Figure 5.16 below shows average annual non-supermarket margins on a ppl basis with margins increasing by around 3.5ppl from 2019 to 2022. As explained in paragraph 5.19 margins increased on a ppl basis from 2021 to 2022 despite decreasing on a percentage basis due to the higher wholesale fuel price in 2022.

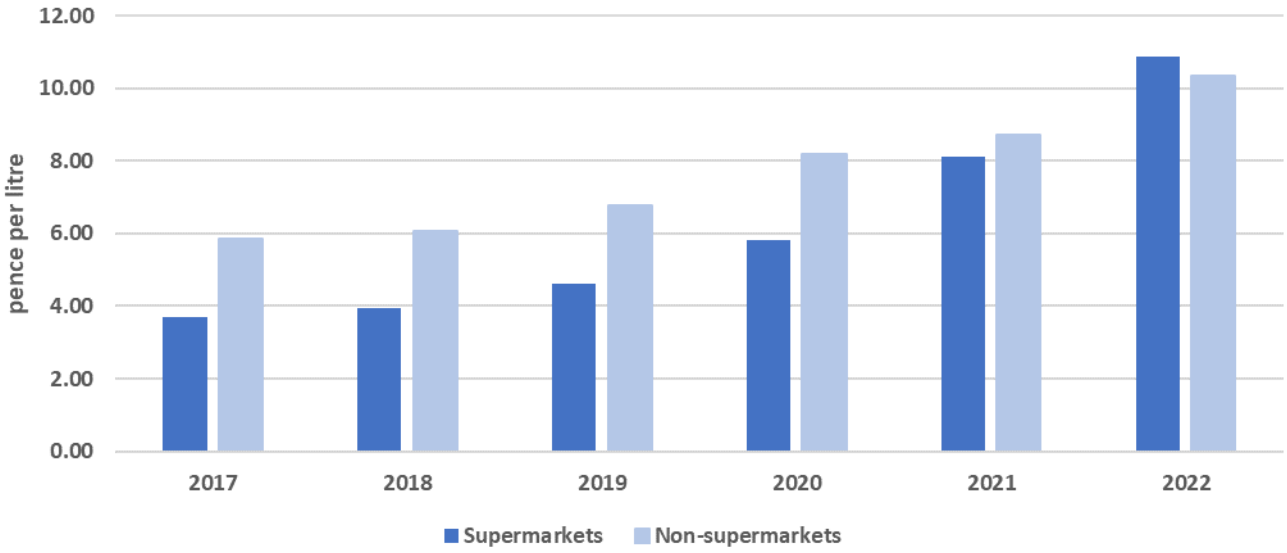
5.54 Figure 5.17 then compares average annual non-supermarket margins to average annual supermarket margins on a ppl basis. This shows that the gap between the two has narrowed significantly from 2019 to 2022 with average fuel margins on a ppl basis now slightly lower for non-supermarket retailers at 10.3ppl compared to 10.9ppl for supermarket retailers. However, as supermarkets tend to have lower wholesale costs due to scale and the use of their own brand, supermarket prices (as set out in paragraph 5.4 above) tend on average to be lower than non-supermarket retailers despite the slightly higher margins.

Figure 5.16: Average annual non-supermarket fuel margins on a ppl basis



Source: CMA analysis based on parties' submissions

Figure 5.17: Average annual non-supermarket and supermarket fuel margins on a ppl basis



Source: CMA analysis based on parties' submissions

5.55 Given that we have considered overall EBITDA for non-supermarket retailers, we also examined the non-fuel revenue and profits for non-supermarket retailers where the data was available. This showed that, while non-fuel sales comprised a relatively small percentage of revenue compared to fuel sales, they contributed a significantly higher percentage of profit due to the higher margins on non-fuel sales.

5.56 We asked non-supermarket fuel retailers to explain why their margins had apparently increased since 2020.

5.57 Many retailers noted that whilst they had not changed their strategy of pricing relative to competitors, competitor pricing relative to wholesale cost had increased over the period which in turn resulted in fuel margin growth. Some retailers in particular cited the reduced competition from supermarkets as a factor driving these relative price increases. This claim is consistent with our findings on the relative path of supermarket and non-supermarket margins.

5.58 Some retailers offered arguments that while fuel margins have increased, this did not represent an increase in profitability because the increase in fuel margins was required to cover increased costs in the period particularly in respect of wages, utilities, and interest rate costs for financing. Our analysis does not support this argument, however, as the trend in operating profit appears to have closely followed that in fuel margins.

5.59 Some retailers offered arguments that accepted there had been an increase in margin but attributed this to something other than a weakening of competition. For example, some retailers noted that they had incurred significant capital investment costs in upgrading their sites in recent years and therefore required the necessary returns to cover this investment cost. In this respect we note that some retailers did not cite capital investment as a driver of increased margins yet still saw similar margin growth. Moreover we note from customer surveys that the key driver for consumer purchasing habits is price followed by brand so we would not expect such capital investments to account for the margin increase we have observed.

5.60 Some retailers also cited a reduction in wholesale fuel costs due to contract renegotiations or changes in supplier. However, in a competitive market we would expect at least some of the cost efficiencies to be passed through to prices thus benefiting drivers.

5.61 Some also noted that fuel volumes had not yet recovered to pre-Covid-19 levels hence increased target margins would also serve to offset the impact of reduced volumes. As with supermarkets we note, however, that margins have remained elevated and in a competitive market we would not expect suppliers to be able to compensate for reduced volumes in this way.

5.62 Overall, therefore, our view is that profitability has increased among large non-supermarket fuel retailers and this cannot be explained by arguments made to us by retailers that do not suggest a weakening of competition.

Retail Pricing Dynamics

5.63 In this section we first detail the pricing policies used by the major PFS groups and set out the implications these have for competition in the market. We then look at the long-term pattern of price leadership and how this has affected retail competition in UK. Next, we use data on the frequency and magnitude of price announcements and margin targets, to analyse whether there have been changes in competitive intensity, before analysing recent developments in the market and how these have impacted consumers.

How major retail groups set price

5.64 Retailers sell petrol and diesel to motorists through PFSs which the customer must physically visit; as a result, competition between road fuel retailers principally takes place at a local level. There are both supply and demand side differences between different local areas, and these differences mean that retailers' prices vary across the UK.

5.65 PFSs can be divided into three main categories: oil company-owned and operated, dealer-owned and operated and supermarkets. The majority of PFSs are owned by dealers, but supermarkets sell the largest volume of fuel.[58] Dealers typically operate under a franchise model whereby they tend to adopt the branding of their fuel supplier, such as Shell or BP. They tend to have long-term supply agreements with their supplier.

5.66 Supermarkets tend to have stronger bargaining positions than dealers when purchasing fuel from a wholesaler because they buy greater volumes. As such, supermarkets are typically able to negotiate a lower purchase price and on better terms than dealers.

Views from market participants

5.67 We have gathered information during the market study through several requests for information using our statutory information gathering powers[59] to four supermarket retailers[60] and nine non-supermarket retailers/Motorway Service Area (MSA) operators,[61] as well as formal interviews with the four supermarket retailers.

5.68 Although there are differences in the precise price-setting approach of different retailers, we have consistently observed a number of key features of the market:

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[58] Petrol Retailers Association – Market Review 2021
[59] These are set out in section 174 of the Enterprise Act 2002.
[60] Asda, Morrisons, Sainsbury's and Tesco.
[61] Applegreen and Welcome Break (under common ownership), BP, Euro Garages, Oil, Motor Fuel Group, Moto-way, Roadchef, Rontec, and Shell.

(a) Prices are set at a local level (although there may be some centrally set bounds to price);

(b) Prices are typically set with reference to competitors' prices within the local area. Larger chains obtain data on fuel prices from Experian Catalyst, who collect data from transactions made using the Allstar fuel card and sell this commercially. This data provides the price on the preceding day for around 85% of fuel stations in the UK, which represents around 97% of the fuel volume in the market. Smaller chains and independent fuel stations are likely to use similar tools to those used by consumers to research local prices;

(c) Firms use pricing rules based on either matching, or applying a +x ppl, or a -x ppl differential, to their competitors' prices. The differential may vary according to a number of factors including the proximity and identity of the competitors; and

(d) Some firms have overarching margin targets and may price outside bounds if targets are not met.

5.69 Retailers told us that they tend to set prices relative to a single "marker" site,[62] or in some cases multiple marker sites. All retailers told us they monitor PFSs in the local area and the marker site will be chosen depending on current pricing and PFS identity. They told us that they update who they view as competitors periodically; from every 6-8 weeks to once a year, or alternatively on an ad hoc basis when there is a change in local competitive conditions such as the opening, closing or rebranding of a PFS.

5.70 Retailers told us that prices are usually updated automatically according to a pricing algorithm, but this process can involve human intervention when price changes suggested by the algorithm are large. Two fuel retailing businesses told us they have pricing analysts who would make these judgements.

5.71 Generally, parties told us that competitors' pricing and the store-level margin of a PFS are the most important factors in their pricing decision. In particular:

(a) supermarkets tend to set prices lower than non-supermarket retailers and report setting prices against other supermarkets. Asda states that its pricing strategy is to be the price leader (ie the lowest priced retailer). The other supermarkets reported competing closely with their supermarket competitors whilst trying to be consistently cheaper than non-supermarket fuel retailers. This results in their marker sites often being other supermarkets. One supermarket reported that, where there is only one competitor nearby, they benchmark their prices against that competitor and where there are multiple

[62] A marker site is a PFS site that is used as a pricing benchmark.

competitors, they benchmark their price against the cheapest. This results in a smaller +/- ppl range on their competitor's price when there is another supermarket PFS within a mile.

(b) non-supermarkets tend to act as price followers by responding to price changes from competitor PFSs, including supermarkets. Their prices are typically higher than the supermarkets.

5.72 As a result of these pricing strategies, local PFS competition is likely to result in firms responding to a price change by a competitor within 1-3 days.[63] This means that there is scope for a firm to derive additional volume from being the first to cut price, before competitors are able to match them.

5.73 During the course of the market study, we held interviews with the four supermarket fuel retailers. We found that although they have similar local pricing rules, there is a difference between the importance ascribed to meeting pre-set margin targets within different businesses:

(a) Asda and Morrisons have margin targets which are set in advance and which they will adjust prices in order to meet.

(i) Asda stated that they have a cash gross profit target set for each respective division within the wider business. These are set at the beginning of the year and the ppl margin would be set to meet this target based on the expected sales volume. If the sales volume was lower than expected the ppl margin may be increased to meet the cash margin target.

(ii) Morrisons told us that that "rule number one [in their pricing policy] is we hit our budget". The ppl budget is determined by taking the total cash margin target, and dividing by the expected volume.

(b) Sainsbury's and Tesco told us that they have pricing rules which they set in advance based on price matching competitors in the local areas around their stores. They make a forecast of the ppl margin based on their expectations around the average selling price, but if the outturn is different they update the forecast margin rather than adjusting prices to meet a target level.

5.74 As a result of these differences in pricing models, Asda and Morrisons are more likely to drive the market price in the UK road fuels market. Whilst Tesco and Sainsbury's may be local competitors, they are more reactive to the actions of others and less likely to drive the overall market price.

[63] Depending on the data source used, it takes time for a competitor's price change to be observed and then for a firm to react to it. For instance, for a firm using Experian Catalyst data, if a competitor changes its prices on day 0, it will observe the change the following day (day 1) and then most likely respond to it the following day (day 2).

Pattern of price leadership over time

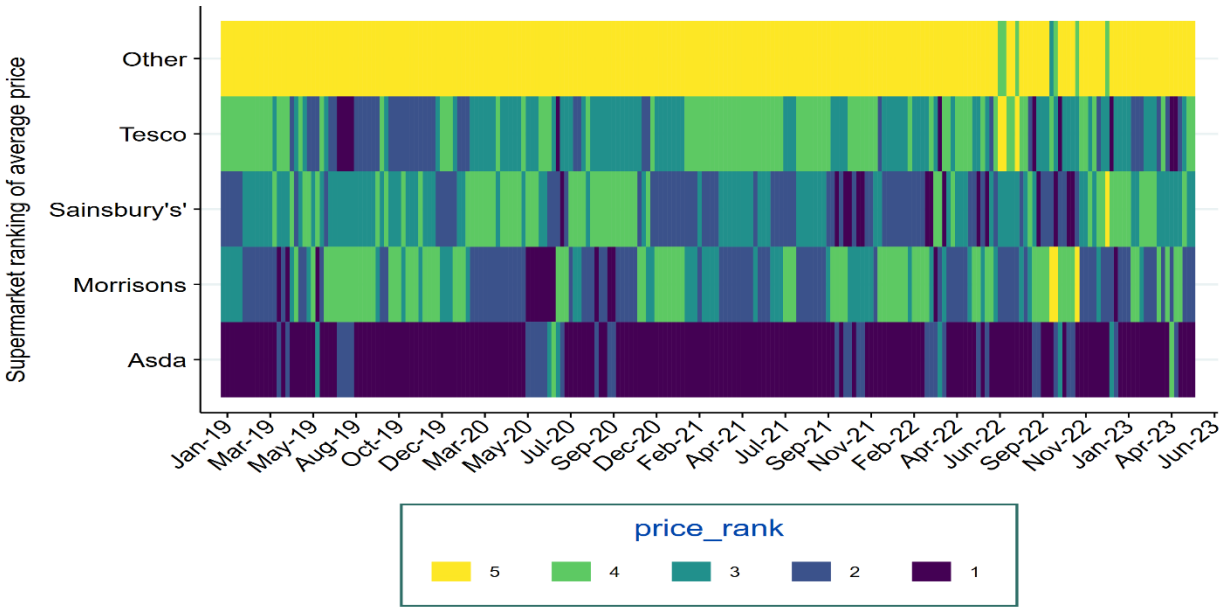
5.75 In this section we look at the long-term pattern of price leadership by the four supermarket PFS retailers. We have focused our analysis on supermarkets for a number of reasons:

(a) During the Asda/Bellis merger investigation, the CMA found that Asda acts as the price leader in road fuel and that other supermarkets tend to follow when Asda triggers price reductions in road fuel. The pricing rules operated by supermarkets mean that they will match or beat the cheapest PFS in their local area, as such if the pricing rules are followed, over time and on average they will be amongst the cheapest retailers in each local area.

(b) Our analysis of the supermarket price gap (see paragraph 5.4) shows that on average supermarkets are cheaper than the other categories of retailers and have been consistently so over time.

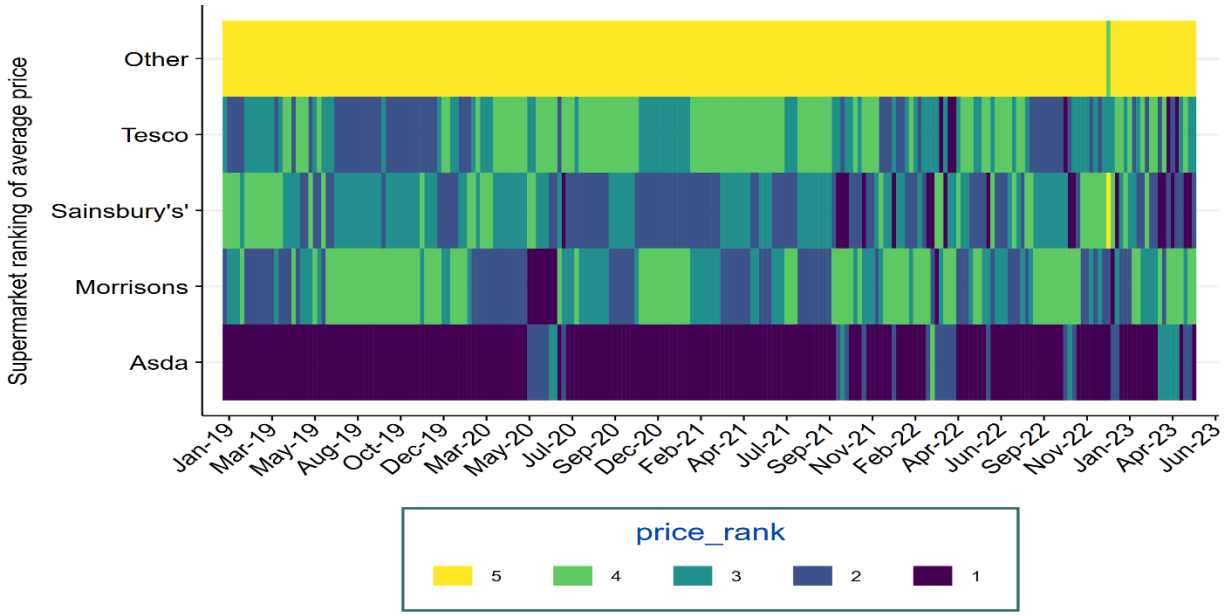
5.76 In order to test who has historically been the lowest-priced supermarket we have looked at how they rank over time. The ranking is constructed by looking at the average selling price across each supermarket's estate in a given week and assigning a ranking between 1 and 5, with 1 being the cheapest and 5 being the most expensive. We do this separately for petrol and diesel.

Figure 5.18: Price ranking heatmap 2019 -2023 – petrol



Source: CMA analysis based on Experian data

Figure 5.19: Price ranking heatmap 2019 -2023 – diesel



Source: CMA analysis based on Experian data

5.77 This analysis suggests that Asda has historically been the lowest-priced supermarket, though less so since the second half of 2021. This is consistent with our analysis in the initial update, and previous CMA merger investigations. It is worth noting a number of factors which should be kept in mind when considering average supermarket prices:

(a) the average price of a supermarket is based on the aggregation of the local competitive conditions it faces across all markets in which it is active;

(b) the differential between the average prices offered by the supermarkets is relatively small, typically 1-2ppl (and not more than 4ppl);

(c) there are differing degrees of overlap between each supermarket estate, with different geographic footprints. As such, it could be the case for example that despite often being the most expensive supermarket in this period, Tesco – with the most PFSs among the four supermarkets - may often be the cheapest retailer in the local markets in which it operates.

Ownership changes in the market

5.78 In 2021, two of the supermarket retailers were purchased by private equity and associated individuals who also control large chains of dealer operated sites:

(a) On 16 February 2021, Mr Zuber Issa, Mr Mohsin Issa and investment funds managed by TDR Capital LLP(TDR) acquired, through Bellis Acquisition Company 3 Limited (Bellis), the whole of the issued ordinary share capital of

Asda Group Limited (Asda). The Issa brothers and TDR also jointly own EG Group Limited (EG).

(b) On 27 October 2021, Clayton, Dubilier & Rice Holdings, LLC (CD&R) acquired Wm Morrison Supermarkets Limited (Morrisons). CD&R exercises indirect control over a number of portfolio companies, including the Motor Fuel Group (MFG).

5.79 Both of these transactions were cleared by the CMA after a phase 1 inquiry, subject to the divestment of 27 PFSs by Bellis and 87 PFSs by CD&R.[64]

5.80 During the Asda/Bellis merger investigation, the CMA found that Asda acts as the price leader in road fuel and that other supermarkets tend to follow when Asda triggers price reductions in road fuel. In particular, the CMA found that Asda occasionally announces a 'national' price ceiling, or cap, following reductions in wholesale fuel costs (after which Asda will not price above the cap at any local PFS for at least a week)[65] and that the media often refers to these price reductions as triggering 'price wars' because other supermarkets tend to follow Asda by cutting their own road fuel prices.[66] As part of the merger investigation, the CMA considered whether the Asda/Bellis merger could affect Asda's incentives to trigger national price cap reductions. The CMA assessed the costs and benefits to the merged entity of Asda's pre-merger national pricing strategy, and decided that the Asda/Bellis merger was unlikely to change Asda's incentives to maintain its pre-merger pricing strategy.[67]

5.81 In the Morrisons / CD&R merger investigation, the CMA applied the local decision rule developed in Asda / Bellis. National concerns were ruled out on the basis of the parties' limited combined share of supply and the relatively limited proportion of each party's estates failing the local decision rule that we applied to determine whether a PFS needed to be divested.

Recent changes in pricing behaviour

5.82 In this section we analyse whether there has been a change in the pricing behaviour of Asda or Morrisons since they were acquired by private equity in 2021. As set out in paragraph 5.73, Asda and Morrisons' pricing strategies, which are based on hitting pre-determined margin targets, are likely to drive the market price in the UK road fuels sector.

5.83 We begin by looking at whether there has been a change in the pattern of price leadership by the supermarkets and whether there have been any changes to their

[64] Decision on acceptance of undertakings in lieu of a reference.
[65] Decision on relevant merger situation and substantial lessening of competition, paragraph 69 and also paragraph 144.
[66] Decision on relevant merger situation and substantial lessening of competition, paragraph 201.
[67] Decision on relevant merger situation and substantial lessening of competition, paragraphs 204-210.

stated pricing policies. We then analyse whether there have been changes in the propensity of Asda (or others) to make price cut announcements which have historically been referred to in the press as triggering ‘price wars’ between the supermarket operators.

5.84 We then assess whether Asda and/or Morrisons has increased the target profitability of their fuel business, before going on to analyse how profitability targets have impacted consumers in 2023. Lastly, we analyse how other market actors have responded and the implications for competition in the market.

Patterns of price leadership

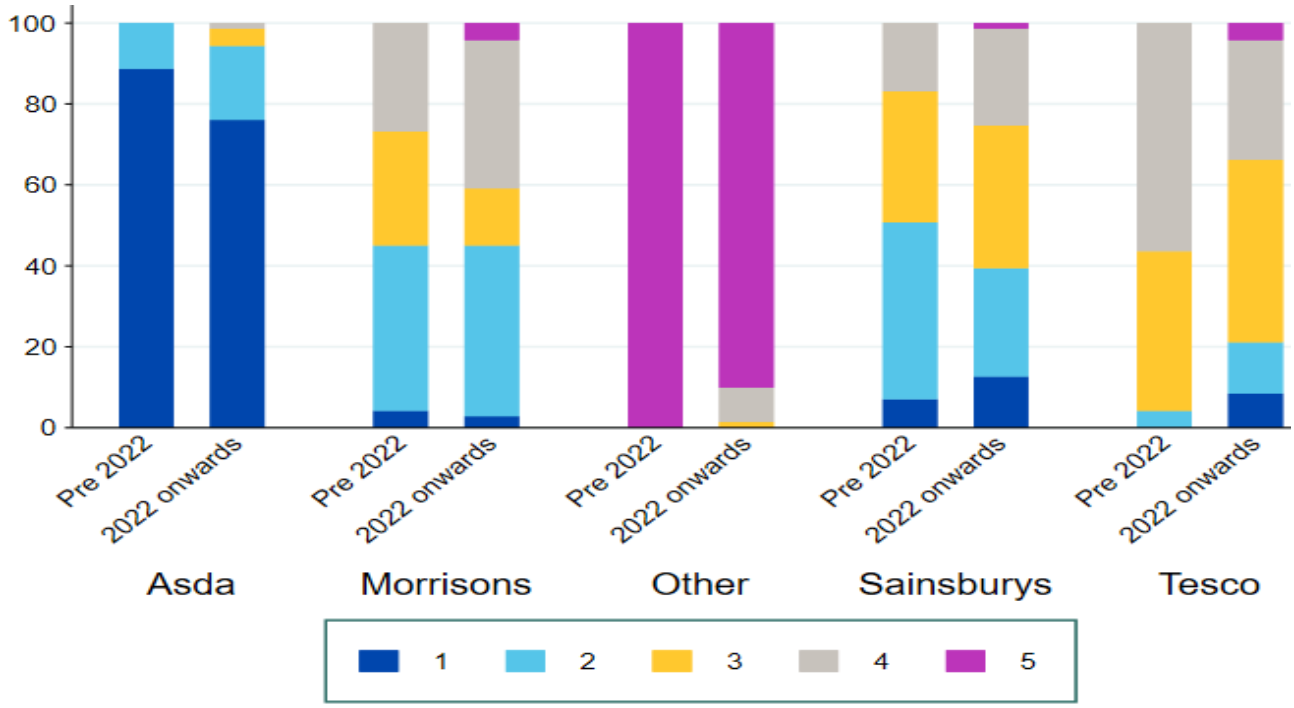
5.85 On pricing strategies:

(a) Asda told us that it has not changed its pricing strategy and that it aims to be the cheapest provider in a local area. However, its overall strategy is focused on growth and paying down debt in a sustainable way.

(b) Morrisons told us that it has not changed its pricing strategy in the last 5 years. Morrisons told us that the guiding principle of its pricing policy was meeting the fuel budget. However, there can be a slight gap between the ppl target from the fuel budget and the goals of the pricing policy.

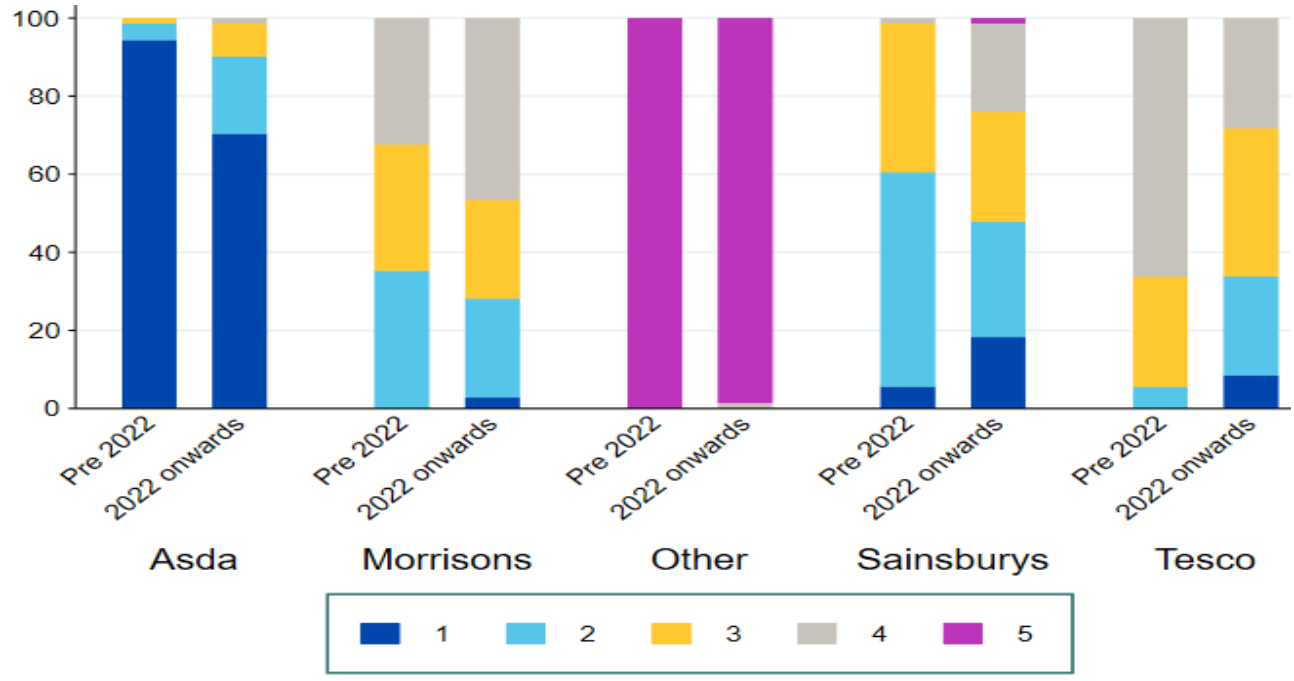
5.86 In order to test how the pattern of price leadership has changed since 2021, we take a more detailed look at whether the rankings of different supermarkets have changed. Figures 5.18 and 5.19 above show the ranking of each supermarket in each week from 2019-2023, separately for petrol and diesel. We used this data to calculate the percentage of weeks each supermarket occupied each ranking. This is shown in figure 5.20 and 5.21 below which suggest that there has been a change in the pattern of price leadership, particularly for diesel.

Figure 5.20: Percentage of weeks at each rank, petrol



Source: CMA analysis based on Experian data

Figure 5.21: Percentage of weeks at each rank, diesel



Source: CMA analysis based on Experian data

5.87 This data shows that:

(a) Asda has reduced its price leadership. Prior to 2022 it was ranked number one for petrol 89% of the time and for diesel 94% of the time. Since the

beginning of 2022 it has been ranked number one for petrol 76% of the time and for diesel 70% of the time;

(b) Morrisons was formerly (pre-2022) the fourth-cheapest supermarket 27% of the time for petrol and 32% for diesel; this increased from the beginning of 2022 to 37% and 46% respectively;

(c) There's been some increase in the frequency with which Sainsburys and Tesco are ranked number one. For Sainsbury's this increased from 6% to 18% for diesel and 7% to 13% for petrol and Tesco from 0% to 8% for diesel and 0% to 8% for petrol from pre-2022 to 2022 onwards;

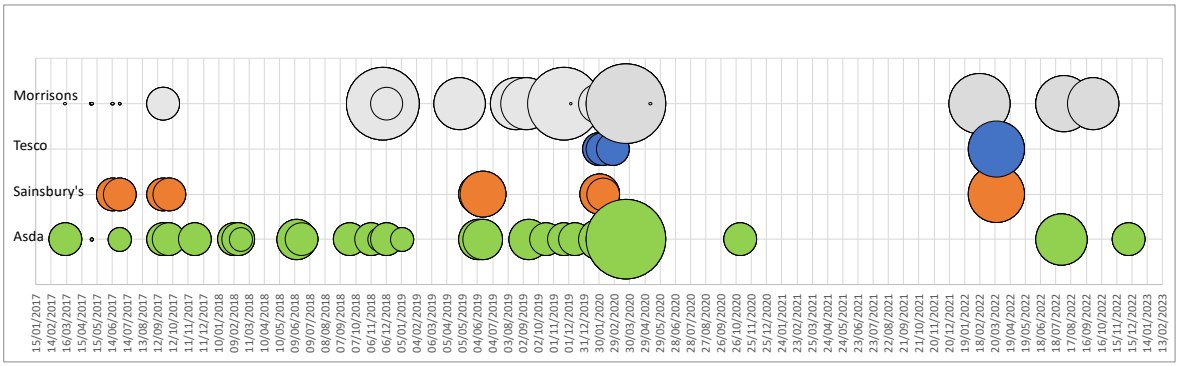
(d) Tesco has overtaken Morrisons by being the fourth-cheapest supermarket less often, despite having a less active pricing policy.

Price announcements

5.88 In order to further test whether Asda and Morrisons have reduced the competitive pressure that they impose on the market, we have analysed data on the frequency of national price cut announcements. Price cut announcements, in this context, are national announcements that a retailer is decreasing its pump prices by a certain amount at all its sites.

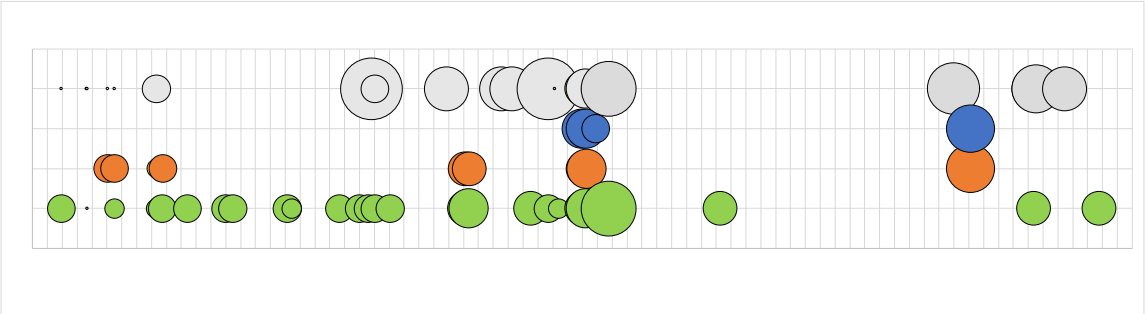
5.89 The following charts show the pattern of price announcements for petrol and diesel over time. Each individual circle represents a price cut announcement, the larger the circle the greater the size of price cut. Tesco told us that they do not systematically record when they have made a price announcement. As such they have only provided data from December 2019 onwards and this may not cover all price announcements made during this period.

Figure 5.22: Price announcements over time, petrol



Source: Asda, Sainsbury's, Tesco and Morrisons data and CMA analysis.
Note: The amount of the price cut was not available for 10 dates - these are represented by dots and cover 8 dates for Morrisons and 2 dates for Asda.

Figure 5.23: Price announcements over time, diesel



Source: Asda, Sainsbury's, Tesco and Morrisons data and CMA analysis.
Note: The amount of the price cut was not available for 9 dates - these are represented by dots and cover 7 dates for Morrisons and 2 dates for Asda.

5.90 Consistent with the findings in Asda / Bellis, this analysis shows that prior to the Covid outbreak in 2020 Asda made significantly more price announcements than any other retailer, especially Tesco and Sainsbury's, and that there have been relatively few price cut announcements by any retailers since Covid. In order to investigate why the frequency of price cut announcements has decreased we have focused our analysis on Asda. Our full assessment is set out in Annex D.

5.91 Asda told us that the decision to make a price cut announcement is driven by reductions in the wholesale cost of fuel, which they buy on a [✂] week lag.[68] Although they also place weight on other factors such as stock levels and how persistent they think a change in the wholesale price will be, this suggests that there should be a relationship between the wholesale price changes and the probability of Asda making a price cut announcement.

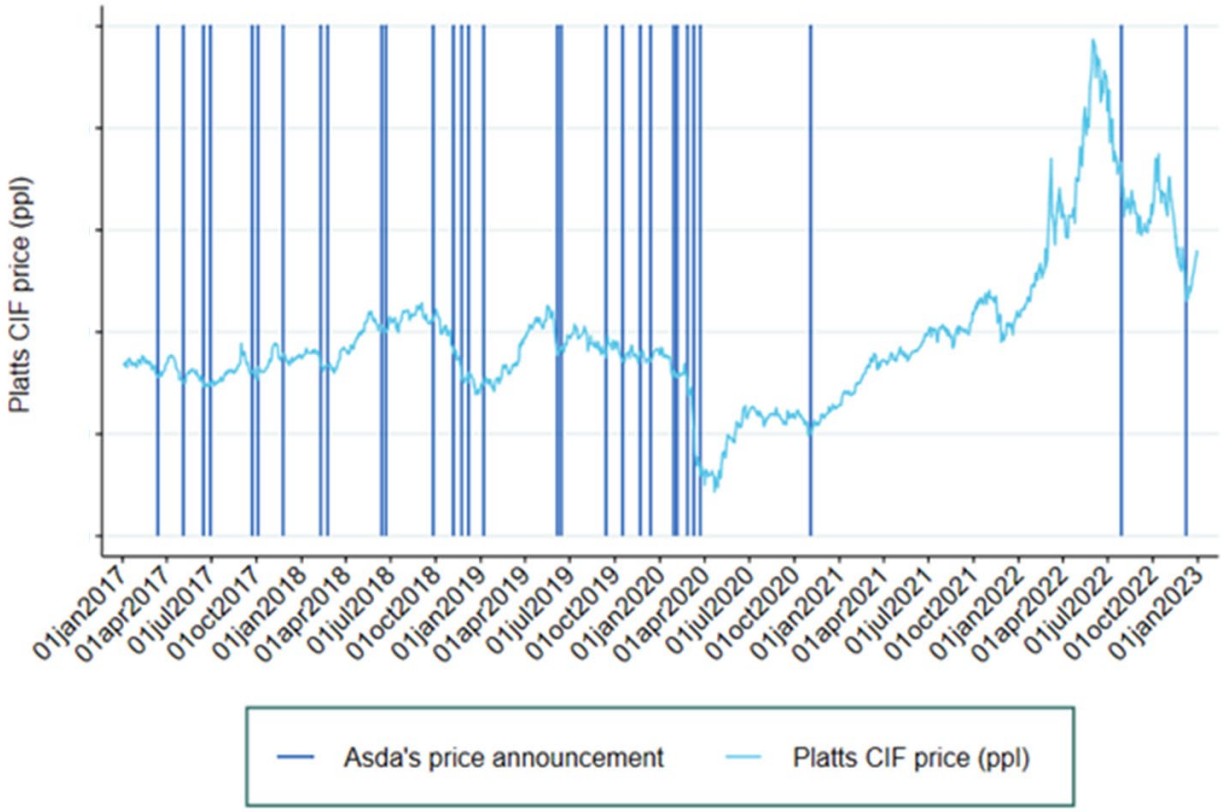
5.92 We first looked at the frequency with which Asda made price cut announcements between 2017 and March 2023. We found that there were between 6 and 9 price cut announcements per year in the years 2017-2020, with none in 2021, and then 2 for each type of fuel in 2022. We then plotted this against the Platts CIF price (which is by far the largest component in the wholesale price), shown in Figures 5.24 and 5.25. This illustrates the reduction in the frequency of price cut announcements, with the two price announcements in 2022 occurring in periods when there was government/regulatory intervention:

(a) In July 2022 the CMA published its Urgent Review findings; Asda made a price cut announcement on 29 July 2022;[69] and

(b) The CMA published its initial update report on 6 December 2022; Asda made a price cut announcement on 8 December 2022.

[68] Asda told us that "*the cost of fuel that is delivered to Asda in a given week will have been set [✂] weeks previously*".
[69] Asda drops petrol prices by 5ppl, Asda price announcement, 29 July 2022.

Figure 5.24: Asda price announcements and Platts CIF price of petrol



Source: CMA analysis of Platts and Asda's price announcement data

Figure 5.25: Asda price announcements and Platts CIF price of diesel

Source: CMA analysis of Platts and Asda's price announcement data

5.93 In order to test whether the movements we observe in the wholesale price after April 2020 would have been expected to result in price announcements if Asda had continued its previous approach, we formulated a simple econometric model (see Annex C). This predicted the probability of a price announcement based on changes in underlying costs and allowed us to assess how likely a price cut announcement was in 2021-2023 if Asda responded to cost changes in the same way as it did in 2017-2020. We found that:

(a) over the period 2017-2020, price announcements occur on days where the predicted probability of a price cut announcement is between 0.07 and 0.25,[70] and when there were only modest reductions in the Platts CIF price; while,

(b) over the period 2021-2023, there are a number of occasions where the Platts CIF price reduced and the daily probabilities of a price announcement predicted were high, materially surpassing the range estimated over the period 2017-2020), and we would therefore expect a price cut announcement, but one was not made.

5.94 In summary, our analysis has shown that Asda has significantly decreased the frequency with which it makes price cut announcements since spring 2020. It has also shown that there have been numerous occasions in the last 2 years where the probability of a price cut announcement, based on changes in wholesale costs, was above the level where an announcement was previously made prior to 2020.

5.95 Asda told us that it is making fewer price announcements due to increased volatility in the fuel market in the last couple of years, compared to the preceding ten. They told us they do not want to make a price cut announcement and then need to revisit it within a short period of time. Hence the lack of certainty and clarity in the upstream market makes it very difficult. By way of example Asda told us about a recent cut to the price of diesel, which was 6p over the course of a week. This was made in increments, without a price announcement, where historically this may have been made in one announcement.

5.96 A reduction in price cut announcements does not necessarily demonstrate that price competition has reduced materially, as retailers may compete on prices without announcing price cuts. Therefore, we have looked for evidence in internal documents to see if any supermarkets have changed their approach to pricing, other than in relation to price announcements, after spring 2020.

[70] The low predicted probabilities simply reflect the fact that price announcements are fairly rare events.

Margin targets

5.97 As set out in paragraph 5.73 Asda and Morrisons told us that they set margin targets which we term 'active'. By this we mean that they set a target for profitability at the beginning of the year (although it can be updated during the year) and will adjust their pricing in order to meet that target. In contrast, Tesco and Sainsbury's told us they monitor margin but do not deviate from their pricing rules in order to meet a particular margin.

5.98 We requested information from Asda and Morrisons in order to assess how their margin targets have evolved.

5.99 Asda and Morrisons provided us with details of their margin targets:

Figure 5.26: Asda margin target

Date	Plan Rate (PPL)
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]

Source: Asda response to RFI.

Figure 5.27: Morrisons margin target: [71]

Date	Final Budget (PPL)
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]
[✂]	[✂]

Source: Morrisons response to RFI.

5.100 The data shows that prior to 2021 Asda and Morrisons both had relatively stable margin targets, Asda's around [✂]ppl and Morrisons around [✂]ppl. At some point during 2021 both Asda and Morrisons took the decision to increase materially their margin targets.

5.101 Asda told us that it does not directly set the level of its ppl margin target, rather it sets a plan for the overall profitability of the fuel business and a ppl figure is then

[71] Morrisons told us that these are the final budget targets for the year and may have been adjusted [upwards] during the year to reflect weaker performance elsewhere in the business.

derived from this based on forecast volumes. As such adjustments to the ppl figure can be made if volumes are above or below forecast levels. Asda told us that:

(a) Asda's original fuel plan for 2022 was, at the business planning stage in November 2021, set at a level of £[✂] million for the year. By 14 January 2022 this had increased to £[✂] million, and increased further to £[✂] million by February 2022.

(b) Further adjustments to Asda's fuel plan occurred throughout 2022, including another £[✂] / month contribution from the second half of 2022 and by 9 November 2022, the revised plan was increased to £[✂] million.

5.102 Taken together this evidence shows that Asda tripled its ppl margin target between 2021 and 2023, and that Asda doubled its cash margin target between when it was set in November 2021 and the middle of 2022.

5.103 Similarly to Asda, Morrisons told us it sets a plan for the overall profitability of the fuel business, and a ppl figure is then derived from this based on forecast volumes. As of the date of this report, Morrisons has more than doubled its ppl margin target between the end of 2020 and 2023.

5.104 Asda further told us that, *'in the course of 2021 and 2022, some adjustments were made to increase the fuel contribution to Asda's overall business to cross-subsidize price reductions in Asda's groceries to counter inflationary pressures on food'*. Morrisons also told us that it uses fuel sales to cross-subsidise other parts of its business and can increase fuel margin if other parts of the business do not perform as well as expected elsewhere.

5.105 Since the road fuels market is a separate product market to groceries, with the majority of operators not present in the groceries sector, we would not normally expect a retailer to be able to raise prices in the road fuels market simply because they were performing more poorly than expected in the groceries market. This is strongly indicative that competition is not working effectively in the road fuels market.

5.106 In internal documents, a retailer speculated that the change in Asda's and Morrisons' pricing was due to the ownership changes, stating:

(a) "*Competitors have adopted a less aggressive position on fuel price, specifically Asda*"; and

(b) "Changes in competitor pricing approach (specifically Asda & Morrisons) due to planned or completed changes in ownership. These previous market-leaders on fuel price have been looking to improve profit delivery from their PFS businesses."

5.107 Our evidence shows that Asda was historically the lowest-priced supermarket in the UK for both petrol and diesel and targeted a margin of around [✂]%. In 2022 it doubled its margin target to [✂]%, before moving it to [✂]% in 2023, triple its 2019 margin target. Although on average across its estate it is often still the cheapest retailer, it achieves this position less frequently than previously (around 70% of the time compared to 90% of the time). Additionally, it has reduced the frequency with which it makes price cut announcements, which have been identified in CMA merger decisions as a form of national price competition between supermarkets.

5.108 Similarly, our evidence shows that Morrisons was historically the second or third cheapest supermarket, with a margin target of around [✂]%. Its margin target increased to [✂]% in 2021 and increased again to around [✂]% in 2022 and 2023, over double its 2020/21 margin target. Furthermore, its ranking has declined: it is the 4th cheapest supermarket 37% of the time for petrol and 46% for diesel (formerly 27% of the time for petrol and 32% for diesel).

Reaction of rest of market to change in Asda and Morrisons approach

5.109 In a well-functioning market if a player becomes less price competitive, we would expect to see this player losing some market share to other competitors, which would constrain its pricing behaviour.

5.110 In the UK road fuels market, supermarkets typically sell far higher volumes of fuel than other PFSs, and as such benefit from economies of scale. As a result, supermarkets have a lower cost base than other retailers, which means that they are generally able to price below dealers and company owned PFSs. Therefore, we would expect that Sainsbury's and Tesco would be best placed to win market share from Asda and Morrisons. As supermarkets margins have continued to rise, we would have expected non-supermarket PFSs to become increasingly competitive.

5.111 In this section we set out what parties have told us about how they have reacted to the margin increases at Asda and Morrisons and set out our analysis of how market shares have changed.

Evidence from retailers

5.112 The pricing strategies used by both supermarket and non-supermarket PFS retailers may reduce the likelihood of a competitive response to Asda and Morrisons, absent a change in pricing strategy. This is because prices tend to be set to maintain a given pricing differential to different competitors, for instance:

(a) An internal document from Tesco shows that [✂].[72]

(b) Sainsburys told us that it adopts a 'follower pricing strategy', [✂].

5.113 A supermarket told us that they have to be careful that they do not have too much volume going into their sites because their trading intensity is one of the highest in the UK. They told us that since their PFSs are located on their supermarket sites they are concerned about queues for the PFS disrupting entry to the supermarket. This coupled with the size of their existing storage infrastructure means that they estimate they could only increase sales volumes by around [✂]%. The supermarket told us that they do not want to be significantly below the rest of the market as there is a material risk that the volume demand would exceed [✂]% and that their PFS would either run dry or disrupt their groceries business.

Impact on market share

5.114 We have analysed petrol and diesel volumes[73] data from 12 retailers, including Asda, to determine how market shares have evolved since 2020.[74] Figure 5.28 suggests that for petrol:

(a) Asda's market share has been broadly stable, between [10-15]% and [10-15]%, for most of the period, with some decline noticeable in late 2022 / early 2023.

(b) Morrisons's market share has been broadly stable, between [10-15]% and [10-15]%, for most of the period.

5.115 Similarly, Figure 5.29 shows that for diesel:

(a) Asda's market share has remained mostly stable at [5-10]% to [5-10]%, with a slight decline to [5-10]% in Q1 2023.

(b) Morrisons's market share has been broadly stable, between [10-15]% and [10-15]%, for most of the period.

Figure 5.28: Total petrol market share

[✂]

Source: Data from Tesco, Asda, Sainsbury's, Morrisons, BP, Shell, Applegreen, Euro Garages, Motor Fuel Group, Moto, Welcome Break and Rontec and CMA analysis.
Note: Sainsbury's uses 13 periods across a 52-week timeframe to report fuel volumes. Tesco uses 12 periods which cover 4 or 5 week intervals. We have matched each period to calendar months to give an aggregate estimate of total fuel sales for each quarter.

[72] [✂].
[73] Morrisons and Motor Fuel Group have provided volumes data for standard petrol and diesel grades of fuel only.
[74] Based on data from Tesco, Sainsbury's, Asda, Morrisons, BP, Shell, Applegreen, Euro Garages, Motor Fuel Group, Moto, Welcome Break and Rontec.

Figure 5.29: Total diesel market share

[✂]

Source: Data from Tesco, Asda, Sainsbury's, Morrisons, BP, Shell, Applegreen, Euro Garages, Motor Fuel Group, Moto, Welcome Break and Rontec and CMA analysis.
Note: Sainsbury's uses 13 periods across a 52-week timeframe to report fuel volumes. Tesco uses 12 periods which cover 4 or 5 week intervals. We have matched each period to calendar months to give an aggregate estimate of total fuel sales for each quarter.

5.116 This analysis suggests that despite the increase in margin targets, Asda and Morrisons have been able to keep their market share broadly stable across this period, though there is indication of Asda losing market share in recent months. Consistent with this, our analysis of margins, shows that for both supermarkets and non-supermarkets, margins have been increasing since 2017.

5.117 There is some evidence that Asda and Morrisons may have reached the point where competitive constraints are beginning to lead to reductions in their sales volumes:

(a) as set out in paragraph 5.7 and paragraph 5.75 to 5.77, the price gap between supermarkets has decreased and there are increasing instances when Sainsbury's in particular has the lowest average price in the UK. However, Sainsbury's and Tesco have retained local pricing policies that set prices independently at each PFS based on local competitors. As a result their national average prices are based on the aggregation of the constraints they face in local areas.

(b) as set out in paragraph 5.12, we have observed that an increasing number of non-supermarket PFS are pricing below the average prices of the supermarkets.

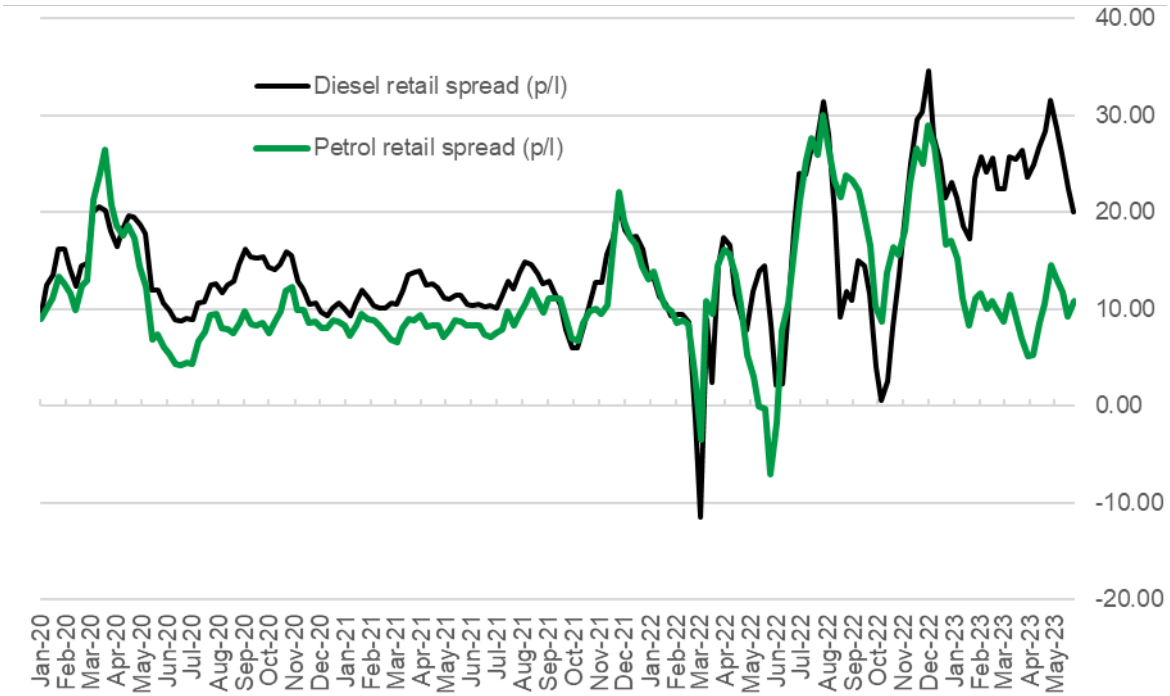
5.118 Based on what we have been told by rival supermarkets, we do not believe that there has been a national change in their pricing policies focused on winning market share from Asda (for instance no one other than Asda told us they were aiming to be the cheapest). However, the nature of their local pricing rules and decision making means that there may be local areas where rivals are now price leaders. Notwithstanding this, however, without a change in rival supermarket's pricing rules, resulting in their prices being more often below Asda's where they are directly competing, there is a risk that price increases will continue being generally accommodated and become entrenched.

Effect of weaker competition in 2023

5.119 The increase in margin targets, set out in paragraph 5.97 to 5.108, could be achieved by increasing the markup on petrol, diesel or both. Figure 5.30 below shows the weekly retail spreads for petrol and diesel over the period January 2020 to end of May 2023. This suggests that the gap between the diesel and petrol

spread was fairly consistent until 2023. However, the spread for diesel has remained consistently elevated since the start of 2023, whereas the retail spread for petrol has significantly declined. This suggests that in 2023 weaker competition is principally manifesting itself in the diesel market.

Figure 5.30: Petrol and diesel retail spread, weekly, January 2020 – May 2023



Source: CMA analysis of BEIS, Platts, Bloomberg and Bank of England data.

5.120 There have historically been differences between the diesel and petrol spreads – over the period January 2020 to January 2023, the diesel spread has been higher than the petrol spread by between 1ppl and 5ppl in most weeks, though there have also been weeks during this period when the petrol spread was greater than the diesel spread. The average difference between the diesel and petrol retail spreads has been under 2ppl over the period 2017-2022. However, since the end of January 2023 we have observed a persistent and significant gap between the two retail spreads, whereby the diesel spread has been higher than the petrol spread by 12-20ppl in each week since the end of January 2023 until May 2023. The difference reduced to 9ppl in the last week of May. While the petrol spread reduced from a peak of 28ppl (observed in December 2022) to 10.8ppl at the end of May 2023, the diesel spread has remained elevated, averaging 24.3ppl from January to May 2023.The diesel spread reached a peak of 31.6ppl at the start of May 2023 and then started to decline during May, standing at 20.0ppl at the end of the month.

5.121 The average diesel spread over the period January – May 2023 (inclusive) was 24.3ppl, while the average spread over the period January 2017 - December 2022 was 11.2ppl. This gives a difference of 13.1ppl for the average diesel retail spread premium over and above the historic average.

5.122 The retail spread is the difference between the average price at the pump (excluding fuel duty and VAT), and an estimated wholesale price (which is comprised of the benchmarked cost of fuel and the cost of biofuel). By definition, the retail spread is a component of the pump price that remains after the wholesale price is accounted for, and therefore the level of and movements in the retail spread cannot be explained by the level of or movements in the wholesale price.

5.123 The retail spread broadly reflects retail and transportation costs as well as retailer profit and some costs that may be borne by wholesale suppliers (such as branding costs). We have not seen evidence that any of the costs which are captured within the retail spread (such as retail and transportation costs, or branding costs) have differed between petrol and diesel, which would suggest that retailers' profits have been higher for diesel than for petrol since the start of 2023.

5.124 Asda told us that there has been volatility in diesel wholesale prices over the past year, and particularly in 2023. Asda told us *'the volatility in the market allows us opportunity certainly from a local perspective to be able to take price where we can see that opportunity'.*

(a) Asda told us that [✂], as they were having some food challenges in the market versus their margin. In [125-175] sites Asda faces no supermarket competitors within [✂] miles, at these sites Asda told us that it decided to flow through reductions in the wholesale price slower in order to increase profits in fuel. They noted that in 2023 there was a particular opportunity to do this on diesel rather than petrol, due to the greater volatility in the diesel wholesale price.

5.125 Morrisons told us that it targets a blended margin across all grades. They told us that their blended margin is consistent with budgeted targets, so on a blended basis, they were achieving their target return, so in order to decrease the diesel price they would have to increase the petrol price, in order to still achieve their target margin.

5.126 Tesco told us they believed the differential between petrol and diesel opened up due to volatility in the input prices of diesel relative to petrol, which caused some hesitation in responding very quickly to the price. Tesco told us that they do not try and have a different spread on petrol to diesel and that diesel prices were adjusting as they gained more confidence in the wholesale price.

5.127 Sainsbury's told us they believed that in December, when Russian sanctions in Europe were due to start there was a belief that supply would be tight, that was priced into the wholesale price, but this tightening did not happen as there were other routes to market in global diesel supply. This, coupled with lower diesel (heating) demand in Europe meant that there was oversupply and the wholesale

price of diesel fell. They noted that the retail price has started coming down in the last 4 weeks against the previous 16. Sainsbury's also noted that [✂]. This imposed an additional cost that could have an impact in the future.

5.128 We consider that the principal factor driving the increase in the retail spread for diesel above that of petrol in 2023 has been a "feathering" of retail prices. This has been caused by a decline in prices in the diesel wholesale market where prices have fallen steadily from 97ppl in early October to 53ppl at the end of April. This has given retailers the opportunity to increase their margins by only gradually reducing their retail prices, which is a way of increasing profitability that is much less obvious to consumers than increasing price with static wholesale prices. We explore this in the following section on rocket and feather pricing.

5.129 An additional factor which may have contributed to this effect is potential differences in the demand characteristics of diesel and petrol. Demand for diesel cars has been declining, whilst diesel is still widely used in business and commercial vehicles such as vans, busses, and HGVs. Although a portion of business customers will have access to fuel cards, and so will not pay the advertised pole price, the remainder are likely to be relatively price inelastic as their journeys are less likely to be discretionary than those made by drivers of petrol cars (which will be comprised of a mix of business, commuting and social use). There is some evidence to support this hypothesis:

(a) A supermarket conducted an elasticity trial where they increased or decreased the price of different fuels at a small number of stations. The price increases for petrol resulted in a larger decline in volume than for diesel (across a handful of sites petrol volume declined by [5-10]% (average volume year on year vs control group); diesel volume by [1-5]%). However, the supermarket told us that they saw some very unexpected results from the trial such as a decline in volume following a price drop, which made them lose confidence in the system used for the trial and the elasticities it was producing.

(b) A retailer conducted a project commencing in 2021 which involved targeted price reductions on both petrol and diesel [✂].

Rocket and feather

5.130 During the course of this market study, we have also investigated the claim that fuel retailing is characterised by "rocket and feather" pricing, whereby increases in the wholesale price of fuel are passed on to consumers faster than decreases, via changes in the pump price. While in itself a rocket and feather pricing pattern is not necessarily indicative of a competition problem, it is a pricing strategy that can be used as a means of increasing overall retail margins. This may be particularly

attractive for retailers as it is a less visible method of increasing margin than simply increasing prices at a time when wholesale prices are stable.

5.131 We conducted analysis of rocket and feather in our initial update report and found some evidence of rocket and feather, particularly for diesel, but the results were largely driven by the industry's response to cost shocks in only two to three weeks around March and April 2022.

5.132 Since the publication of our initial update report we have noted a substantial divergence in the retail spread for petrol and diesel. Additionally, as set out in paragraph 5.122 Asda have stated that they have not passed on reductions in the wholesale cost of diesel as quickly as they usually would have done, in order to increase their margins – ie they have feathered. We have therefore re-run the local rocket and feather analysis to confirm whether the feathering has taken place and to determine whether retailers other than Asda have engaged in it.

5.133 Figures 5.31 and 5.32 show the results of the firm-specific rocket and feather model. We do not have sufficient data to estimate the model for 2023 alone, so have estimated it both including and excluding 2023 data. As can be seen:

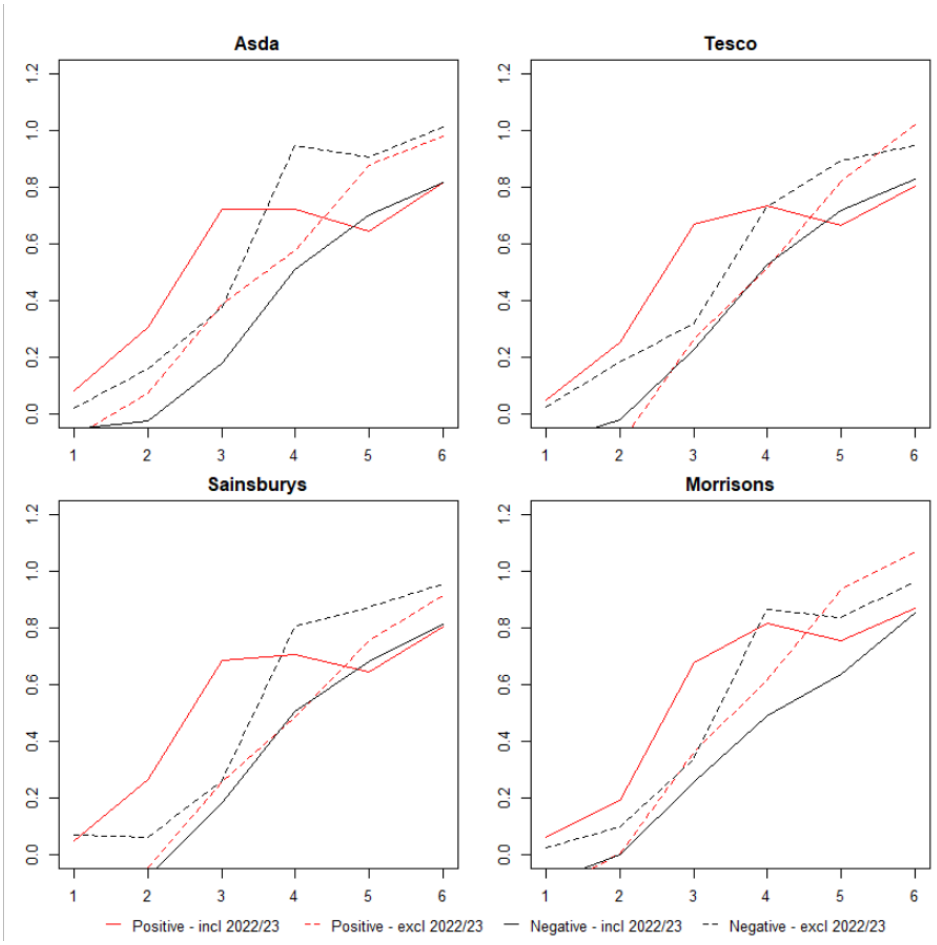
(a) For diesel,

(i) there is a clear difference between the speed of pass through, particularly for diesel when 2023 data is included. This is shown by the difference between the dashed and solid line of the same colour. For instance, for Asda, for diesel the analysis shows the inclusion of 2023 data leads to a faster pass through of positive cost shocks and a slower pass through of negative cost shocks;

(ii) each supermarket retailer's positive and negative response function is different when 2023 data is included, which indicates that they have followed the same pricing pattern – ie rocket and feather, albeit to different degrees.

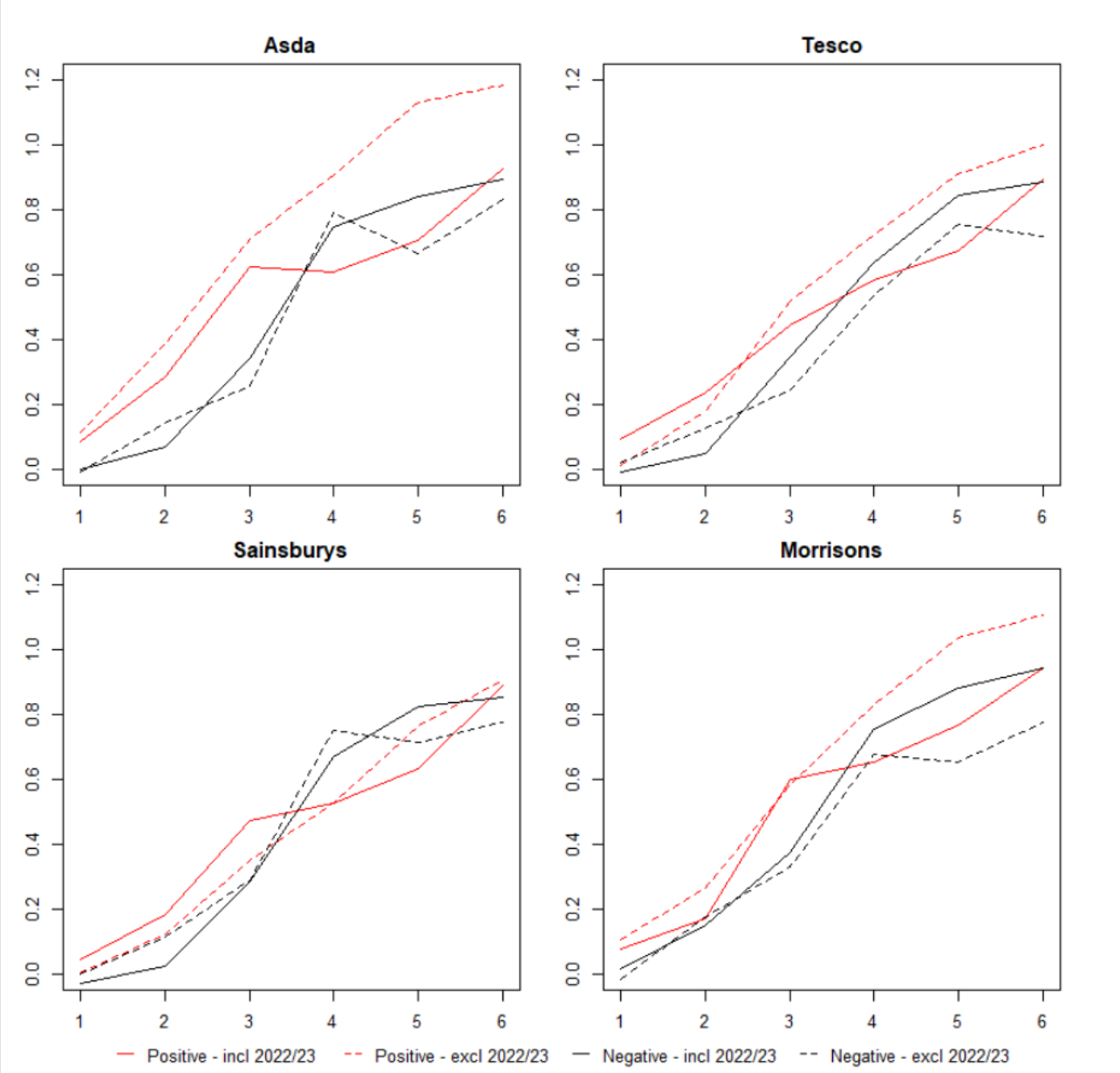
(b) For petrol, the inclusion of 2023 data does not make a substantial difference to the results, and there is no clear evidence of rocket and feather.

Figure 5.31: Impulse response functions for diesel



Source: CMA analysis of Experian data.

Figure 5.32: Impulse response functions for petrol



Source: CMA analysis of Experian data.

5.134 Based on these results there is clear evidence in the data of rocket and feather pricing for diesel in 2023. The evidence from the retailers suggests that this may have been used as a strategy to increase margin in a manner that is less visible to consumers than increasing prices.

Conclusion on national retail competition

5.135 Overall, the evidence we have seen points to a national weakening of competition between road fuel retailers since the beginning of the Covid pandemic. Profit margins on fuel have been increasing across both supermarket and non-supermarket retailers. The traditional price-leader, Asda, is now competing less hard on road fuel and other retailers have followed suit, retaining their existing

price relativity approach. We do not see any further evidence that generalised rocket and feather pricing is happening in the petrol market, but we do see evidence for this happening in 2023 in diesel.

Impact of the Asda/Bellis merger

5.136 As set out in paragraphs 5.97 to 5.108 the most significant increase in Asda and Morrisons' internal margin targets came from 2021 onwards, meaning that these occurred after each of these supermarkets were bought by private equity purchasers. As noted in paragraph 5.78 both purchasers had existing road fuel businesses, leading the CMA to carry out a merger investigation. In each case, the CMA cleared the merger at phase 1, subject to divestment of a number of PFSs.

5.137 Given the timing that we observe, this raises questions about whether the mergers, and in particular the Bellis/Asda merger, contributed to the weakening of competition we have seen in the road fuel market, and the associated negative outcomes for consumers.

5.138 It is important to note that a CMA merger assessment focuses on the impact of the merger of the two businesses on competition and not on the impact of a change of ownership in and of itself. In February 2021, the Issa Brothers and TDR Capital acquired the entire share capital of Asda, subject to a small minority shareholding by Walmart. The Issa Brothers and TDR Capital already jointly owned Euro Garages (EG) at the time they acquired Asda.[75] At that point, EG and Asda therefore came under common ownership. The purchase of EG by Asda that was announced in May 2023 is essentially an internal restructuring following which both businesses will remain under the same ultimate ownership and control. As the 2023 transaction does not result in a change in the ultimate control of either business, it is not a relevant merger situation that would be reviewable by the CMA under our merger control powers.

5.139 In our 2021 Bellis/Asda decision, we considered the impact of the merger of the two businesses in local areas where EG and Asda both have a PFS. We considered whether by removing competition between these sites, the merger would allow the parties to increase prices or deteriorate other elements of their offering, such as quality. This is because after the merger it may be less costly for the merged entity to raise prices (or lower quality), because some of the customers lost at a site where this happens will be retained by the merged entity if they switch to a site previously owned by the other merging party.

5.140 As a result of our assessment of the impact of the merger on local market competition, we found a realistic prospect of a significant lessening of competition (the legal test at phase 1) in 36 local areas. To remedy these concerns, on 16

[75] Subject to some minority shareholdings of third parties.

June 2021 the CMA accepted undertakings from the merging parties to divest 27 PFSs and allowed the merger to proceed without further investigation.

5.141 In addition, we considered whether the addition of the EG PFSs to the Asda estate would reduce Asda's incentives to act as a downward price leader in the market at a national level, including through announcing retail price reductions following wholesale cost reductions. The concern was that post-merger Asda may have less incentive to lead downward price movements because it would incur a cost at both its supermarket sites and at EG sites. However, we found that Asda's road fuel pricing strategy contributed to its perception as a value-led retailer, which impacted its overall margins (including in groceries). We considered that the potential gain in profit from not reducing prices in EG PFSs post-merger would be outweighed by the grocery margins that Asda would lose if it deviated from Asda's previous pricing approach.

5.142 In the course of our market study, we have seen no evidence to suggest that Asda's decision to increase its internal margin targets was driven by the merger of Asda and EG's existing road fuel businesses and the loss of rivalry between them. While, in common with the other major fuel retailers, EG will have benefitted from the increased margins across the industry, we have not seen evidence that the impact on EG profitability was a relevant factor in Asda's internal decision-making. Rather, it seems more likely to have been driven by a unilateral change in business approach by Asda, incentivised and facilitated by changes in market conditions.

5.143 The biggest factor to change market conditions is the war in Ukraine, which has had two potentially relevant effects. First, it increased the price of inputs for both fuel and groceries, putting potential pressure on margins. Second, it created huge volatility in wholesale road fuel prices, which made it easier for Asda to increase margins in a way that was less obvious to consumers in circumstances where prices were generally falling (by feathering prices), meaning that the reputational impact of doing so was lessened.

5.144 Most importantly, however, Asda's change in approach was only successful because of the weak competitive response from the rest of the market. If others had responded more competitively, Asda would have lost market share and profitability on fuel, but this did not happen. The absence of a strong competitive response will be a relevant factor that we will take into account in considering future mergers in the sector. More immediately, however, we are aiming to address this weakness directly through the recommendations we are making in this report, as outlined in section 10.

Local retail competition

5.145 While some elements of pricing are set at a national level, road fuel markets have significant local aspect. This is due to the fact that consumers have to be physically present to purchase fuel and it uses up time and fuel to travel to a PFS.

5.146 We have heard a number of concerns in relation to geographical price variation, both directly (through contact from members of the public and elected representatives) and indirectly (through press reports, parliamentary questions and so on). In particular, we have seen concerns that:

(a) some regions and sub-regions of the UK have higher prices than others.

(b) rural areas have higher prices than urban ones, and motorway service areas have much higher prices than other sites.

(c) prices can vary widely within a relatively small geographic area.

(d) prices can vary widely across a single supplier or brand.

5.147 In this section we consider:

- how pricing practices by retailers lead to geographical price variation;
- the extent of those price variations, including how they have changed over time;
- the opportunities that may be open for consumers to access cheaper fuel by buying from the lowest-priced retailers, and barriers that may be preventing them from doing so; and,
- the factors that are associated with higher or lower prices, and the way these relationships have changed over time.

How retailers set prices

5.148 In this section we consider how the way that retailers set prices in the road fuel market contributes to geographic variation in prices.

5.149 We sent requests for information to a number of parties in order to find out how they set prices. The majority of parties told us that they set their prices at a local level, depending on the level of local competition, within the scope of a wider national pricing policy. The national pricing policies tend to set target differentials to different types of competitors.

5.150 Several retailers, including all four supermarkets, told us that prices vary across their PFSs due to local conditions of competition:

(a) One retailer told us that its PFSs are managed centrally, with a common strategy across its forecourt estate. Each PFS is then adapted/priced individually to take account of local conditions of competition.

(b) One retailer told us that it has a local pricing policy and that its price is primarily driven by local competition. During the recent period of extreme price volatility, there has been a very large spread of wholesale cost prices for retailers (as a result of the lag in their wholesale fuel purchasing strategy) which leads to a broad spread in retail prices. The retailer, in accordance with its pricing policy, matches this broad spread of competitor prices at the local level, which consequently leads to it also offering a broad spread of prices.

(c) One retailer told us that its pricing policy is determined at a central level and then adjustments are made where required to take account of local competitive conditions and other site-specific features. It told us that it does not, as a matter of course, monitor site-specific costs across its PFS estate, (rather it monitors financial performance at a top line level across its entire estate). However, competition takes place at a local level, so pricing needs to be competitive relative to the prices of competitors that are located closest to each of its sites.

(d) One retailer told us that its pricing guidance takes into consideration a number of factors including the proximity, number, and type of competitors in the local area. It told us that rather than setting a price which would be required to offset costs, it prices within a range relative to a benchmark competitor.

(e) One retailer told us that its pricing is based on local competition.

(f) One retailer's pricing strategy takes into account local conditions of competition.

(g) One retailer told us that they monitor competitor prices and use these as an input when setting their own prices. Local characteristics such as traffic flow are key in determining who are the competitors.

5.151 Two supermarkets told us that they aim keep the spread of prices across their PFSs within a narrow range:

(a) One supermarket told us that its pricing strategy contains several criteria, including 'minimal pricing spread'[76] and 'minimal variation between its neighbouring sites'[77]

[76] It defines the spread as the gap between the lowest priced sites and the highest priced sites, though at times of high volatility and 'hi-low' pricing by competitors the spread can exclude specific outliers.
[77] It categorises neighbouring sites as sites in the same city or sites along the same road network.

(b) Another supermarket told us that it sets a base price and the spread is set within [✂] price points of this base price.

5.152 In an internal document, one supermarket stated that it aims to keep the spread of prices across its PFSs within around [✂] pence (with the ability to exclude up to 10 PFSs from this rule), and that it would 'aim to narrow our price spread to [✂]p for majority of our sites'.

5.153 As a result of these pricing strategies there is scope for prices to vary in different local areas and between sites of the same brand depending on the presence or otherwise of other competitors. The distances over which this will happen in practice depend on how far retailers consider motorists are currently willing to travel to buy cheaper fuel. One supermarket told us during the market study that they assumed customers would be willing to travel around 10 minutes or 3 miles; another told us that to achieve a balance between price and convenience, they thought customers may be willing to travel and/or deviate from a routine journey by up to 15-25 minutes.

5.154 It is therefore the case that competitive conditions, and therefore prices, can vary materially between PFSs beyond these distances, and we consider this is likely to explain a significant proportion of price differences between different towns or cities within regions or sub-regions.

5.155 Some variation in prices is likely to be driven by differences in costs between PFSs in different locations, as retailers with higher costs may need to charge higher prices to remain profitable. Many parties told us that distribution costs and volumes of fuel sold could affect the pump price, but we consider this does not explain the full variation in local prices we have seen.

Measuring and explaining price dispersion

5.156 This pattern of prices varying geographically is not a new phenomenon, but we have examined it in the context of the considerable volatility in the market over recent years and the changes we have observed in the market.

5.157 In this section we begin by considering the extent of price variation within the UK by region, local authority area and rurality. Next we consider the association of different local characteristics with prices and whether these have changed since the start of 2022. We then move on to assess whether the pattern of price dispersion for different supermarket brands has changed over time. We next look within the areas selected for our local area case studies to see if local price dispersion has changed over time. Lastly, given our findings on price dispersion, we look at whether the rankings of PFSs within a local area change over time.

Supermarket price dispersion

5.158 In order to see whether there have been changes in price dispersion over time, we have analysed the patterns of price dispersion within given brands. This is because different brands have slightly differentiated offerings that can lead to price differentials between them. As such, if we were to look at national price dispersion, we would not know whether there had been a change in the pattern of price dispersion or if the mix of sites had changed over time. By looking at within-brand price dispersion we are able to remove any potential mixing effect from our analysis.

5.159 We focused our analysis of brands on supermarkets, as we found in the initial update report that they had, on average, the lowest prices of any brands and that they were often price leaders in a local area. As such, if the patterns of price dispersion have changed over time for supermarkets, this might be expected to result in changes for other retailers. As shown in Figures 5.4 and 5.5 above, we found:

(a) Price dispersion for each supermarket, for both petrol and diesel, fluctuated over the period 2017 until mid-2022, with no clear pattern, or trend, over this period;

(b) There has been an increase in within-brand price dispersion from mid-2022 which is consistent with a change in Asda's pricing approach (see paragraph 5.99) and the other supermarkets' strategies to follow and price within a set range of their nearest competitor PFS, see paragraph 5.112.

Regional and sub-regional price variation

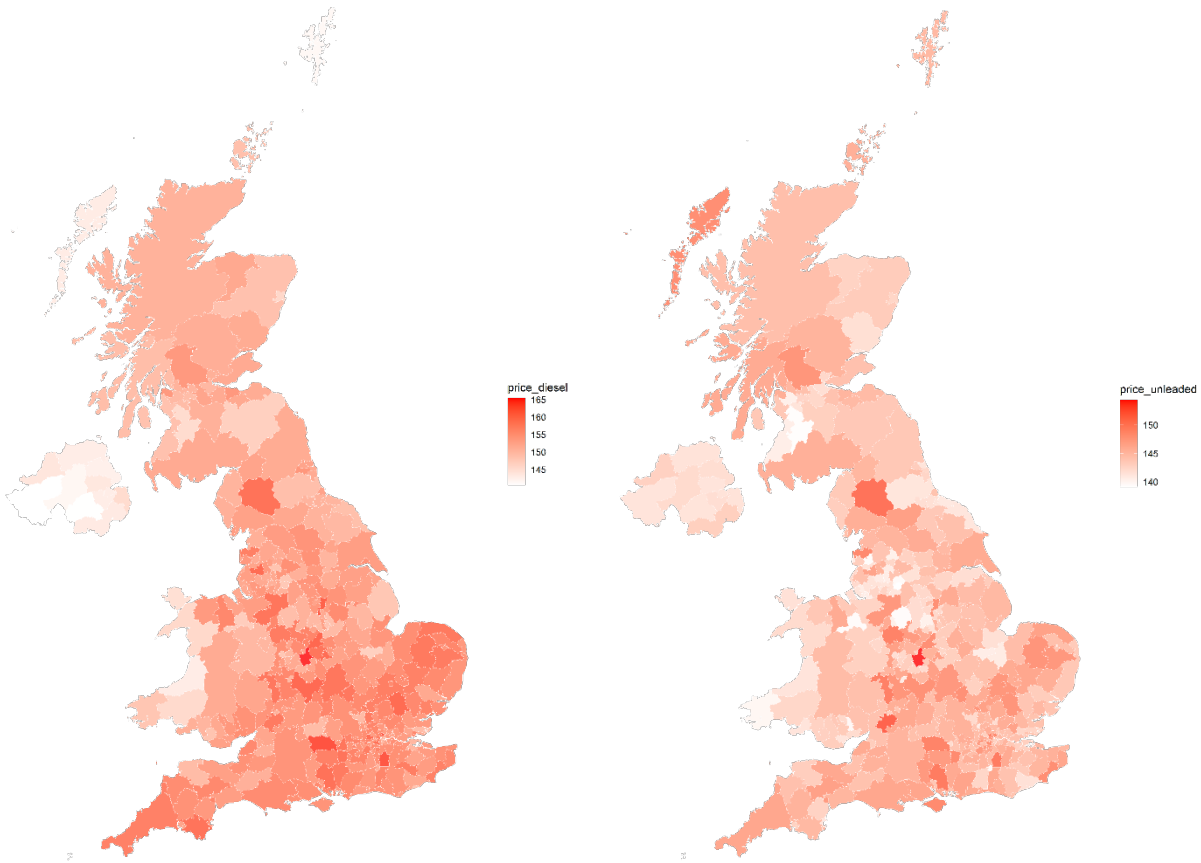
5.160 We have looked at the extent to which average prices vary by region, and compared them to London, which we use as a baseline. On average, the cheapest region was Northern Ireland, where petrol was on average 2.8ppl cheaper, and diesel 1.4ppl cheaper than in London. The fact that we observe prices that are significantly lower in Northern Ireland is likely due to the fact that PFSs there are competing with PFSs across the Irish border, which are subject to a range of different competitive and fiscal dynamics.

5.161 Among the other regions and nations of the UK, differences in average price were much more modest. For each of Wales, Scotland, East Midlands, West Midlands, Southwest, Yorkshire and Humber, North West England and the North of England we see cheaper average prices for petrol and diesel than in London, with gaps ranging from 0.03ppl to 0.7ppl. In the East of England, petrol is marginally more expensive than London (0.13ppl).

5.162 We have also considered prices at the local level. Figure 5.33 shows how the average price varied by local authority area separately for diesel and petrol, for the week of 8 May 2023. This indicates that there was a moderate level of dispersion in average prices across different local authorities, ranging from 141ppl to 165ppl for diesel, and from 139ppl to 154ppl for petrol. This is a greater level of dispersion than we have observed than among regional averages. There would of course be further variation between PFSs within each local authority area.

5.163 Figure 5.33 also shows that local authority areas that have higher average prices of petrol also tend to have high average prices of diesel, and similarly for lower prices.

Figure 5.33: Heat map of average price for Diesel (left) and Petrol (right) by local authority, week of 8th May 2023

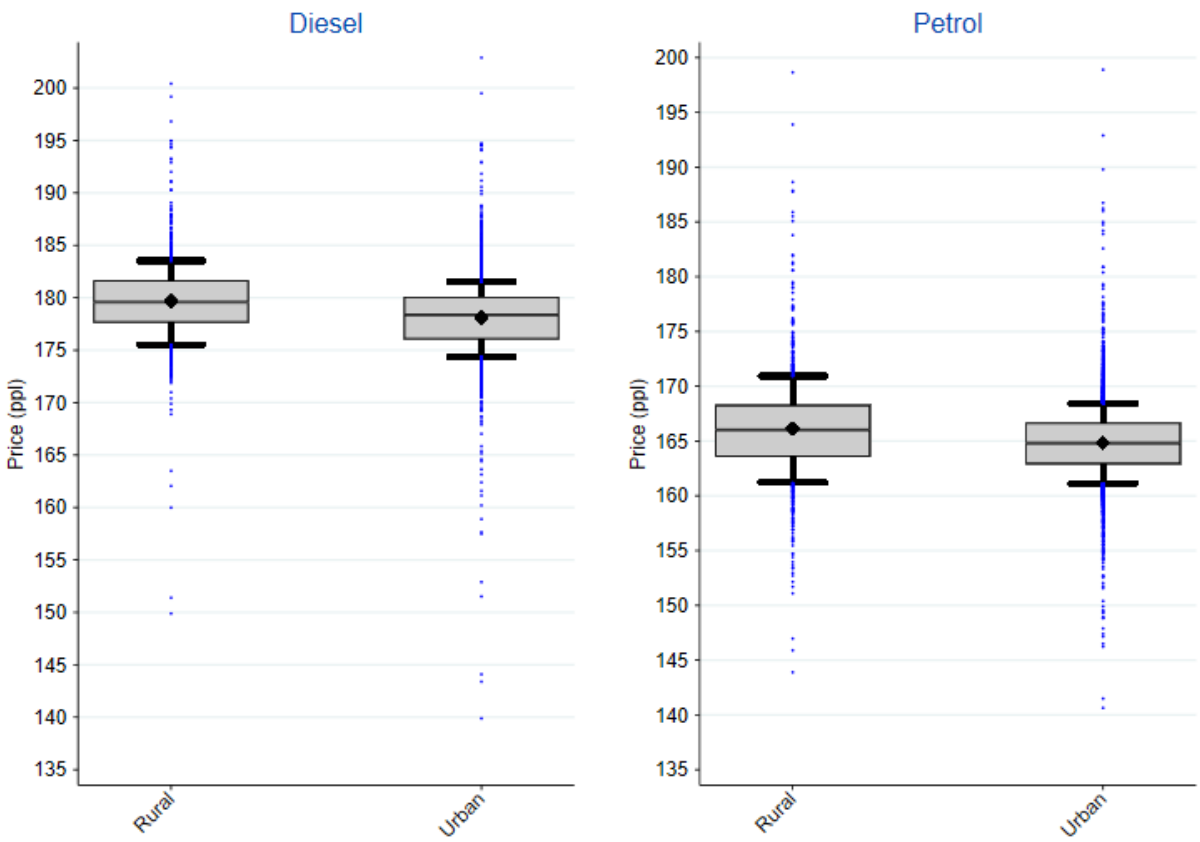


Source: Experian and ONS data and CMA analysis.

5.164 We have also considered price dispersion by PFS depending on whether they are in an urban or rural location.[78] Figure 5.34 below sets out what we have observed.

[78] For the purposes of this sub-section we have amalgamated Experian's residential, urban transient and industry/office location types into an "urban" location type.

Figure 5.34: Box plot for price by location type (2022)



Source: CMA analysis of Experian data

5.165 The data shows that median rural prices are 1.2ppl higher than median urban prices for both diesel and petrol. Looking at the range of prices within each category, we see that rural sites have similar price dispersion as urban sites. For diesel, the difference between the upper and lower quartiles is 4.0ppl for rural and 4.1ppl for urban. For petrol, this difference is 4.7ppl for rural and 3.8ppl for urban. This shows that the differences in price within each category (rural and urban) are significantly larger than the differences between the two categories.

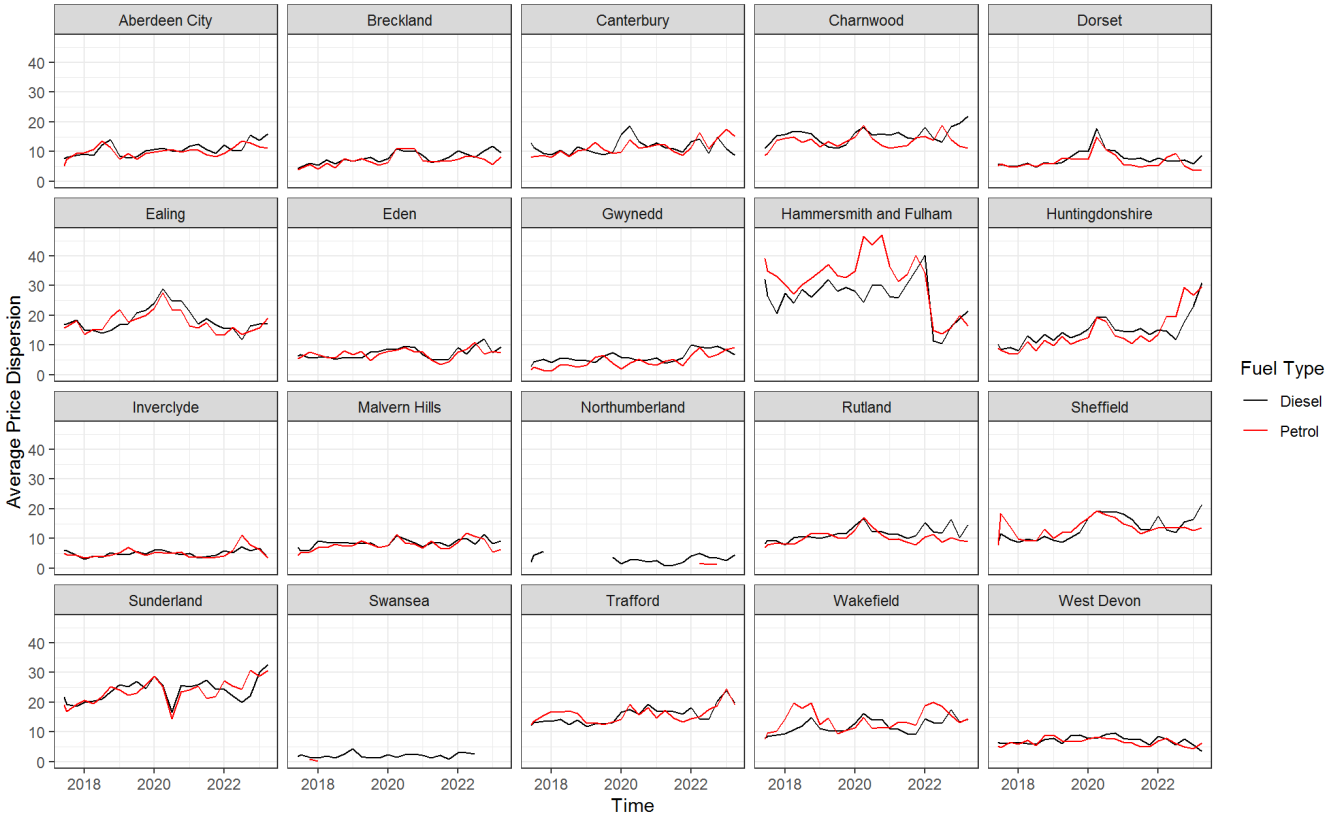
5.166 Given the above findings, we conclude that differences in price between local areas are more likely to be driven by specific local factors rather than the region of the UK that a PFS is in, or whether it is in an urban versus a rural location.

Local price dispersion

5.167 We conducted detailed analysis in 20 local areas,[79] each comprising an area covered by a 20-minute drive time around the chosen centroid PFS. For each of these areas we have calculated the price dispersion.[80]

5.168 Figure 5.35 shows the price dispersion around the centroids[81] in the 20 local areas, for both petrol and diesel.

Figure 5.35: Price dispersion around centroid in 20 local areas, Q2 2017 – Q2 2023



Source: CMA analysis of Experian data.
Note: Price dispersion is calculated as the average quarterly difference between the maximum and minimum prices within a 20-minute drive time of each centroid. Complete price dispersion lines are not available for Northumberland and Swansea due to missing data.

5.169 We find that the level of dispersion differs across the areas. In some areas price dispersion remained below 10ppl throughout the period, whilst in others price dispersion exceeded 10ppl for most of the period. Generally, the pattern of price dispersion remained fairly steady over time within each area, with a slight upward drift. If we compare some of the areas where price dispersion is low to those where it is high we note:

[79] Note that for one local area there were no competitors within 20 minutes, so it is not included in the price dispersion charts.
[80] Calculated as the average quarterly difference between the maximum and minimum prices over the period Q2 2017 – Q2 2023.
[81] The dispersion is calculated within a 20-minute drive time of each centroid.

(a) In two local areas price dispersion is below 7ppl for diesel and petrol in each quarter. In both of these areas there are no competitors within a 5-minute drive, no supermarkets within a 20-minute drive time, and the average price within the area is higher than the national average.[82]

(b) In three local areas the price dispersion is higher at 15-40ppl.[83] All three of these areas are in or near large cities and therefore capture over 50 PFSs within a 20-minute drive. Price dispersion in these local areas is lower (between 4-20ppl) when we consider a 10-minute drive-time. Two of these local areas[84] have a higher average price for petrol and diesel than the national average (between 1-3ppl more expensive for diesel and 1-2ppl more expensive for petrol), while the third has average prices below the national average.

5.170 This analysis suggests that in most local areas there is a degree of price dispersion and in some it is significant – more than 15ppl. As a result of this, consumers may be able to save significant sums by choosing a different petrol station within their local area if they currently use a higher priced station.

Conclusion on price dispersion within local areas and across brands

5.171 We have found that prices vary both within local areas and across the PFS estates of given brands, with a trend of slightly increasing price dispersion within each area over time and within some brands.[85] The variability of prices within local areas means that some consumers (ie those currently purchasing from higher priced PFSs) are likely to have the opportunity to save money by shopping around. We have gone on to assess the extent of the available savings in a selection of local areas.

Analysis of the extent of savings available locally

5.172 We conducted detailed analysis of 21 local areas, which are spread across England, Scotland and Wales. We selected areas which are more expensive than the national average[86] to see which factors might explain this and also to find out whether consumers around these sites had cheaper alternatives.

5.173 We picked PFSs which were (on average) more expensive for diesel than the national average price in the first half of 2022 as centre points for our analysis

[82] These are Swansea and Northumberland.
[83] These are Hammersmith & Fulham, Ealing, Sunderland.
[84] These are Hammersmith & Fulham and Ealing.
[85] Additionally, we note that generally, price dispersion is lower amongst PFSs that are near to each other, this is consistent with the local price setting models described in paragraphs 5.148-5.155.
[86] For diesel only, as data for petrol was significantly sparser – see Annex B, paragraph 2.

('centroids').[87] We analysed the number and type of alternative PFS within a 5-, 10- or 20-minute drive time of each centroid, as well as the price dispersion within these drive times.

5.174 Table 5.1 summarises our findings across the local areas; for each local area around a centroid, the table shows the number of competitors, and of those, the number of supermarkets, located within a 5-minute drive, the drive time to the nearest supermarket and the highest average saving consumers could make by driving to the cheapest PFS within the specified drive time (based on average prices in the 52 weeks up to w/c 8 May 2023).

5.175 As the table shows, in the majority of areas, consumers can make a saving within a 5-minute drive: consumers can save between 1ppl and 9ppl on diesel, and between 1ppl and 10ppl on petrol, based on average prices across the 52 weeks up to w/c 8 May 2023.

Table 5.1: Number of competitors and highest average saving by local area

Local area	*Number of competitors*	*Number of supermarkets*	*Drive time to nearest supermarket*	*Highest average saving (year up to May 2023)[1], diesel (ppl)*			*Highest average saving (year up to May 2023)[1], petrol (ppl)*		
	5-minute drive time	*5-minute drive time*	*Within 20-minute drive time*	*5-minute drive time*	*10-minute drive time*	*20-minute drive time*	*5-minute drive time*	*10-minute drive time*	*20-minute drive time*
Aberdeen City	5	2	5 mins	6	6	6	4	5	6
Breckland	0	0	14 mins	N/A	1	6	N/A	4	4
Canterbury	3	1	5 mins	1	2	3	1	1	4
Charnwood[2]	1	0	10 mins	0	4	10	N/A	N/A	N/A
Dorset	1	1	2 mins	1	1	2	1	1	6
Ealing	4	1	5 mins	7	7	7	9	9	10
Eden	7	0	20 mins	4	4	8	5	5	7
Gwynedd	0	0	9 mins	N/A	4	4	N/A	5	5
Hammersmith & Fulham	2	0	9 mins	1	4	6	1	4	5
Highland	0	0	None	N/A	N/A	N/A	N/A	N/A	N/A
Huntingdonshire	2	0	7 mins	4	7	11	4	6	14
Inverclyde	2	2	1 min	2	2	4	1	2	5
Malvern Hills[3]	2	0	8 mins	N/A	N/A	N/A	N/A	N/A	N/A
Northumberland	0	0	None	N/A	N/A	4	N/A	N/A	7
Rutland	2	0	13 mins	0	0	3	0	0	2
Sheffield	7	1	5 mins	5	7	10	6	6	9
Sunderland	5	0	6 mins	4	6	6	3	4	4
Swansea	0	0	None	N/A	0	1	N/A	N/A	N/A
Trafford	7	2	4 mins	9	9	12	9	9	13
Wakefield	2	1	4 mins	7	7	7	6	6	9
West Devon	0	0	8 mins	N/A	3	4	N/A	4	4

Source: CMA analysis of Experian data.

Note: 1The highest saving is based on average weekly prices across the 52 weeks up to w/c 8 May 2023. For some local areas pricing data was not available for each of the 52 weeks, so the average is calculated over the weeks for which pricing data is available (and this is low for some areas).

2Not enough data from the centroid site was available to make petrol savings comparisons for Charnwood.

3 Only one observation (w/c 19th March 2023) is available for Malvern Hills.

[87] We used data for H1 2022 as this was the most recent available data when we started our analysis. We have since obtained data for the remainder of 2022 and also Q1 2023 and we use the 52 weeks up to w/c 8 May 2023 in our analysis of highest average savings.

5.176 In six local areas[88] there were no competitors within a 5-minute drivetime of the centroid PFS. This lack of geographically close local competition is likely to be a contributing factor to the high prices observed in the first half of 2022 for these areas.

5.177 At the same time, we found that in four of these centroids there were competitors within a 10-minute drive.[89] In these areas consumers could save up to 5ppl on diesel by driving 5-10 minutes to the cheapest PFS (based on data for 52 weeks up to w/c 8 May 2023).[90]

5.178 In two more sparsely populated or remote areas, there were fewer PFSs available:

(a) In Northumberland in England there were no competitors within a 10-minute drive, but there were 3 competitors within a 20-minute drive (none of which are supermarkets). In the 52 weeks up to w/c 8 May 2023, the average diesel prices at this PFS were around 4ppl higher than the national average and the average petrol prices around 7ppl above the national average. In this area consumers could save just under 5ppl on diesel at the cheapest competitor within a 20-minute drive (based on average prices in the 52 weeks up to w/c 8 May 2023).

(b) In the Highlands in Scotland the centroid did not have any competitor PFSs within a 20-minute drive time.[91] The diesel prices at this PFS were 8ppl higher than the national average and also higher than the average for the Highlands.[92]

5.179 For full details of each local area see Annex B.

5.180 We have found in several local areas we analysed that there was at least one competitor within a 5-minute drive, which was on average 3ppl+ cheaper for both petrol and diesel. However, although prices are displayed on a pole at the edge of a PFS site, consumers may have to spend time and effort finding out which PFSs are the cheapest in the local area. To assess the extent of these costs we have looked at how rankings of PFSs within a local area change over time.

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[88] These are: Highlands, Breckland, Gwynedd, Northumberland, Swansea and West Devon.
[89] The average diesel prices at these PFSs were between 2ppl to 6 ppl higher than the national average, and the average petrol prices were between 0-5ppl higher than the national average (based on the data points where prices were available for these centroids).
[90] To calculate the savings, only data points in our selected time period where data was available for the centroid PFS was considered. Prices were pairwise compared with competing PFS on the dates that contained prices for both, and the PFS that yielded the highest average saving compared to the centroid was chosen as the "cheapest", as long as there were at least 4 observations.
[91] The centroid is an independent dealer PFS located near Strontian of the Highlands. The nearest competitor PFS is 29 minutes away near Onich, where diesel prices were around 10.2 ppl cheaper than the centroid in 2022 (based on the weeks that price data was available for both PFSs). There was not sufficient data for comparison of petrol prices.
[92] The corresponding average price in the Highlands on the weeks that price data was available for the centroid was 175.65ppl. Price data was only available on 5 weeks in 2022.

Changes in rankings of PFS within a local area over time.

5.181 Competition tends to be stronger where customers are able to compare prices easily. Obtaining this information is more difficult when suppliers frequently change their prices, and their relative competitiveness varies over time. This is because consumers will need to engage in search more regularly, either by using a price comparison tool, or by driving past sites. We refer to the cost of engaging in search, ie the time taken to use a price comparison tool, or drive to sites, as a 'search cost'.

5.182 To assess the potential magnitude of search costs for PFS customers, we sought to measure how PFS rankings changed over time. Given we have found that price dispersion exists within local areas, we consider that search costs will be higher if rankings change regularly.

5.183 Our analysis of rankings has been conducted on a set of small local markets.[93] This is because the analysis needs each local market to be relatively well-defined, and not part of a wider market (such as a town within Greater London). This is because the analysis is measuring changes in the rankings of PFSs that could plausibly be used by a defined set of customers.

5.184 We selected the towns for our analysis based on two criteria:

(a) we included only those towns that had between 5 and 20 PFSs. This was to ensure there was some choice available to consumers (so 5 or more PFSs) and that these PFSs were within a sufficiently small geographic space to be plausibly within the choice set of customers.

(b) We selected towns that had a high degree of price dispersion (calculated using Experian data), to ensure that there was the opportunity for customers to save money in the areas selected for our analysis. For each town, we estimated the cost of fuel separately for an "informed" and "uninformed" customer that purchased 40 litres of fuel every 2 weeks in 2021. The informed customer purchased fuel at the lowest price reported in the town in the week of purchase, and the uninformed customer is assumed to have purchased fuel at the median price in town. We considered there to be "high" price dispersion where the total cost of fuel paid by the informed and uninformed customer differed by more than £50 over 2021.

(c) This led to the selection of 43 towns.

5.185 We used 2021 data for this analysis to remove the volatility arising from Russia's invasion of Ukraine from the beginning of 2022. We used this data to calculate:

[93] Proxied by the 'town' category in the ONS classification of settlement types

(a) the median price (across 2021) by rank relative to the lowest price.

(b) the price ranking for each PFS within their respective town for each week, separately for diesel and petrol.

5.186 The results for individual towns, which are reported in Annex B, indicate that while it is fairly straightforward for customers to know which petrol stations tend to be the cheapest (in our sample of areas these were mostly supermarkets), it is more difficult to gauge the relative competitiveness of other petrol stations as they regularly change rankings. Thus, a customer who does not buy fuel at a supermarket, or where there is no supermarket in the local market, is likely to face high search costs.

5.187 Our analysis of rankings shows that individual non-supermarket PFSs regularly change their relative competitiveness in a local area. This coupled with the evidence on price dispersion tells us that it may be currently costly for consumers to engage in sufficient search to get the best possible price.

Drivers of geographic price variation

5.188 The analysis above considers the extent of geographic variation, and whether this has changed over time. In order to consider the drivers of this variation, we have conducted econometric modelling to assess the relationship between a number of different factors and prices. The model uses cross-sectional data for the UK from June 2017 to May 2023, to show how either a change in one factor, or the presence or absence of a factor, affects price, while holding all other factors constant. For instance, it allows us to see how price differs between areas with different numbers of competitors, controlling for the presence or absence of supermarkets (which may also affect prices).

5.189 Given our findings set out above, we have also tested whether we can see a change in the impact of factors when we compare results based on data from before January 2022 to those based on data from after that date.

Number of competitors

5.190 As set out above, we have heard from industry participants that they set prices according to local conditions, and all else equal we would expect that a site with more local competitors would face more pressure to lower their prices. In order to test the significance of the number and nature of competitors in a local area over the course of the market study we have carried out a number of pieces of econometric analysis, see Annex C to our initial update report for earlier work. We have updated some of this analysis, to bring in data for 2023.

5.191 We have measured the relationship between the price charged by a petrol station and the number of competitors in its local area (controlling for other factors), and the extent to which this relationship changed over time.[94] Although, these relationships are expressed as a number[95] in this case we have placed less weight on the exact number and more on any pattern we can observe over time. This is because, point estimates are do not reflect the true causal effect of local competition on prices, as prices are affected by other, unobserved factors that are also likely correlated with local competition. However, if these other factors do not change over time, then changes in these results may be indicative of changes in the effect of local competition.

5.192 Figures 5.36 and 5.37 below shows the results for petrol and diesel, respectively. The dots are the central estimates of the correlations, and the vertical red lines are the confidence intervals.[96] For example, the first dot on the left-hand side of the first chart shows that, in 2018, sites with one competitor were charging prices that were on average 1ppl lower than sites with no competitor. Over the 2018-2022 period, the correlation patterns are broadly similar for petrol and diesel:

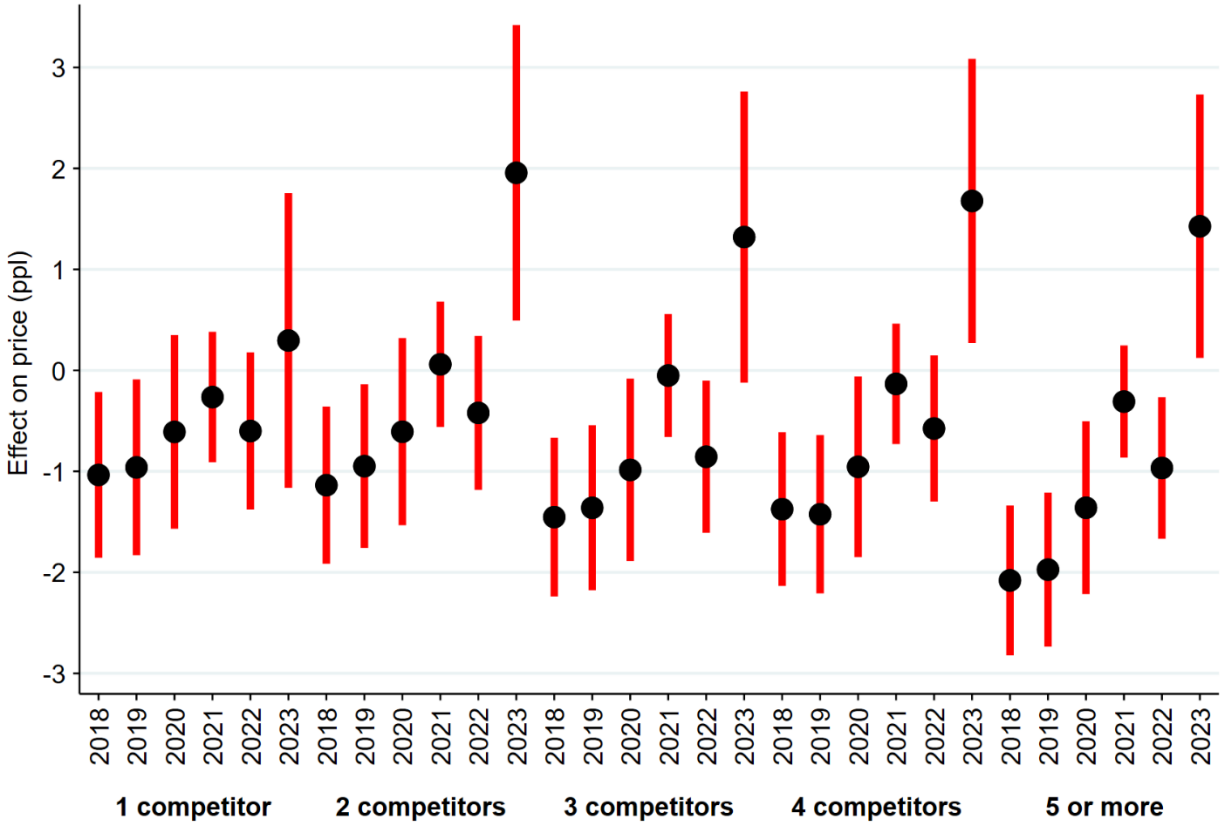
(a) in 2018-2019, sites exposed to more competition tended to charge lower prices; and

(b) in 2020-2022 that association becomes weaker or disappears.

(c) in 2023, the patterns for petrol and diesel start to diverge: petrol prices revert to their previous pattern, where sites exposed to more competition charge lower prices, while diesel prices exhibit the opposite pattern where sites exposed to more competition charge higher prices – we note that this result is counter intuitive.

[94] Annex C to our initial update report provides more detail on the data and methodology used for this analysis.
[95] Since we are conducting regression analysis we obtain a coefficient which is the central estimate of the effect of the independent variable on the dependant variable, with an error band around it.
[96] Measured using heteroskedasticity-robust standard errors clustered by petrol station.

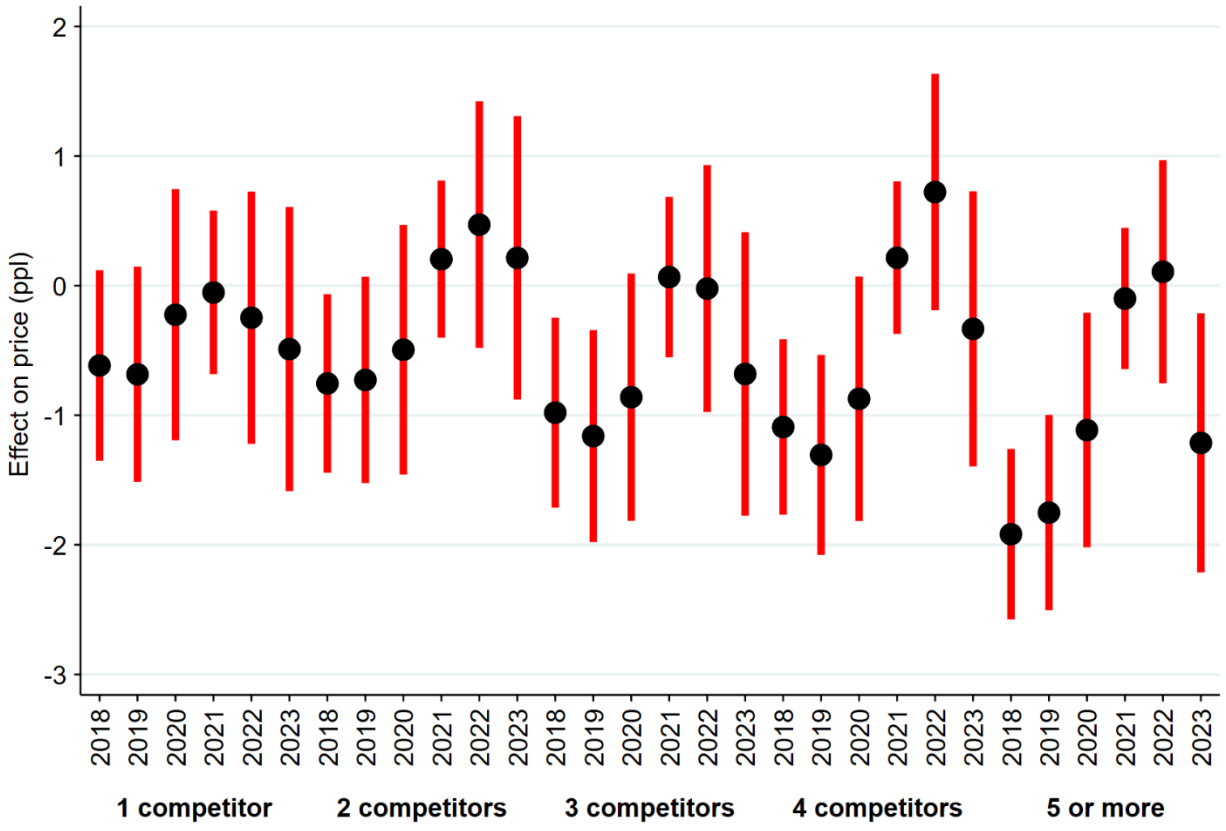
Figures 5.36: Effect of number of competitors on diesel price[97]



Source: CMA analysis based on Experian data

[97] All coefficients are statistically significant.

Figure 5.37: Effect of number of competitors on petrol price[98]



Source: CMA analysis based on Experian data

5.193 As explained above in paragraph 5.191, the results we see for diesel prices in 2023 could be driven by the effect of other factors (eg difference in the price elasticity of petrol and diesel customers or in the cost of serving different types of areas). However, if these factors can be assumed to stay constant over time, this result may provide support for the view that in 2023 diesel prices have been particularly impact by a reduction in competition.

Presence of a supermarket competitor

5.194 We have also looked at whether the presence of a supermarket is associated with lower prices. This could be the case because supermarkets tend to act as price leaders and to price lower than other PFSs, so their presence exerts a competitive pressure on other PFSs in the area.

5.195 Our analysis allows us to identify the impact of different competitors, and classes, of competitors on price before and after January 2022. The results, set out in Table 5.2, show that PFSs with at least one Asda, Sainsbury's or Tesco competitor are, relative to PFSs without these competitors, cheaper for both petrol and diesel but that this effect has diminished since January 2022. We also found

[98] All coefficients are statistically significant.

that amongst the supermarkets, Asda continued to have the strongest impact on prices, but that this had again diminished since January 2022.

Table 5.2: Effect of Supermarkets on PFS price.[99]

	Diesel	Petrol		
	Pre Jan 2022	Post Jan 2022	Pre Jan 2022	Post Jan 2022
Any Supermarket present	-0.6639***	-0.1992	-0.7643***	-0.2004
Effect of specific supermarkets on price				
Asda	-0.7547***	-0.5623***	-0.7290***	-0.6469***
Sainsburys	-0.2246***	-0.0198	-0.2865***	-0.1217
Tesco	-0.2771***	-0.1422	-0.2765***	-0.0235
Morrisons	-0.0541	0.1205	-0.0510	0.0616

Source: CMA analysis based on Experian data
Note: *, **, *** means the results are statistically significant at the 95 per cent, 99 per cent and 99.9 per cent levels respectively.

5.196 Table 5.3 below shows that the highest-priced 10% of PFSs for both petrol and diesel are less likely to have a supermarket competitor and significantly less likely to have an Asda competitor.

Table 5.3: Number of sites with competitors that are supermarkets and Asda sites (at w/c 8 May 2023)

Group	Number of sites	Number of sites with a supermarket competitor	% of sites with a supermarket competitor	Number of sites with an Asda competitor	% of sites with an Asda competitor
All PFS that reported diesel price	6683	5887	88%	3901	58%
Top 10th percentile for diesel price	712	620	87%	363	51%
All PFS that reported petrol price	5905	5250	89%	3514	60%
Top 10th percentile for petrol price	791	660	83%	389	49%

Source: CMA analysis based on Experian data
Note: This is based on the number of PFS that reported price on week commencing 8 May 2023. Some PFS did not report both a diesel and petrol price in that week so the count of sites differs between diesel and petrol.

5.197 When we compare across the two periods, however, we see that the association with lower prices of both the presence of a supermarket competitor and the presence of an Asda competitor has declined. This finding is consistent with our wider findings that supermarkets have become less competitive in this market across the between 2017 and now.

[99] We conducted an F test to see whether there was a statistically significant different between the Pre and post January 2022 coefficients for (i) petrol and (ii) diesel. For Asda's petrol prices, the test cannot reject the hypothesis that the coefficients are equal. For all other cases, the test rejects the hypothesis that the coefficients are equal.

Distance to a fuel terminal

5.198 Our analysis shows that a 10 mile increase in distance to nearest terminal is associated with 0.07ppl higher diesel prices and 0.06ppl higher petrol prices. Although this is statistically significant, this is relatively small.

5.199 Table 5.4 below shows that the most expensive 10% of PFSs for petrol and diesel are on average located further from the nearest terminal than PFSs in general. However, given the small price increment associated with increased distance from the nearest terminal, this is unlikely to be a significant factor in explaining higher prices.

Table 5.4: Average minimum distance to terminal (at w/c 8 May 2023)

Group	Average of minimum distance to terminal (miles)
All PFS that reported diesel price	21.5
Top 10th percentile for diesel price	22.7
All PFS that reported petrol price	20.9
Top 10th percentile for petrol price	22.9

Group	Average of minimum distance to terminal (miles)
All PFS that reported diesel price	21.5
Top 10th percentile for diesel price	22.7
All PFS that reported petrol price	20.9
Top 10th percentile for petrol price	22.9

Source: CMA analysis based on Experian data
Note: This is based on the number of PFS that reported price on week commencing 8th May 2023. Some PFS did not report both a diesel and petrol price in that week so the average of minimum distance to terminal differs between diesel and petrol.

Volume sold

5.200 The econometric analysis shows that an increase of 1 million litres is associated with a 0.1ppl increase in diesel and petrol prices. Although this is statistically significant, this is relatively small given that average volumes per site are approximately 4.9 million litres.

Conclusion on drivers of geographical variation

5.201 Overall our analysis indicates two factors that are associated with higher-priced PFSs: a lower number of competitors and the absence of supermarket competitors (particularly, Asda competitors). At the same time, we find that distance from terminal and volume sold do not appear to be important factors explaining why a PFS would be among the most expensive.

5.202 Splitting our findings between the pre- and post-January 2022 periods, however, we find that the influence of the factors that are relevant has changed. We find that the impact of the number of competitors on price is higher in the post January 2022 period than it was previously. However, although we still find that supermarkets are associated with lower prices, the size of this effect has declined

between the two periods. This is consistent with our wider findings of a decline in the intensity of supermarket competition in this period over the past six years.

Overall conclusions on local competition

5.203 Overall we consider that due to the fact that retailers price depending on the number and type of competitors nearby, price variation is common within and between local areas. At the same time, we have found that with the exception of Northern Ireland, differences are small between the principal regions of the UK and between rural and urban areas once these other characteristics are taken into account.

5.204 While we have seen evidence that some of this variation may be explained by differences in costs, it is also clear that a more significant part of it is due to the pricing rules retailers follow, which tell them to match or price close to their cheapest rivals in an area.

5.205 This means that if there is only one of the cheapest retailers – supermarkets – in an area, they are likely to price close to one of the more expensive retailers, and differently from their other sites where there are more and lower-priced competitors.

5.206 Competition in local areas typically takes place within local areas determined by how far motorists are willing to travel to purchase fuel. Retailers typically told us this was in the region of three miles, while some said between 10 to 25 minutes drive time.

5.207 It is therefore the case that competitive conditions, and therefore prices, can vary materially between PFSs beyond these distances, and we consider this is likely to explain a significant proportion of price differences between different towns or cities within regions or sub-regions.

5.208 We found that, in general, price dispersion within local areas has been at most trending up a small amount over the period Q2 2017 – Q2 2023. Price dispersion has, however, increased from mid-2022 in some areas, consistent with a change in Asda's and Morrisons' pricing approach and the other supermarkets' strategies to follow and price within a set range of nearby PFSs.

5.209 We found that at a local level consumers will generally have access to cheaper fuel within a reasonable drive time, but the extent to which non-supermarket PFSs switch their relative competitiveness over time may make it hard for consumers to identify the best deals at any point in time, increasing search costs to find the best prices.

5.210 We also found there will be some areas where there are no generally lower-priced retailers ie supermarkets, for example in more sparsely populated or remote areas, and so these areas are likely to have higher prices.

5.211 We have found that prices are likely to be lower where there are more competitors, where there is a supermarket nearby, and in particular an Asda, as they have historically been the market leader. However, we also found that the association between lower prices and the presence of a supermarket competitor, and of an Asda competitor, has been lessened during the period after January 2022.

5.212 We consider that measures which increase the transparency of prices and aid consumers in easily finding the cheapest fuel stations would enable consumers to find the cheapest fuel in a local area more easily, expand the range over which consumers will find it effective to search, and so increase the pressure that consumers are able to exert on retailers to offer low prices. We discuss this further in Section 10.

The extent of barriers to the construction of new PFSs

5.213 Given our finding that prices are lower when there are more competitors, and in particular supermarket competitors in an area, we have considered the extent to which there are barriers to the construction of new PFSs, which might help lower prices for consumers in local areas.

5.214 We asked retailers to explain any material costs or barriers to the construction of new PFS sites. The most frequently cited barriers were gaining planning permission (both the time and cost involved), the cost of land and the cost of construction (a number of retailers noted inflationary pressures in the construction sector).

5.215 When asked directly about the planning regime, most retailers viewed it as a significant barrier to the construction of new PFS sites; some supermarkets expressed an opposing view, not seeing it as very significant or insurmountable in the context of other issues. The Department for Transport told us the sector frequently report that the planning system is a barrier to expanding/opening new MSA PFSs.

5.216 Although most retailers described planning as a barrier, when asked directly what effect the removal of all planning rules would have on their plans for market entry and expansion, most retailers did not directly answer the question. However, one retailer did state that they would likely expand their PFS estate if all planning restrictions were removed. That retailer indicated that the focus of such expansion would be on sites with an EV offer.

5.217 On construction costs, we saw evidence that anticipated changes in the market as a result of the progressive move to EVs may be leading to some innovation in the way that petrol and diesel are supplied. Two retailers indicated that new fuel pumps are being or will be installed using above ground tanks. These are cheaper, faster to construct and easier to decommission than tanks below ground.

5.218 The evidence in the paragraph above indicates that, as consumer demand in this market declines, new entry may to some extent become more viable because two of the major barriers identified by parties (upfront construction and land costs) have the potential to reduce significantly. Notwithstanding the issue of planning, in theory anyone with a small space of car park or brownfield land could install at significantly lower cost (either themselves or in contract with an existing provider) a small, unmanned, above-ground PFS.

5.219 Responses from parties indicate, however, that the time and cost involved in the planning process for even a small new PFS could still be a significant barrier. The major hurdles that an applicant needs to overcome include: land use; health and safety issues in relation to the storage of petrol;[100] suitable highway access to the site; amenities impacts (ie impact on local residents from eg use at night, deliveries); and over-concentration issues (whereby local residents or businesses may argue that there should not be a new PFS because it may put one or more existing suppliers out of business). An excessive focus on over-concentration could be an impediment to a well-functioning and competitive market in that it may risk preventing new entrants in an area where fuel prices are high.

5.220 One option for government and planning authorities could be to offer permitted development rights[101] for small PFS provision on existing brownfield sites. This would still require an applicant to meet conditions on health and safety, highway access and amenities but it would significantly reduce the time, cost and uncertainty involved in the planning process. It could potentially make a real difference in ensuring local fuel prices remain competitive and affordable in a declining market.

5.221 Local authorities might also wish to consider PFS provision in their Local Plans alongside EV charging provisions – at present it is rarely mentioned. This is likely because of the increased focus on sustainability and the movement away from fossil fuels. However, the lack of focus on the issue risks disadvantaging lower income or vulnerable consumers who may be left reliant on ICE cars for longer given the cost of switching to EVs. A greater focus on PFS provision in Local Plans could be particularly relevant in areas where petrol or diesel prices are

[100] The Health and Safety Executive provides detailed guidance on this.
[101] Permitted development rights are defined in government guidance as: 'a national grant of planning permission which allows certain building works and changes of use to be carried out without having to make a planning application. Permitted development rights are subject to conditions and limitations to control impacts and to protect local amenity.'

higher than others or where, as consumer demand declines, provision may start to appear inadequate.

6. Motorway retail sector

6.1 In this section we set out our findings in relation to competition among road fuel retailers operating at motorway service areas (MSAs).

6.2 It is well known that prices at PFSs located within MSAs tend to be higher than those off the motorway network. In our Initial Update Report, we found that prices at PFSs located at MSAs are on average 17.2ppl higher for diesel and 16.0ppl higher for petrol than at urban sites, and that prices for motorway PFSs were much more clustered around the mean than was the case for non-motorway PFSs. Since then we have further considered the hypothesis that weak competition faced by motorway PFSs is resulting in some customers paying prices that are significantly higher than would otherwise be the case.

Nature of competition in the MSA road fuel sector

6.3 Most motorways have one or more MSA where drivers can take a break and refuel. Government policy regarding roadside facilities on the strategic road network in England, which includes MSAs, is that their primary function is to support the safety and welfare of road users; and in order to be signed from the road, require a legal agreement with the relevant highways authority.[102] Given it is essential for MSAs to be signed from the motorway,[103] MSAs in effect operate under the terms of legal agreements with the relevant highways authority. Such agreements typically require MSAs, amongst other things, to provide petrol and diesel, free toilets, hot food and showers 24 hours a day throughout the year.[104]

6.4 Government advice is that motorists should stop and take a break of at least 15 minutes every 2 hours and the network of signed roadside facilities is intended to provide opportunities to stop at intervals of approximately half an hour. On this basis, the maximum distance between signed motorway service areas should be 28 miles.[105] However, the distance between MSAs may be less than this, for example the M1 in England has 11 MSAs, which are on average 17.5 miles apart.

6.5 MSAs typically divide their business between the forecourt, which may have a small shop, and the general provision of amenities including drinks, snacks and meals in a separate, much larger, building. The forecourt and the remainder of the MSA may be operated by the same company or by different companies. Of the three main MSA operators, Moto and Welcome Break operate most (but not all) of

[102] Strategic road network and the delivery of sustainable development, paragraphs 71-112 and Annex A. This relates to England, but we understand that similar policies apply in the other nations of the UK.
[103] A small proportion of MSAs are located at junctions with non-motorways; and some of them are not signed from the motorway.
[104] This the current DfT requirement for new MSAs in England.
[105] Strategic road network and the delivery of sustainable development, paragraphs 74-76.

their own forecourts, but Roadchef has a different business model and does not operate any forecourts at its MSAs.

Shares of road fuel supply at MSAs

6.6 In this market study, we have concentrated on the supply of road fuel from the forecourt, rather than other aspects of MSA operation.

6.7 The main operators of PFSs at MSAs are Moto, Welcome Break, BP and Shell with other suppliers (such as EG, MFG and Rontec) together having only around 10% of PFSs. Supply is concentrated with an HHI of about 2000.

6.8 There are four main business models for the supply of road fuel and operation of forecourts at MSAs:

(a) Moto operates most of the forecourts at its own MSAs and sells BP-branded road fuel;

(b) Welcome Break operates most of the forecourts at its own MSAs but primarily sells own-branded road fuel;

(c) BP and Shell operate the forecourts at MSAs where provision of amenities is carried out by others and sell their own-branded road fuel.

(d) Other suppliers (such as EG, MFG and Rontec) operate the forecourts at MSAs where provision of amenities is carried out by others and sell fuel of brands such as BP, Esso and Shell.

Private and fuel card sales

6.9 There are also two main methods of selling road fuel, both at MSAs and elsewhere:

(a) Road fuel may be sold at the pole prices which are displayed at PFSs. Customers would pay, for example, using a debit or credit card, with cash or a widely-accepted fuel card linked to pole prices, such as Allstar. We describe these sales as private sales since private non-business customers have no option but to purchase at pole prices (only businesses are eligible for fuel card sales).

(b) Road fuel may also be sold via fuel cards, which are not linked to the pole price at the PFS where the fuel is supplied. In these cases, the customer pays the fuel card company a pre-agreed price, which may be determined via

a pricing formula,[106] or linked to average prices across a range of PFSs. Prices for these fuel cards are the same, or very similar, for all PFSs accepting the fuel card including those at MSAs.[107] The fuel card company, which is often the fuel supplier to the PFS, buys the fuel from the PFS operator at a given margin above the PFS operator's fuel purchase price. We describe these sales (ie excluding fuel cards that link directly to pole prices at the PFS where the fuel is supplied) as fuel card sales.

6.10 Our analysis suggests that only about 25% of the road fuel supplied at MSA forecourts represents private sales, with the remaining 75% being fuel card sales. We compared MSAs with other non-supermarket PFSs on the strategic road network (non-motorway trunk roads),[108] for which private sales and fuel card sales each averaged about 50%. Private sales are a much higher proportion at supermarket PFSs and off the strategic road network; we estimate about 90%, with fuel card sales being 10%.

6.11 We consider that there are two reasons why the proportion of private sales is lower at MSAs than at other PFSs on the strategic road network:

(a) The proportion of truck and van traffic on motorways is slightly higher than elsewhere on the strategic road network. In 2021 HGVs accounted for 14% of vehicle miles on motorways and 10% of vehicle miles elsewhere on the strategic road network, while the comparable figures for vans were 20% and 19% respectively.[109]

(b) As discussed further below, the pole prices paid on private sales at MSAs are substantially above pole prices off motorway and this results in less fuel being sold at pole prices both in absolute terms and relative to fuel card sales, where prices are similar at MSAs to off-motorway. An internal document of one MSA forecourt operator identified that there had been a cycle of increasing fuel prices to maintain margins, leading to volume drops and further fuel price increases which were ultimately unsustainable. It also stated that fuel prices were much higher than customers' willingness to pay, generating deep friction, quoting comments from customers such as 'I would never buy there'. Another document of the same MSA operator estimated that a reduction in the price premium compared to supermarkets from [20-30p] to [5-10p] would generate a volume uplift of about [80-90]%. Our analysis also suggested that lower pole prices were associated with a higher

[106] Pricing formulae are described in section 7 and link the price per litre of motor fuel to Platts benchmarks and other factors.
[107] One fuel card supplier told us that it charged some of its customers a small surcharge for MSA purchases but this was less than [0.5p] per litre.
[108] The non-motorway PFSs are based on data from 7 non-supermarket retailers. Consequently, any supermarket PFSs on the strategic road network are excluded.
[109] As HGVs use much more fuel per mile travelled than other vehicles, they would account for more than 14% of fuel used on motorways and 10% of fuel used elsewhere on the strategic road network. Source for vehicle miles: Annual Road Traffic Estimates 2021. The percentage of vehicle miles on other roads was 3% for HGVs and 18% for vans.

proportion of private versus fuel card sales at pole prices, ie with a higher volume of private sales.

Evidence of higher pole prices at MSAs than other PFSs

6.12 As already noted, fuel card prices are similar at MSAs to fuel card prices at other PFSs but pole prices are substantially higher at MSAs.

6.13 In our initial update report, we quoted Experian data showing average pole prices at PFSs based MSAs were, compared to the average for urban areas, 16.0ppl more expensive for petrol and 17.2ppl more expensive for diesel in 2021.

6.14 We have carried out a further comparison using average prices for the whole of 2022. This shows the average pole price paid by private motorists at MSAs was 19.8ppl higher for petrol and 15.1ppl higher for diesel compared to the average for all PFSs.[110] We consider that the lower 2022 figure for diesel may reflect the unusually high non-motorway diesel prices for part of 2022, for instance there may have been a reluctance by MSA operators to increase the pole price above a price point of 199.9ppl.

6.15 Our 2022 comparison shows not only a substantial difference between pole prices paid by private motorists at MSAs and off-motorway, but also that this difference has increased materially over time. Previous work by the OFT showed a price difference in August 2012 of 7.5ppl for petrol and 8.3p/ppl for diesel.[111] Adjusting for inflation (CPI) to 2022, the August 2012 figures would be 9.5ppl for petrol and 10.5ppl for diesel. The actual 2022 figures therefore show an increase of 100% for petrol and almost 50% for diesel compared to August 2012 even after adjusting for inflation.

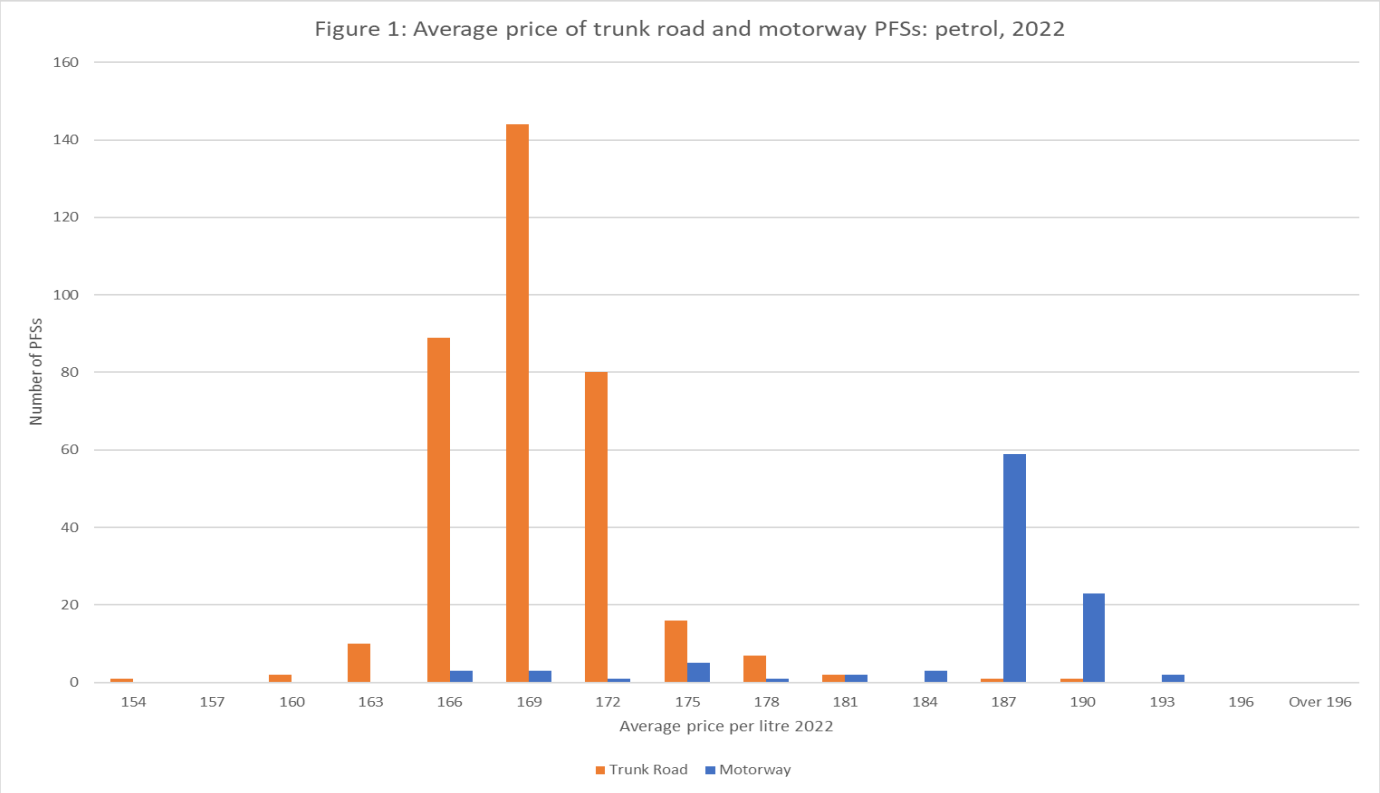
6.16 We also found 2022 pole prices paid by private motorists at non-MSA PFSs on the strategic road network were 3.1ppl higher for petrol and 3.6ppl higher for diesel than the average for all PFSs. These PFSs are more comparable with those at MSAs. For example, they tend to have much higher fuel card sales than other PFSs and 90% of those in our sample are open 24 hours per day.

6.17 Thus, 2022 pole prices at MSAs were also substantially higher than at non-MSA PFSs on the strategic road network (by 16.7ppl for petrol and 11.5ppl for diesel). The difference between MSA and non-MSA PFSs on the strategic road network is further illustrated in Figures 6.1 (petrol) and 6.2 (diesel). These show that pole prices at almost all MSAs were higher than at almost all non-MSA PFSs on the strategic road network. There were only six MSAs with average 2022 pole prices

[110] These figures are for MSAs which are accessed only from motorways. The figures for MSAs at junctions which are accessible from both motorways and other roads, some of which are not signed from motorways, were somewhat lower at 16.1/litre for petrol and 12.7p/litre for diesel. The average for all PFSs is from BEIS data.
[111] UK petrol and diesel sector call for information, paragraph 4.44.

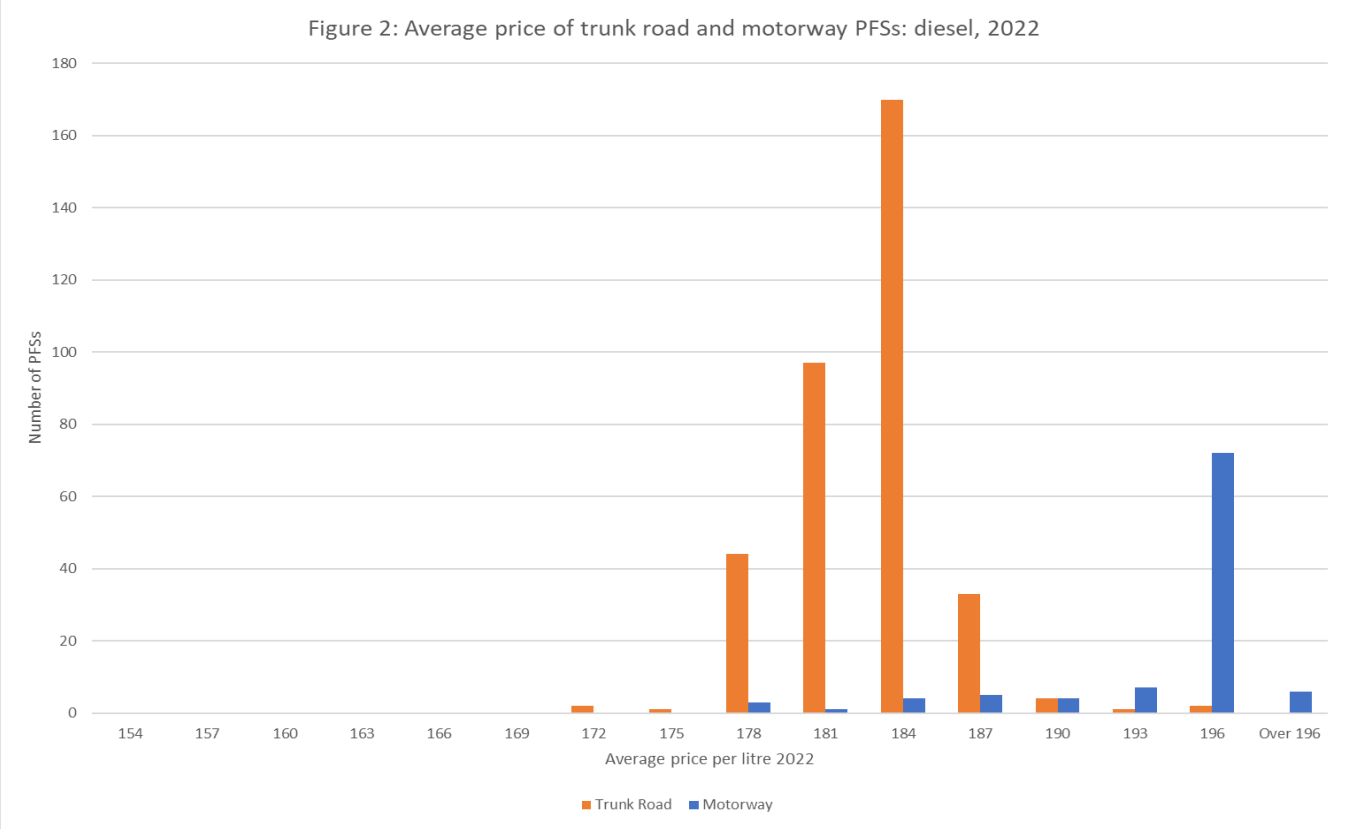
below 170ppl for petrol and 183ppl for diesel, of which three were in Northern Ireland and two were in South Wales.

Figure 6.1: Average pole price paid by private motorists for PFSs on the strategic road network: petrol, 2022



Source: CMA

Figure 6.2: Average pole price of PFSs on the strategic road network: diesel, 2022



Source: CMA

6.18 MSA PFS operators' ability to charge higher pole prices reflects the weaker competition that they face. Even though, as discussed in paragraph 6.11(b), high prices have led to a reduction in private demand, there is a remaining body of price-inelastic motorists willing to pay high MSA pole prices. We believe that there may be a number of factors that are relevant to explaining this. First, MSAs are typically sited a considerable distance from each other, so that motorists running short of fuel have relatively little choice of PFS. Second, even if off-motorway PFSs are near to motorway junctions, they are not signed from the motorway; therefore, motorists may not be aware of them. Third, in contrast to other roads, fuel prices are not displayed on the motorway, they are only displayed once the motorist has left the motorway and entered the MSA; therefore, it is more difficult for motorists to compare prices. Fourth, the supply of fuel at MSAs is concentrated; therefore, MSA PFSs have less incentive to compete with each other.

Recent evidence from trials of lower pole prices at MSAs

6.19 Moto told us it had carried out trials of lower pole prices at some of its MSAs. At two MSAs it had been able to include the lower pole prices on the MSA sign on the motorway, and its pole prices over the period October 2021 to March 2023 had averaged [5-10]% above local supermarkets, compared with [10-20]% for its core MSA PFSs (we estimate this equates to an average reduction of about [10-20]ppl

compared to Moto's core MSA PFSs). The results for these two MSAs, where the prices were displayed on the motorway signs, showed an increase in fuel volumes and in sales both from the forecourt shop and the amenity building and that this was sufficient to increase profitability versus Moto's core MSA PFSs. However, at two other MSAs where it had reduced prices but not been able to display the lower prices on the motorway signage, the increase in fuel volume and shop sales was lower and profitability declined relative to Moto's core MSA PFSs; this trial was consequently ended after 12 months.

6.20 Moto also told us that the results of these trials showed the need for lower prices to be signed on the motorway. Moto said that National Highways would not allow it to connect into National Highways' power cables which ran along the motorway (except for the first trial where such connection was allowed as a one off), so Moto needed to find its own power solution. This added to the costs of reducing prices, about £250k if solar power could be used, or about £275k if a fuel cell was needed due to shading of the sign.

Evidence on costs differences between MSA and other PFSs

6.21 Following the initial update report in which we noted mixed views about the cost differences between MSAs and non-MSAs, we received further evidence from parties:

(a) One retailer submitted that as MSAs are legally obliged to operate 24 hours a day, this leads to indirect costs, such as payroll and utility costs, that are subject to high inflationary pressures. According to the retailer, the inflationary pressures were currently due to the on-going shortage of hospitality staff (with around 1-in-10 having left the sector post-Covid) and the energy crisis (on the back of the Russia/Ukraine war). The retailer further noted that MSA sites have more HGV customers which means they incur higher capital expenditures. The retailer outlined two further examples of operating costs which are higher for MSAs as compared to non MSAs, namely: the distance from centres of support for maintenance of MSAs leading to higher costs and capex involved in establishing a new MSA (eg, cost of land or utility connections) which require a longer recoupment time.

(b) Another retailer submitted that there were higher costs associated with operating MSAs, due to factors such as the requirement to offer the full suite of services at a MSA (including to comply with a 'minimum service provision' as per its licence with the Department for Transport, which requires it to provide the following amenities to motorists 24 hours a day, 7 days a week: toilets, showers, refuge areas, truck parking, and a hot food offer), as well as other services it chooses to provide, such as EV charging at some sites.

(c) A further retailer said that MSA locations had significantly higher rent and operating costs, as well as slightly higher fuel distribution costs.

(d) However, another retailer said that there was no material difference in costs and revenues between their MSA sites and similar sized sites trading similar volumes that are not located on the motorway network.

(e) Another retailer said it did not believe that MSAs should be significantly more expensive than other PFSs. It noted that MSAs are not significantly more expensive than other non-MSA sites with a similar sales profile and offer, but it could be more challenging to recruit and retain staff at MSA sites due to the transient nature of motorways and potential length of journey to work.

(f) Another retailer said its operating costs in the last three years were [0-5ppl] higher at MSAs than at other PFSs. Labour costs were about [0-5ppl] higher and rents about [0-5ppl] higher. Its comparison also showed that the gross margin from its shops was about [0-5ppl] lower at MSAs than at other PFSs. This retailer also said that two additional factors were of relevance to this comparison: the volume of fleet sales at MSA sites, which meant that costs on a ppl basis were diluted across much greater volumes; and the very low shop revenues at MSAs compared to non-MSAs meant fuel margins needed to be higher to achieve the same levels of profitability and attract investment from their owners. However, the difference in shop gross margin was only about [0-5ppl].

6.22 We note that retailers' submissions were mixed as to whether costs were higher at MSA PFSs than off-motorway; and that in some cases retailers referenced costs, such as truck parking, hot food and EV charging, that are not obviously relevant to road fuel pricing as they are charged for separately. Moreover, the limited data available on costs suggested that any difference in costs was small and largely due to a difference in rents. We consider that higher rents may be explained by differences in ownership structure, eg due to many non-MSA PFSs not incurring rental charges due to being held freehold. In any event, the difference in costs between MSA and non-MSA PFSs is less than the price difference.

6.23 We also consider that any differences may in part be the result of higher MSA prices, rather than an explanation of them. For example, higher rents (to the extent not explained by differences in ownership structure) reflect the agreements between site owners and MSA PFS operators and are likely to be increased by MSA PFS operators' ability to earn higher profits from higher pole prices. Similarly, a lower MSA shop margin may reflect a restricted offering at the forecourt shop as a result of MSA operators wishing to attract customers into the main amenity building.

6.24 Overall, therefore, our current view is that any difference in costs (and shop margin) between MSA PFSs and others can explain at most a small proportion of the difference in pole prices.

MSA sign trials and permissions

6.25 In our Urgent Review, we discussed the potential to increase transparency through implementing mandatory signage on the motorway network. The Review noted that the CMA had previously engaged with the Department for Transport (DfT) to explore ways of improving fuel price transparency and competition on motorways. One option suggested by the Review was the possible installation of signs displaying fuel prices of alternative PFSs, including those just off the motorway.

6.26 National Highways have been authorised to put live fuel prices on motorway signs since January 2022,[112] provided that MSAs make a request for them and are willing to pay. We understand that only a few motorway fuel price signs have been rolled out to date, however.

6.27 We consider that a wider rollout of motorway fuel price signs is likely to be a positive development for the market. In principle, it is intuitive that being able to see prices at MSAs could have an impact on price transparency and competition, and this is supported by Moto's two trials discussed above.

Margins analysis

6.28 Our analysis of the financial information of MSA providers indicated the following:

(a) There is a significant disparity between the fuel margins on non-fuel card sales compared to fuel card sales. Margins on non-fuel card sales were in the range of [20-30]-[30-40] ppl compared to [0-5]-[5-10] ppl for fuel card sales.

(b) Compared to average non-motorway non-fuel card fuel margins MSAs' non-fuel card fuel margins are a multiple of between 2-3 times higher.

(c) However, overall fuel margins are similar to non-MSA PFS due to the blended impact of higher fuel card sales (see paragraph 6.10 above).

(d) Profit margins (including non-fuel sales) also appear similar as the scale benefits of higher volumes for MSAs is offset by lower non-fuel sales. This

[112] January 2022 was the date of the National Highways 'motorway wide' authorisation for these signs. This permitted National Highways to place signs anywhere on their network in response to MSA operator requests for such a sign. In total there are currently two sites that have signs: see Traffic Sign Authorisation.

may be due to consumers purchasing non-fuel goods from the wider MSA estate.

(e) For MSA PFS providers who also operate the wider MSA site, while fuel accounts for a significant percentage of revenue, it accounts for a relatively small share of profit. This is due to the significantly higher margins on other services such as amenities and hotels etc.

Methodology

6.29 Our financial analysis was based on management accounting information and supporting documents (such as associated commentary on the management accounts) provided by firms who operate MSA PFSs. As the basis of preparation of management accounts varies from firm to firm (for example the types of costs included, the method of cost allocation for shared costs and also some other variations in accounting methodology) it is not always possible to compare management accounting information between two different firms.

6.30 Therefore, in areas such as the comparison of MSA PFS site profitability and non-MSA PFS site profitability we have had to rely on comparisons between PFSs owned by the same firm rather than comparisons between PFSs of different firms. This has therefore excluded those providers where the vast majority of their sites are MSA PFSs and as such there is a risk that this sample may not be representative.

6.31 Furthermore, the level of detail provided in these management accounts varies by firm such that it is not always possible to calculate all metrics across all firms.

Fuel Card vs Non-Fuel Card Margins

6.32 We found a significant difference between the fuel margin from fuel card and non-fuel card sales for the MSA providers who provided this as part of their management accounting information. Based on the information we have, margins on non-fuel card sales tended to range between [20-30]-[30-40] ppl compared to margins on fuel card sales which ranged from [0-5]-[5-10] ppl in 2021 and 2022. This compares to average fuel margins of approximately 8-11ppl for supermarket and non-supermarket retailers we examined - see Figure 5.17. MSA non-fuel card margins are therefore significantly higher than fuel margins in the wider market.

MSA PFS profitability compared to Non-MSA PFS Profitability

6.33 As discussed in the methodology section above, we were only able to compare MSA PFS site profitability with non-MSA PFS site profitability for those firms that provided site level PFS information for a reasonable amount of both. Based on this analysis we observed that:

(a) Fuel margins between the two are broadly similar as the higher margin non-fuel card sales in MSAs are offset by the higher proportion of lower margin fuel card sales in MSAs.

(b) Overall profit margins (including non-fuel sales) are also similar. The scale advantage of higher fuel sales volumes in MSAs appeared to be offset by lower volumes of higher margin non-fuel sales. This may be due to the consumers' non-fuel purchases being made on the wider MSA site rather than the PFS site.

(c) MSA PFSs generally had higher absolute profits due to the higher volume of fuel sales.

Wider MSA site profitability

6.34 We also examined the management accounts of those MSA PFS providers who also operated the wider MSA estate. This showed that while fuel comprised the majority of revenue, it contributed relatively little to gross profit (being the profit before costs such as wages, site overheads and rent). This is due to the significantly higher profit margin on other activities such as catering and shower services.

6.35 However, it should also be noted that as fuel accounts for the majority of revenue it may also be important in covering fixed and operating costs (such as staff wages and rent) that are excluded from the calculation of gross profit in the management accounts.

Conclusions on motorway pricing

6.36 We have found that MSA PFSs are located at relatively infrequent regular intervals, dictated by driving safety planning decisions made some time ago.

6.37 MSAs work within the requirements of Government policy.

6.38 Fuel card customers, who will typically pay the same price as off-motorway, make up around three-quarters of MSA PFS volume.

6.39 However, we have found higher pole prices at MSA PFSs compared to non-motorway PFSs (around 17ppl higher than comparator sites for petrol and 11.5ppl for diesel) and that this gap has increased by about 100% for petrol and almost 50% for diesel (inflation adjusted) since 2012.

6.40 We have found high fuel margins being made on private PFS sales, though overall fuel margins are similar to other PFSs due to the high volume of fuel card sales at low margins.

6.41 Other factors suggest that competition for private sales is restricted between motorway PFSs:

(a) Price variation is very low between motorway PFSs compared to non-motorway, with few outliers.

(b) Motorway PFSs are situated some distance from each other and the market is concentrated.

(c) Price visibility is poor. Unlike for non-motorway PFSs, pole prices cannot generally be seen from the road.

6.42 We have, however, heard from one motorway PFS and wider MSA operator that it was able to run a successful trial of lower fuel prices which, when combined with improved signage from the motorway, was commercially successful in attracting more customers to offset the lower selling price.

6.43 Overall, the majority of sales (around three quarters) at motorway PFSs are to business fuel card customers who pay similar prices to off-motorway. However, the remainder of sales are at pole prices which are significantly higher at motorway PFSs than off-motorway. The high level of motorway pole prices reflects weak competition due to the distance between motorway PFSs, concentration of motorway PFS suppliers and poor visibility of prices. However, evidence from a recent trial suggests that lower prices signed from the motorway may generate sufficient extra volume to be beneficial both to suppliers and pole price customers.

7. Wholesale

7.1 In this section, we set out the main wholesale suppliers and their shares of supply. We then go on to consider wholesale contracts, how competition works and evidence on the profitability of wholesale supply.

The wholesale sector

Main wholesale suppliers

7.2 As stated in our Initial Update Report,[113] wholesale suppliers include:

(a) The six main UK refiners.[114]

(b) Importers of road fuel into the UK, such as Greenergy and Mabanaft.

(c) Independent wholesalers, such as BP, Certas and Shell, which primarily purchase fuel from UK refiners and/or importers to sell to retailers.[115]

7.3 There are two principal models of wholesale supply: unbranded and branded. Unbranded wholesale supply will typically only cover the supply of fuel, whereas branded supply will typically include additional services such as marketing; access to a loyalty scheme; back-office support; fuel cards, safety inspections and franchising of food service offers.

Shares of supply

7.4 Table 7.1 shows our estimated shares of wholesale supply on three bases:

(a) Total supply, reflecting suppliers' position in the overall market. This measure of supply includes any internal supply to a supplier's own PFSs, supply to fuel card companies and other fleet sales, as well as sales to retailers;

(b) Sales to retailers only, including branded supply to independent retailers and unbranded supply which is primarily to supermarkets. This measure of supply is more reflective of suppliers' position in negotiations with independent retailers, including supermarkets; and

(c) Branded sales to retailers only, ie branded supply to independent retailers excluding unbranded supply which is primarily to supermarkets. This

[113] Initial update report, paragraph 7.4.
[114] Essar, Esso, Petroineos, Prax, Phillips 66 and Valero. Refiners may import petrol and diesel as well as refine it in the UK.
[115] Refiners and importers may sell diesel and petrol to each other as well as to independent wholesalers and retailers.

measure of supply is more reflective of suppliers' position in negotiations with independent retailers over branded supply.

7.5 Greenergy is the largest wholesale supplier overall, followed by Esso, BP, Shell and Valero. Greenergy is also the largest supplier in terms of sales to retailers, with Esso and Valero next largest. BP and Shell are less significant in terms of sales to retailers than in terms of total supply (as is Certas). BP is not a significant supplier to supermarkets and sells some road fuel from its own owned and operated PFSs and Shell is not a supplier to supermarkets and sells some road fuel from its own PFSs (which is not included in sales to retailers).

7.6 BP, Esso, Valero and Shell have the largest branded sales to retailers. The other suppliers with more than 5% of branded sales to retailers are P66 and Certas. Branded sales to retailers are moderately concentrated,[116] with six suppliers having shares of more than 5%.

Table 7.1: Estimated shares of wholesale supply of road fuel (petrol and diesel), 2022 (% of volume)

Supplier	*Total supply**	*Sales to retailers†*	*Branded sales to retailers‡*
BP	10 - 20	5 – 10	20 - 30
Certas	5 – 10	0 – 5	5 – 10
Essar	5 – 10	5 – 10	0 – 5
Esso	10 - 20	10 - 20	20 - 30
Greenergy	20 - 30	20 - 30	N/A
Mabanaft	0 – 5	0 – 5	0 – 5
Petroineos	0 – 5	0 – 5	N/A
P66	5 – 10	5 – 10	5 – 10
Prax	5 – 10	5 – 10	0 – 5
Shell	10 - 20	5 – 10	10 - 20
Valero	10 - 20	10 - 20	10 - 20
	100	**100**	**100**

Source: CMA calculations based on RFI responses from suppliers. The Table shows shares for 2022; shares for 2021 were very similar.
* Sales by each of the named suppliers to final customers, retailers, fuel card companies and other distributors, excluding supply to any of the other named suppliers to avoid double counting, as a percentage of total sales by the 11 named suppliers. Total sales based on RFI responses by the 11 named suppliers for both 2021 and 2022 slightly exceeds total sales of road fuels as stated in Energy Trends, Table 3.5, suggesting that supply by others not included in the Table was small and within the margin of error.
†. Sales by each of the named suppliers to retailers as a percentage of total sales to retailers by the 11 named suppliers. In total, sales to retailers were about two thirds of total supply.
‡.Branded sales by each of the named suppliers to retailers as a percentage of total branded sales to retailers by the 11 named suppliers. Greenergy and Petroineos do not make branded sales. In total, branded sales to retailers were about one quarter of total supply and 40% of total sales to retailers.

How wholesale competition works

7.7 We considered how wholesale competition works in our initial update report.[117] In short, when their existing contracts are coming to an end, retailers seek bids from suppliers for a new contract and choose one or more suppliers on the basis of the terms offered.

[116] The Herfindahl–Hirschman index (HHI) of concentration is about 1850. The HHI is calculated by summing the squared market shares.
[117] Initial update report, paragraphs 7.25 to 7.37.

7.8 Retailers told us that security of supply (ie supplier reliability and resilience) is very important. Retailers rely on wholesale suppliers for security of supply as retailers themselves only hold a few days' supply in their tanks. The supply from wholesalers to retailers is dependent on sufficient road tanker trucks and drivers being available to transport road fuel from terminals to PFSs, but is generally resilient in ensuring sufficient fuel reaches PFSs.[118]

7.9 Competition between suppliers that are judged sufficiently reliable and resilient is on the basis of overall price and other contractual terms, such as volume commitments and days of credit offered by suppliers.[119]

7.10 In the case of branded supply, the quality of the branded offer is also important. Specific factors mentioned by retailers included branding support; premium grade penetration; popularity of loyalty program; and fuel card penetration. [120] The choice of branded suppliers is somewhat more limited than for unbranded supply (see Table 7.1), but as already noted there are six suppliers with shares of more than 5%. Retailers also may consider switching to unbranded supply: retailers selling under their own brands are not limited to supermarkets but also include other retailers such as Applegreen and there are also retailers selling on an unbranded basis.

7.11 Retailers did not identify significant switching costs other than, in relation to branded supply, rebranding costs which are usually covered by the new supplier (see paragraph 7.31).[121]

Wholesale profitability analysis

Summary

7.12 In summary, our analysis of wholesaler profitability during the period January 2017 to July 2022 indicates that:

(a) Average annual fuel margins have generally been stable, ending the period at a similar level to where they started, despite a modest increase in 2020. Operating profit margins follow a similar trend, although we note that this result follows the removal of one party's data from the sample given that it distorts the overall analysis considerably.

[118] An exception was during September 2021 when a temporary shortage of drivers led to some PFSs running out of fuel and panic buying, resulting in many PFSs limiting the value or amount of fuel that consumers could purchase. Also, due to a number of supply issues during October to December 2022, retailers' stocks of road fuel declined (as shown in DESNEZ experimental statistics) but noticeable shortages were largely avoided. Stocks recovered after December 2022.
[119] Initial update report, paragraph 7.31.
[120] Initial update report, paragraph 7.32.
[121] Initial update report, paragraph 7.34.

(b) Fuel margins spiked in early 2020 in the wake of Covid-19 before gradually returning to pre-2020 levels over the course of 2021 and 2022. However, lower volumes due to lockdown mean that this was not reflected in an increase in absolute profitability.

(c) Both fuel and operating margins are low and not at a level that would cause us concern about the competitiveness of this sector.

Methodology

7.13 The wholesale sector operates between the refining and retail segments in the value chain and contains a diverse range of companies and business models. Therefore, to ensure we accurately capture and understand the profitability being generated in this activity, we have excluded the following from our analysis:

(a) refineries conducting what they describe as wholesale activities but are, in fact, activities which primarily involve the sale of fuel at the refinery gate (so-called 'ex-rack' sales). This is because the revenue and profit from these sales have already been accounted for in our analysis of refining profitability; and

(b) the so-called 'COCO' (company-owned, company-operated) PFS estates of wholesalers who own and operate their own PFS estates. These are frequently subject to transfer-pricing arrangements, where revenues and costs are based on the prevailing market rate rather than the actual revenues received and costs incurred.

7.14 Instead, we have focused on the wholesale supply of road fuel to supermarkets and so-called 'DODO' (dealer-owned, dealer-operated) estates. As separate entities with arm's-length supply arrangements, these allow us to understand better the actual costs and revenues involved, and the true level of margins achieved.

7.15 We requested management accounts from a sample of wholesalers. These are produced by the companies and therefore we consider that they provide a good measure of how the companies monitor financial performance over time. We requested the information that would capture both the impact of Covid and the Russian invasion of Ukraine, and received annual data for January 2017 to December 2020 and monthly data for January 2020 to July 2022.[122]

[122] Due to the nature of the management accounts received, we were able to include seven wholesalers in our fuel margin calculations and five for operating margins. Consequently, while we have included management accounts from most respondents, we have not included all UK wholesalers in our calculations. However, while various premia or discounts are negotiated on a customer-by-customer basis, we note that wholesalers' revenue and input costs are determined to a significant degree by international pricing benchmarks and would expect the profitability of those wholesalers we have not been able to include to follow a similar trend. As a result, any variations would be largely driven by differences in operational efficiency and so, we believe that it is likely their results would follow similar trends.

7.16 We found that the parties organise and report on their wholesale activities in different ways:

(a) Some do not prepare financial reports for retail road fuel on a standalone basis, consolidating these sales instead with fuel supplied to other industries eg, fleet, transport etc into one general wholesale operation.

(b) Some wholesalers' activities are captured in more than one division or business unit. Additionally, certain businesses operating across different segments of the road fuel value chain combine their wholesale operations with other, non-wholesale businesses within a broader retail channel. This makes it difficult to determine the financial performance of wholesaling alone.

(c) Shared costs, such as central group overheads, may not be allocated to the wholesale business and margins may, consequently, be overstated.

(d) Certain other costs may not be included in the operating profit margin information for those parties offering additional ancillary services in support of branded fuel supply. Revenues include the associated fees but in some cases central branding costs, for example, may not have been charged to the wholesale business.

(e) The level of reporting detail also varied, with fewer parties providing operating profit figures than fuel margin data.

7.17 Fuel margins have been calculated by deducting fuel costs from fuel revenues and dividing the resulting gross margin by fuel revenues. This excludes various other operating costs, including wages, rent and capital investment costs reflected in depreciation. Therefore, this will mean that fuel margins overstate true profitability.

7.18 Operating margins have been calculated by dividing the parties' reported operating profit by revenue. As noted above some expenses, particularly shared costs, have not been included in the information provided by some parties with the effect that margins are likely to be overstated.

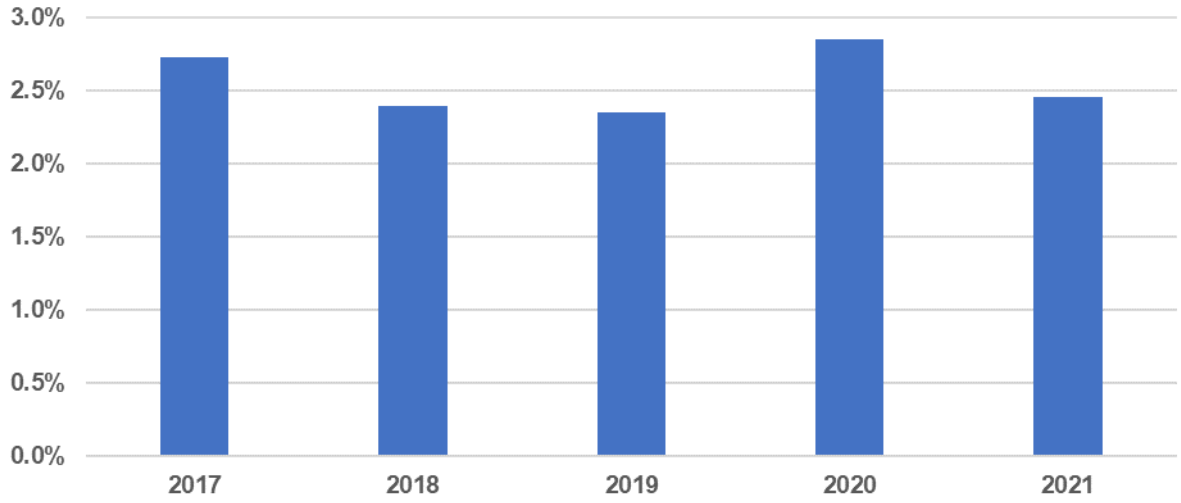
7.19 Despite the various limitations of the submissions described in paragraph 7.16, we believe the evidence received is still sufficient to identify broad trends in profitability and that it does not contradict the findings set out above.

Findings

7.20 Figure 7.1 shows the annual fuel margins for wholesalers from 2017 to 2021. This demonstrates that fuel margins rose slightly in 2020 following the impact of Covid-19 but, in 2021, dropped back towards the level achieved in preceding years. This also shows that fuel margins are relatively low and, as these exclude additional

costs of the business (such as operating costs etc), profit margins are likely to be lower still.

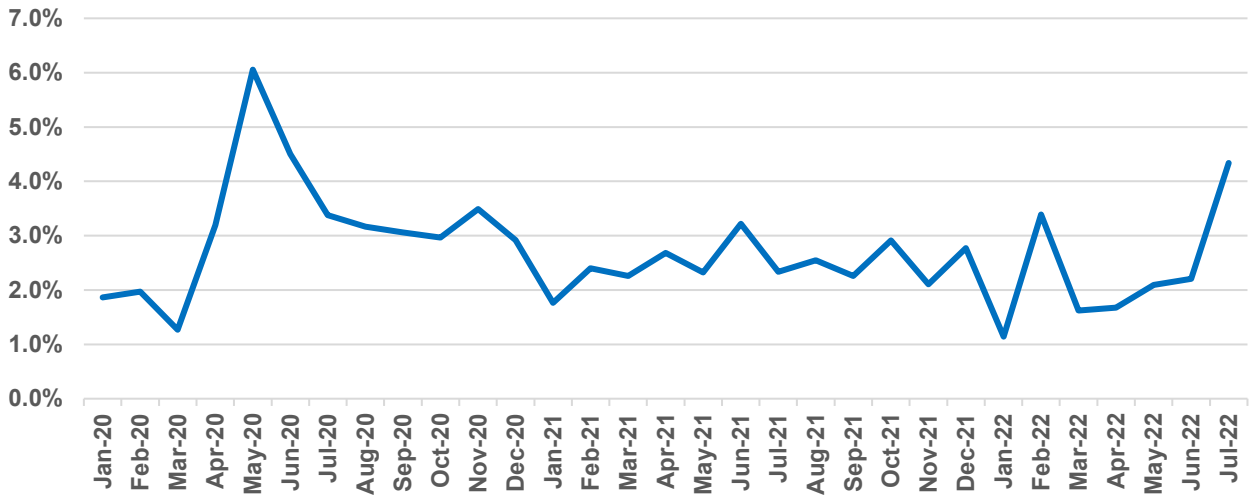
Figure 7.1: Average annual fuel margin for the period 2017-2021[123]



Source: CMA analysis based on parties' submissions

7.21 Figure 7.2 below shows that monthly wholesale margins rose significantly in the first half of 2020 due to the impact of the Covid pandemic. The spike dissipated in subsequent months, with margins broadly returning towards prior levels by the end of 2020. Some volatility also occurred in the first half of 2022 following the Russian invasion of Ukraine.

Figure 7.2: Average monthly fuel margin for the period January 2020 to July 2022



Source: CMA analysis based on parties' submissions124

[123] Based on six parties' submissions. We have removed one party given that its inclusion distorts the average and misrepresents the general trend for the other companies involved.
[124] Based on six parties' submissions. We have removed one party given that its inclusion distorts the average and misrepresents the general trend for the other companies involved.

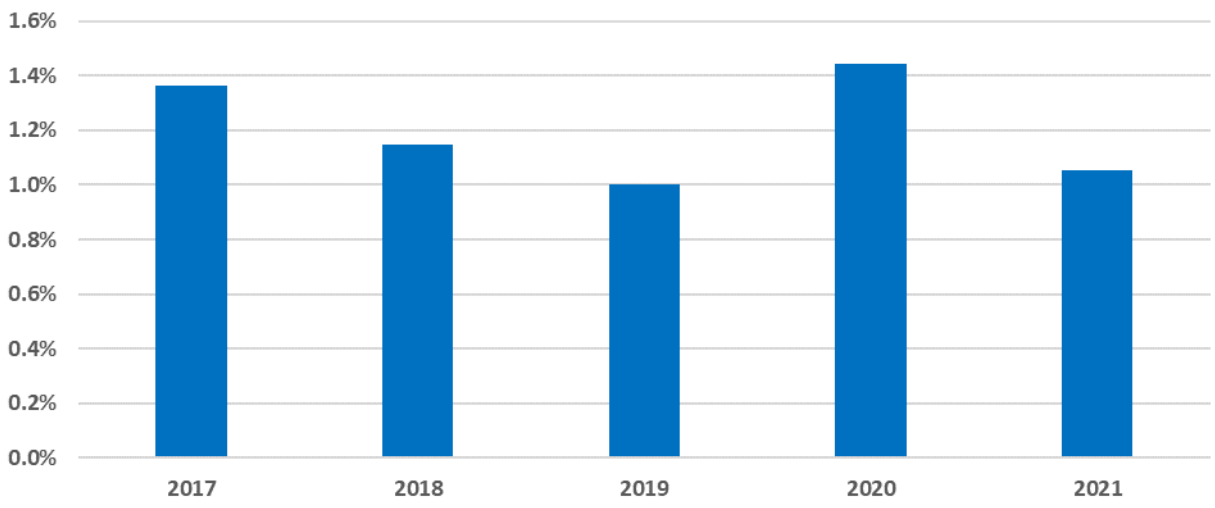
7.22 We note that wholesaler fuel margins generally move inversely to those in refining, suggesting an initial lag in the pass through of lower and higher input costs during Covid and the invasion of Ukraine respectively.

7.23 On an absolute basis, average wholesaler fuel margins appear low. As noted above in paragraph 7.17, fuel margins only reflect the cost of the refined products sold and do not take other operating costs into account.

7.24 We also observed that the level of fuel margins achieved by individual parties varied depending on the business model adopted. Some operators provide various ancillary services (signage, payment systems etc) in support of the branded fuel products supplied. While these companies' fuel margins are still low in absolute terms, in our view, they are higher than for those operators providing unbranded services, as one would expect given the need to cover the costs of the wider services they are providing. Consequently, including these companies in our analysis pulls the average margin higher and above the levels being achieved by the majority of parties in our sample.

7.25 Only five parties provided operating margin data and, as Figure 7.3 demonstrates, margins are lower than reported fuel margins given the additional operating costs deducted. The trend follows a similar profile to that of fuel margins above.[125]

Figure 7.3: Average annual operating profit margin for the period 2017-2021



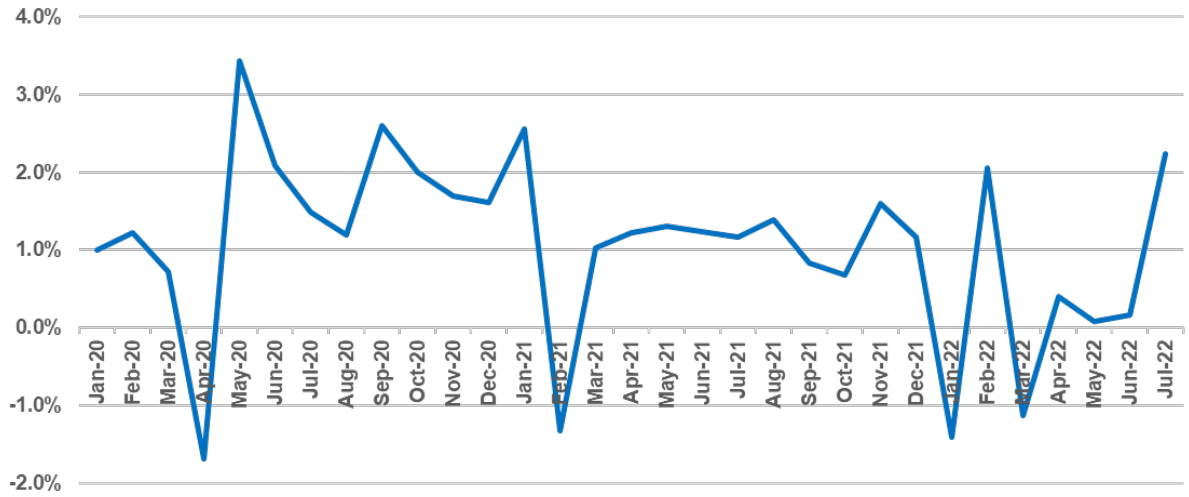
Source: CMA analysis based on parties' submissions[126]

7.26 Monthly operating profit margins (Figure 7.4) are also low and display some weakness around the beginning and end of calendar years, while the sector has

[125] When using the operating profit data from the five parties who submitted it, we noted that one company distorted the average considerably, distorting the general trend for the other companies involved. The business in question [✂]. We have therefore removed this wholesaler from the sample, reducing it to four parties. In our view, this reflects more accurately the reality for the other parties and results in a flatter margin trajectory similar to that observed for fuel margins.
[126] Based on four parties' submissions.

recorded negative margins for brief periods. Following the Covid-related spike in early 2020, margins trend gradually lower, although significant month-to-month volatility is evident.

Figure 7.4: Wholesalers' average monthly operating profit margins January 2020 to July 2022



Source: CMA analysis based on parties' submissions[127]

Conclusions on wholesaling sector profitability

7.27 Annual fuel margins have generally been stable, despite a modest increase in 2020. Operating profit margins are lower in absolute terms given the additional costs deducted and follow a similar profile to fuel margins, although this follows the removal of one party's data from the sample given that it distorts the overall analysis considerably.

7.28 While margins have been volatile since 2020, this is largely due to the impact of two unprecedented global events in 2020 and 2022. The industry is otherwise well served by a variety of parties offering both branded and unbranded fuel supplies to retailers at low-to-modest levels of profitability.

7.29 Despite the presence of some parties in the sector offering branded supply at higher margins, our view is that absolute wholesale fuel and operating margins are low and not a major contributor to the increase in fuel prices experienced by motorists in 2021 and the first part of 2022. We do not consider that margins indicate any deficiencies in competition in the wholesale sector.

[127] Based on four parties' submissions. We have removed one party given that its inclusion distorts the average and misrepresents the general trend for the other companies involved.

Wholesale contracts

Main characteristics

7.30 Most road fuel is supplied under contract rather than on a spot basis. The main characteristics of contracts between wholesale suppliers and retailers were described in our Initial Update Report.[128] In short, contracts for unbranded supply, eg to supermarkets, typically last for one to two years, determine prices via formulae (see paragraph 7.35), contain volume commitments and may include delivery to the PFS, or may be on a collection basis (if the retailer arranges delivery from the terminal to the PFS). Contracts for branded supply are similar, but typically last for five years and cover supply to a list of PFSs which will operate under the supplier's brand.

7.31 The longer contract term of about five years for branded supply facilitates competition by providing a longer period to recover the upfront rebranding costs which arise when a retailer switches some or all of its PFSs to a different brand.[129] Such costs included site branding, infrastructure such as signage and poles and point of sale hardware.

Contractual volume terms

7.32 As regards contractual volume terms, we stated in our initial update report that we had not seen specific evidence of contracts being interpreted inflexibly by suppliers with adverse effects on competition or consumers, but would welcome any further evidence from stakeholders on this issue.[130]

7.33 We received one response from a stakeholder, which was from a large retailer which told us that, due to under-achieving against the minimum volume commitments in its contracts with one of its suppliers during 2019-21, it had had to agree to an increase in volume for the remaining years of the contracts and make a payment in compensation. We noted that the payment was small in relation to the contracted volume. We do not consider that this would have had a significant impact on the market as a whole.

7.34 Moreover, as we have not heard concerns about this more widely, we see this as a contractual concern in relation to an individual retailer/supplier relationship rather than a systematic concern about the working of the market. In light of this, we did not pursue this issue further.

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[128] Initial update report, paragraphs 7.18 to 7.20.
[129] Initial update report, paragraph 7.37.
[130] Initial update report, paragraph 7.38.

Pricing

7.35 In general terms, contracts set the wholesale price of fuel on the basis of international prices for diesel and petrol and for the biofuels which are blended with fossil fuels in the mix supplied to retailers. As set out in our Initial Update Report,[131] this is achieved through a contractual pricing formula relating the price per litre of petrol and diesel to:

(a) A price assessment (which we describe as a benchmark) for the UK import price of fossil fuel;

(b) The cost of meeting biofuel obligations;

(c) Other factors such as fuel duty, exchange rates and conversion factors;[132] and

(d) A premium (or discount) to the level implied by (a) to (c) that reflects the retailers' own costs and to give them a margin. This will likely vary by terminal if the contract covers supply from more than one terminal. We refer to this as the 'add-on' premium or discount.

7.36 We discuss further fossil fuel benchmarks and biofuels obligations in the next sections. The 'add-on' premium (or discount) reflects competition in the wholesale market, which is considered in paragraphs 7.2 to 7.11 above.

Fossil fuel benchmarks

7.37 UK road fuels sector market participants nearly universally use two fossil fuel price assessments as benchmarks – one for petrol, one for diesel – provided by Platts (U.K.) Limited, part of S&P Global Commodity Insights ('Platts)', to write their pricing contracts. These price assessments are referred to colloquially within the road fuels market as the 'Platts price', with the vast majority of pricing contracts between refiners and wholesale suppliers, and between wholesale suppliers and retailers, specified in the form of 'Platts plus/minus'.

7.38 As set out in more detail in Annex F, we found that the number of transactions, bids and offers informing the petrol and diesel Platts price assessments, particularly the petrol price assessment, has been very low for an extended period of time. The evidence available suggests that only a small proportion of transactions and other trading activity is being reported to Platts to be used in forming the petrol and diesel Platts price assessments. Platts told us that in the event of limited trading liquidity it has regard to other data points. We are

[131] Paragraphs 7.21 to 7.23.
[132] Exchange rates and conversion factors are needed because benchmark prices may be quoted eg in dollars per tonne, and need to be converted to pence per litre.

publishing our analysis of this matter to provide more information to industry participants.

Biofuels

Blending of biofuels with fossil fuels

7.39 The UK government aims to encourage the blending of biofuels with fossil fuel in order to reduce carbon emissions. The main instrument for doing so is the Renewable Transport Fuel Obligation (RTFO), which was introduced in 2008 and requires suppliers to include a set percentage of biofuel in road fuels. The RTFO has been progressively tightened since 2008: the required biofuel percentage has increased from 2.5641% of fossil fuel in 2008 to 13.078% in 2023. However, more environmentally friendly biofuels are double-certified (ie counted twice/given a double weighting) under the RTFO.[133] Using double-certified biofuels means that the required biofuels percentage is reduced to 13.078/2% = 6.539% of fossil fuel. This makes it easier to achieve.[134]

7.40 Almost all biodiesel supplied in the UK is double-certified. The main double-certified biodiesel used in the UK is UCOME (Used Cooking Oil Methyl Ester).

7.41 As regards petrol, the biofuel supplied in the UK is a mixture of single- and double-certified biofuels. The main biofuel blended with petrol is bioethanol, which is single-certified if manufactured from crops or double-certified if manufactured from waste or other double-certifiable feedstocks.

7.42 The RTFO and our analysis is considered in more detail in Annex E. Other important aspects of the RTFO include that suppliers receive certificates (RTFCs) for compliance; and that these certificates can be, and are, traded. Suppliers can also buy out their obligation under the RTFO: this means paying the Government a fixed sum (currently 50p) per certificate, instead of blending in biofuels or purchasing a certificate on the open market. However, we understand there has been little buying out of RTFO obligations as the buy-out price has almost always been above the open market price of RTFCs.

Contractual pricing formulae and the cost of biofuels

7.43 Diesel pricing formulae in contracts between wholesalers and their retailer customers mostly link to a single-certified biodiesel (FAME-10) benchmark price

[133] Double-certified fuels are primarily those manufactured from waste and residues or produced using only renewable energy of non-biological origin.
[134] There is also a separate development fuel obligation.

and not to the double-certified UCOME benchmark price despite almost all the biodiesel supplied in the UK being double-certified.

7.44 Petrol pricing formulae mostly link to a single-certified bioethanol benchmark price and, to the extent that bioethanol alone cannot meet the RTFO (due to the maximum bioethanol content being 10% for E10 petrol, and 5% for E5 petrol), also link to a diesel biofuel benchmark, which again is the single-certified FAME-10 benchmark price rather than the double-certified UCOME benchmark price.

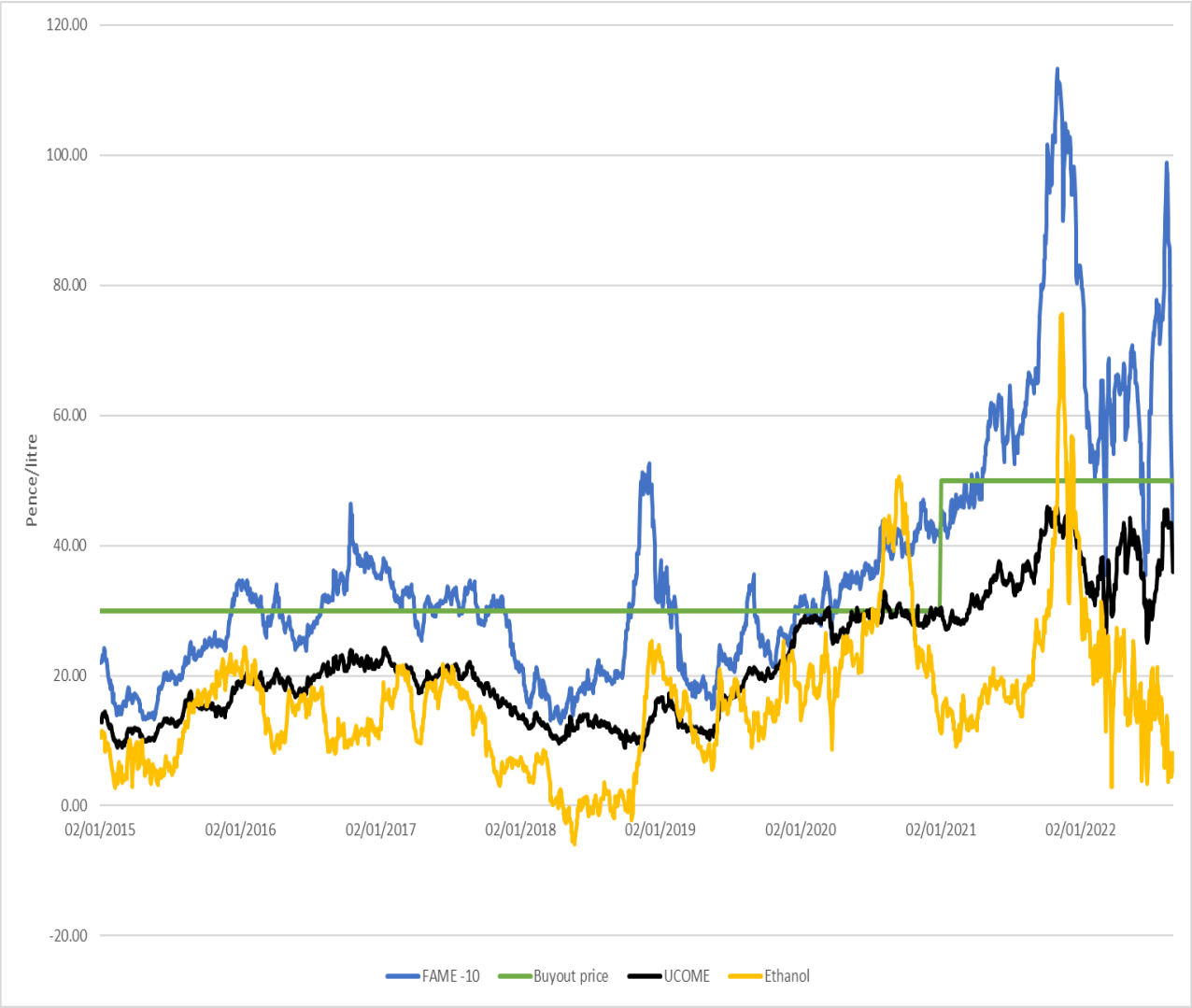
7.45 We found that the link to the single-certified FAME-10 benchmark price rather than the double-certified UCOME benchmark price increased the cost of the fuel supplied to retailers. The effect has been increasing over time and for 2021 and 2022 (up to end August) we estimate it to be about 3.5ppl for diesel and 0.5ppl for E10 petrol. We do not have more recent data, but we understand the difference has been smaller since the end of August 2022.

7.46 Our calculations also show that for much of 2021 and 2022 (to the end of August 2022), the addition to prices implied by the single-certified FAME-10 benchmark price was above the level implied by the RTFO buy-out price, see Figure 7.5 below—the dark blue line (FAME-10) was above the green line (buy-out price) for much of 2021 and 2022, whereas the grey line (UCOME) was not. The Government has stated that the buy-out price is 'intended to protect consumers from excessive increases in fuel prices'.[135] We are concerned that suppliers' use of a FAME-10 benchmark, which exceeds the buy-out price, risks frustrating this intention.

7.47 The evidence we have received suggests that most contracts with retailers are linked to FAME-10, but we did also see evidence of contracts linked to UCOME; of contracts where the customer provided the supplier with RTFCs; and of contracts with a cap on the biofuel component linked to the RTFO buy-out price. Although these contracts are not affected by the issue identified above,[136] retailers with such contracts cited them as a reason for increased margins. We consider this reflects retail prices being determined by pass-through of the FAME-10 benchmark paid by the majority of retailers. Thus, where contracts are not linked to FAME-10 but are more reflective of suppliers' costs, this seems to have benefitted retailers via a higher margin, rather than being passed through to consumers in a lower retail price.

[135] Paragraph 1.11: Renewable transport fuel obligation annual report 2020.
[136] In the case of contracts with a cap on the biofuel component linked to the buy-out price, the issue would still arise but to a lesser extent.

Figure 7.5: Cost of RTFC implied by UCOME, FAME-10, FAME 0 and ethanol price compared with traded and buy-out price of RTFC



Sources: CMA calculations based on data from Argus (for biofuel, RTFC) and Platts (for fossil fuels), see Appendices 1 and 3. The traded price of RTFC is only available from 2020

Suppliers' views on our analysis

7.48 We shared our emerging biofuels analysis with 10 large wholesale suppliers of road fuel.

7.49 The suppliers did not agree that the use of FAME-10 necessarily increased prices. They said the wholesale market was competitive and the biofuel component of pricing formulae should not be considered in isolation from other components as the additional revenue from linking to FAME-10 rather than UCOME would tend to be offset by a lower 'add-on' premium.[137] Some suppliers provided evidence that they offered customers a choice of different formulae (optionality) with a lower

[137] This is the premium (or discount) to the blended fossil and biofuel price, sometimes referred to as the Platts premium, which is negotiated between suppliers and customers for each contract.

level of ‘add-on’ premium if the FAME-10 benchmark was used. These suppliers submitted that the difference reflected their expectation of FAME-10 and UCOME prices over the contract period. It was also submitted that the large increase in FAME-10 prices in 2021 and 2022 reflected a series of unanticipated events,[138] and two suppliers indicated that biofuel pricing had increased their profits (compared to the level they would otherwise have been), though one added that this only to a limited extent ameliorated some of the material refining losses it had incurred in the previous decade.

7.50 Some suppliers added that the use of FAME-10 reflected established industry practice and customer preference. They submitted that, as the FAME-10 benchmark continued to be used across the market, this enabled customers to easily compare prices on a ‘like-for-like’ basis across competitors.

Our view on biofuels benchmarks

7.51 The issue of how biofuel benchmark prices affect the price of fuel paid by retailers has come into focus because the renewable obligation is tightening over time and because the biofuel premium over fossil fuels has, as shown in Figure 7.5, tended to be high and volatile in recent periods.

7.52 We have considered the view of suppliers on our emerging analysis. We consider that the use of different biofuels benchmark prices could, in principle, be offset by differences in ‘add-on’ premia. However, we note that such ‘add-on’ premia are in general negotiated at most once a year, so upward movements in the FAME-10 price in the interim would create a windfall for wholesale suppliers paid by retailers, which we would then expect to be passed on in the pump price. Moreover, the evidence we received was limited and did not appear to suggest the impact of using FAME-10 in contracts was fully offset by lower ‘add-on’ premia.

7.53 We do not consider that the continued use of FAME-10 gives rise to significant benefits as a result of retail customers being able to compare prices on a ‘like-for-like’ basis across competitors. This is because retailers can ask suppliers for a quote on a consistent basis, eg they can ask for quotes based on UCOME rather than FAME-10. We see no reason why a supplier would refuse to quote on the basis retailers request, but even if that were the case, comparisons can still be made using current and future prices for different benchmarks.

7.54 Overall, we consider that it is a problem that most wholesale prices are linked to a biodiesel benchmark that differs significantly from the benchmark for the biodiesel actually being used. Consequences include distortion of the pricing signals being conveyed to the market; wholesale, and consequently retail, prices being more

[138] One supplier said that such events included the Russian invasion of Ukraine, Covid-19-related hampering of harvests, poor weather, supply issues for two significant producers of sodium methylate (a key catalyst in the biodiesel production process), uncertainty and changes in regulation.

volatile (due to FAME prices being more volatile than alternatives, see Figure 7.5); and additional risk being created in the supply chain due to differences between cost and revenue being increased. While there is no perfect way of reflecting costs in pricing formulae, we consider that the current approach of linking to FAME-10 does not work well and could be improved. We would expect wholesale suppliers to offer retailers a more cost-reflective benchmark than FAME when negotiating new contracts (see further discussion in Annex E, paragraph 47).

7.55 Additionally, we remain concerned that high biofuel prices have at times caused the biofuel component of wholesale prices to exceed the level implied by the RTFC buy-out price which is intended to protect consumers, and that this could happen again.

Conclusions on wholesale

7.56 At a general level, we have found that wholesale supply is not highly concentrated and that margins are low.

7.57 We noted in our Initial Update Report that we had not heard widespread concerns around contract terms between wholesalers and retailers, including in regard to the enforcement of minimum volume commitments. Since then we have heard concerns from one retailer about this issue. As we have not heard concerns about this topic more widely, we regard this as a specific contractual concern for an individual retailer rather than a more general issue relating to the overall functioning of the sector. Therefore, we did not pursue this issue further.

7.58 Given the overall analysis outlined above, we do not consider that any intervention is required to improve the general level of competition in the wholesale sector.

7.59 We have, however, identified issues in relation to the use of benchmarks, which industry participants may wish to consider.

8. Refining

8.1 The UK refining sector is made up of six major refiners, which operate processes to transform crude oil into petrol, diesel and other products. Together they produce around 40% more petrol than is consumed in the UK, but only around 55% of domestic consumption of diesel, with the shortfall being made up by imports. They then sell their refined product either directly to retailers, or to independent wholesalers.

Provisional findings from our initial update report

8.2 In our initial update report we said that, despite the spike in refining margins we had seen in 2022, we did not think that UK motorists had faced negative outcomes arising from deficiencies in competition in the UK refining sector. We also found that, looking at the period since 2020, UK refiners had not made high profits, as low or negative margins during the initial period of the Covid pandemic effectively cancelled out the high margins caused by the Russian invasion of Ukraine.

8.3 Specifically, within our initial update report, we noted that:

- Overall margins over the five years have been modest and below levels that would give us cause for concern about competition.
- Margins did become very high for a period in the first half of 2022. This was driven by forces outside the refiners' control, primarily global supply constraints caused by the Russian invasion of Ukraine. These margins then returned towards their historical range at an average of 0.5% in August 2022. While we have analysed margin data up to August, the recent increase in the diesel refining spread suggests that margins will have increased somewhat in the period since then.
- For 2020 most UK refiners experienced negative margins (ie they were loss-making). This can be explained by the global reduction in demand for petrol and diesel, due to the covid lockdown-related reduction in mobility and other activity across the world. While less uniform, we also saw low margins, occasionally turning negative, through 2021.
- Taking these impacts together, over the period since 2020 refiners have earned either low or negative margins; in effect, the margin spike in 2022 has done no more than even out the margin troughs in 2020 and 2021.

8.4 We highlighted that the UK refining industry faces stiff competition from refiners elsewhere in the world, with new capacity continuing to be added, particularly in Asia. The number of refiners in the UK, by contrast, has been in long-term decline, from 17 refineries in 1976, to 12 in 2000, to 6 today. We noted that we can also

expect increasingly tough demand-side conditions with downward pressures on global demand, driven partly by the shift away from internal combustion engine vehicles. However, the UK will continue to rely on imports of diesel for the foreseeable future, which will bring resilience risks.

8.5 Given these factors, despite the high margins that we observe in refining during 2022, we said that we do not see evidence that UK motorists are facing negative outcomes arising from deficiencies in competition in the UK refining sector. As noted above, refined petrol and diesel trade on international markets, with prices determined by international supply and demand. Within the UK there is no apparent incentive for UK refiners to set prices below international levels because they know they can sell their entire output at this price level; at the same time, they cannot respond to short-term peaks in margin by increasing their capacity due to the time and expense that the capital investment required to do this would entail. This means that at times when global refining spreads are high, UK refiners will earn higher margins (and vice versa). Changing the structure of the UK industry, eg by breaking up refiners, even if practically achievable, would have no impact on this given the nature of the global market.

8.6 We considered whether measures should be taken to directly limit margins that refiners are able to earn in periods when global prices for petrol and diesel are high but noted that we would not recommend any such measures for three main reasons:

(a) Firstly, looking over a medium-term price horizon, and taking account of the at-times negative profit margins we have observed, there have been no overall excessive profits for UK refiners to date. Reducing their profit levels below sustainable medium-term rates would risk accelerating the reduction in refining capacity that the UK has seen over past decades.

(b) Secondly, applying such restrictions in the UK would create an incentive for UK refiners to sell abroad, which at best would remove any benefit for UK consumers and, at worst, risk shortages in the UK; and

(c) Thirdly, we do not know if the recent high margins will continue into the future, once the current imbalance of global supply and demand eases.

8.7 For those reasons, we said that we did not think that there are interventions that could be made directly to change how the refining market is functioning in the UK, and would improve outcomes for motorists. Instead, recognising the impact that high and volatile refining margins have on the prices that consumers face at the pump, we said that we would consider whether there are wider steps that government could take to mitigate the impact of ongoing volatility.

Conclusions on refining

8.8 Since our initial update report we have not received any representations from parties wishing to challenge our reasoning.

8.9 In addition to the absence of representations from parties on our emerging findings, we have not become aware of any other relevant information that would make us change our view during the course of the market study.

8.10 We observe that refining spread has generally reduced since peaking in June 2022, although this has been more pronounced and steadier in the case of petrol than for diesel. This disruption was caused by the Russian invasion of Ukraine in March 2022. Prior to this, around 40 per cent of refined diesel imported into the European Union came from Russia. Petrol saw a small uptick in refining margins around October-November 2022, while diesel saw a larger uptick in October-November 2022, as well as one in August-September 2022.

8.11 Our view remains that competition between UK refiners operates sufficiently well that no question of a remedy arises.

8.12 Notwithstanding our findings on competition in the refining sector, we have considered whether there are actions the government could take to increase resilience to fluctuations in wholesale prices. The most direct step that the government can take is to protect motorists from temporary price spikes by making temporary reductions to fuel duty; the UK government took this step by announcing a 5ppl reduction in fuel duty in March 2022, and confirming in March 2023 that this would be extended for another year. This measure provides immediate and direct relief to motorists exposed to price increases and would be a strong option to provide protection from future price shocks.

8.13 The obvious downside of such measures is the cost to the exchequer. Where refiners gain windfall profits as a result of global supply and demand factors, there may therefore be an argument in favour of government seeking to recoup some of the cost of providing support to drivers through reduced fuel duty. Any steps to do this would, however, need to be carefully considered, taking into account the size and duration of any period of elevated wholesale margins, within the context of the longer-term picture on margins. If not carefully calibrated, such a measure could have the unintended consequence of driving a decision to close operations at a UK refiner, with negative effects on the national and local economy.

8.14 We have also considered measures that the government could take to smooth the supply of petrol and diesel, such as the government holding a supply of petrol that could be released into the market when the price is high and replenished when it is low. In theory this could help moderate wholesale price increases, however this is

unlikely to be practical at the scale that would be required to have an impact on globally determined prices.

8.15 We therefore do not make any recommendations for intervention in relation to refining.

9. Future of the sector

9.1 In November 2020, Government announced a commitment to end the sale of new petrol and diesel vehicles by 2030, and that all new cars and vans will be required to be fully zero emission at the tailpipe by 2035.[139]

9.2 In this section of our Report we consider further the potential impact on the future of the road fuel sector in the UK as demand for petrol and diesel declines, to assist the UK Government and the Devolved Nations in its consideration of:

(a) what a future network for road fuel supply might look like; and

(b) the implications of a declining network for those motorists who will continue to be reliant on fossil road fuels up to and beyond 2030.

Projections for the future of petrol and diesel vehicles

9.3 The UK government delivery plan published in July 2021 set out the Government's investment and policy strategy for meeting the phase out dates for internal combustion engine (ICE) vehicles, including significant milestones and how it will monitor progress.

9.4 The government is investing in the rollout of EV charging infrastructure on motorways, on streets, in homes and workplaces.[140] The Treasury launched a £400 million fund to leverage private investment and bolster the rollout of charge points across the UK.[141]

9.5 The government recognises that as demand for cleaner road fuels increases there will be significant disruption as the industry moves away from conventional vehicle technologies. The government is not banning outright the use of petrol and diesel cars and vans from 2030, and petrol and diesel vehicles will continue to be sold on the second hand market. The UK government has, however, confirmed the passenger vehicle ICE ban in 2035 and its intent for a heavy duty ICE vehicles ban in 2040.[142] Targets are likely to be introduced for zero-emission vehicle sales, before the 2030 deadline on the sale of new petrol and diesel cars and vans comes into force.[143]

9.6 At the end of September 2022 there were 40.8 million licensed vehicles in the UK of which 1 million were licensed plug-in vehicles.[144] The RAC estimated that at the

[139] Hybrid vehicles will not be impacted by the 2030 ban, however, from 2035 they will face a similar ban on any brand-new hybrid car sales.
[140] See delivery plan, page 17.
[141] See delivery plan, page 21.
[142] UK confirms pledge for zero-emission HGVs by 2040 and unveils new chargepoint design.
[143] *The Guardian*, 'Ambitious' UK plans for electric vehicles welcomed, published 20 October 2020.
[144] Vehicle licensing statistics: July to September 2022.

end of 2022 there were around 712,000 zero-emission Battery Electrical Vehicles (cars) on the UK's roads.[145]

What the parties told us about their strategies

Retail

9.7 Demand for road transport fuels has declined over recent years due to improvements in vehicle efficiency and the increasing use of hybrid and electric vehicles.[146] There is broad consensus that petrol and diesel sales will decline, with petrol likely to decline before diesel, and there is uncertainty over how long it will take to fully transition away from petrol and diesel to alternative road fuels. Factors such as the speed at which new technologies can be developed and rolled out, government policy, and changes to the supporting infrastructure and other exogenous factors, such as international disruptions to the supply of oil, all mean that the pace of this decline is uncertain. In addition, a recent AA poll of 15,549 drivers found that 81% think EVs are too expensive for them to purchase.[147] We would though expect the decline road fuels sales to accelerate as EV adoption rates increase and the ban on new ICE vehicle sales comes into force. The current supply and distribution PFS infrastructure will change, both in anticipation of and in response to these changes.

9.8 However, most retailers told us that they did not expect their current strategies to materially change over the course of the next 5-10 years. They expected their PFS networks to remain profitable over this period, with growth in their on-site convenience store offer and other services, including an EV charging offer, offsetting the expected decline in petrol and diesel revenues. We also heard that, as well as expanding/redeveloping existing sites, retailers had plans to open new PFSs with an EV charging and/or biofuels offer. The number of new PFS sites currently planned or in prospect varied. Most retailers we spoke to were not planning to expand their PFS estates significantly. As well as new builds, retailers were actively looking at acquisition opportunities.

9.9 Some retailers told us that planning beyond 5-10 years with any degree of certainty was more difficult (and some did not, therefore, plan beyond this time horizon). What was clear was that sites that are uneconomic and/or unsuitable for EV charging will ultimately have to close. For example, the viability of PFS sites with physical constraints, such as the available space, power and commercial viability of the site, may increasingly be at risk of closure as demand declines. Retailers told us they were though expecting to continue to supply petrol and

[145] The road to electric - the UK's adoption of electric cars in charts and data.
[146] UKPIA Response to CMA Road Fuel market study - Invitation to Comment.
[147] Four in five drivers say electric cars are still too expensive.

diesel at their PFSs beyond 2030, while demand remained and it was still viable to do so, alongside an expanded EV charging and alternative road fuels offer.

Refining and Wholesale

9.10 The international nature of pricing, coupled with significant volume of crude oil imports suggests that the UK refineries are subject to global market conditions for refined product, with the refineries operating as price takers.[148] In addition, the United Kingdom Petroleum Industry Association (UKPIA) told us that refinery operators face significant risks, such as sudden changes in geopolitical events, changes in fuels demand due to seasonal variations, a collapse in demand during the COVID pandemic and exchange rate fluctuations.[149]

9.11 As an example of the impact of a recent geopolitical event, Russia supplied 24.1% of the UK's refined oil imports in 2021. However, Russia fell to the sixth-largest import source for refined oil in April 2022 as importers sought alternatives following the Russian invasion of Ukraine and imports from Russia ended altogether in December 2022.[150]

9.12 UK refineries will need to adapt to a low carbon environment, by both becoming cleaner and more fuel efficient and adapting to changing global market conditions in the context of falling domestic and international demand for petrol and diesel. UKPIA told us that as trends such as improvements in vehicle efficiency and the increasing use of hybrids and EVs, along with increases in the biofuel content of petrol and diesel, accelerate under Government decarbonisation policies these will prompt changes in the supply infrastructure required to service demand for conventional road fuels and growing demand for alternative fuels.[151] One respondent told us that, as demand decreases, there is likely to be further rationalisation of both UK and European refineries.

Implications for the sector

Retail

9.13 Both the network of PFSs and the business models of remaining PFSs are likely to change in response to declining sales of petrol and diesel. Both of these changes may have implications for competition and consumers.

[148] The UK became a net crude oil importer in 2005 and a net importer of petroleum products in 2013. See U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.
[149] UKPIA Response to CMA Road Fuel market study - Invitation to Comment.
[150] Trends in UK imports and exports of fuels - Office for National Statistics; Imports of fossil fuels from Russia - House of Commons Library.
[151] UKPIA Response to CMA Road Fuel market study - Invitation to Comment.

9.14 As consumers' demand for petrol and diesel fall, those PFSs which are currently less profitable are likely to be closed down first and the least profitable PFS retailers are likely to exit the market first. As such, the network of PFSs and set of competing PFS retailers are likely to be unevenly affected.

9.15 There may be tipping points in the profitability of PFSs and of PFS retailers from potential accelerations in the fall in demand and the non-linear impacts of these changes on profitability. The timing and impact of tipping points will likely be hard to predict.

9.16 PFS sites typically offer a diverse range of services and product lines, either via a kiosk or branded on-site convenience store, often serving an important role in their local community. While there is likely to be a continued role and need for PFSs for the foreseeable future, the PFS network will evolve further as petrol and diesel volumes decline and the numbers of EVs and hybrid vehicles on UK roads increases.

9.17 Non-supermarket retailers told us that they had already started to or had plans to install charging facilities for EVs. Both supermarket retailers and MSAs told us that they were already investing in EV charging facilities and biofuel solutions, both installing charging points in their on-site car parks.

9.18 However, installing rapid and ultra-rapid EV charging facilities at non-supermarket PFS sites is unlikely to drive the same level of footfall as petrol and diesel sales do now given the physical constraints on space and/or connectivity to the grid issues. This is because the majority of EV motorists will primarily be relying on overnight home charging and on-street charging facilities.[152] The Petrol Retailers Association (PRA) told us that the significant upfront costs to install ultra-rapid EV charging facilities and 7 year period for recovering the initial investment cost, meant that installing EV charging facilities may not be a realistic or economical option, particularly for some non-supermarket PFS operators. Such sites are likely to have to close as their petrol and diesel sales decline to uneconomic levels. Further, PFS operators will have to ensure that they either fully transition to EV charging or decommission their sites before they become uneconomic, or they risk their assets becoming stranded. We would expect, therefore, to see a decline in the number of PFSs over this period, with more areas being served by a limited number of PFSs.

Refining

9.19 UKPIA told us that: 'Demand for road transport fuels has declined over recent years due to improvements in vehicle efficiency and the increasing use of hybrid

[152] A 2022 DfT research report found that at-home charging accounted for 75% of EV charging demand. Page 8, Public Electric Vehicle Charging Infrastructure. Deliberative and quantitative research with drivers without access to off-street parking. Research report.

and electric vehicles. Over the same period, the biofuel content of petrol and diesel has also increased, leading to a further decline in demand for crude oil derived petrol and diesel blending components. These trends will continue and accelerate under Government transport decarbonisation policies, prompting changes also in the supply infrastructure required to service reduced demand for conventional road fuels and growing demand for alternative fuels'.[153]

9.20 As consumers' demand for petrol and diesel falls, UK refiners will face falling domestic demand for refined petrol and diesel. This may make it more challenging to run a profitable refinery in the UK and could lead to refiners partially decommissioning refining capacity, exiting the market, or shifting their focus to producing non-fossil fuels. For instance, one UK refiner told us that the industry opinion is that 'Transition from towards Net Zero will lead to a decline in road fuels demand across the UK and into the EU. This will progressively lead to excess refining capacity in Western Europe, which will then lead to poor refining margin in Europe […]. Ultimately, this will lead to some capacity rationalisation as the weakest assets will struggle to cover their operating costs and required Licence to Operate investments'.

Implications/risks for competition and outcomes

Retail

9.21 The transition away from fossil-based road fuels to other cleaner road fuels and decline in the number of PFSs will impact differently on households across the UK, dependent on both locational and income factors. The changes in PFS retailers' business models may also affect competition.

9.22 An important factor here is that drivers of ICE vehicles may be able to switch to EVs to mitigate any adverse effects on them, but some types of consumer will have greater ability to switch than others. We have seen some research that suggests that EVs may be less attractive to rural motorists because they are further away from charging hubs, and also face difficulties in installing charging points in areas where local parking is already very limited and/or access is difficult.[154] In such circumstances, the loss of a PFS could have a disproportionate detrimental impact on the local community.[155]

9.23 In the final report of our electric vehicle charging market study, we noted that it was important, for those who cannot afford the cost of buying or leasing an EV,

[153] UKPIA Response to CMA Road Fuel market study - Invitation to Comment.
[154] See Public Electric Vehicle Charging Infrastructure. Deliberative and quantitative research with drivers without access to off-street parking. Research report.
[155] The loss of PFS sites in urban areas can also have a similarly detrimental impact on the immediate locality, not least because the local community maybe reliant on them, not just for petrol and diesel, but for the OS convenience store.

that they are not excluded from driving and that sufficient petrol and diesel continues to be available for at least a transitional period following 2030.[156]

9.24 HMT similarly commented in its Net Zero Review Analysis that:

"Different households will be exposed to the transition [to Net Zero] at different points in time:

- As higher income households drive more and are likely to adopt EVs earlier, the costs and benefits of EV adoption are likely to fall on higher income households first;
- Conversely, any changes to the cost of running an internal combustion engine (ICE) vehicle will fall disproportionately on lower income households, so there could be a trade-off in some instances between incentivising decarbonisation and mitigating distributional impacts; and,
- Car usage varies by geography, income and age, which will influence how soon the benefits of the EV transition could be experienced".[157]

9.25 As the PFS network transitions away from petrol and diesel and smaller PFSs exit the market, local markets may become more concentrated and the market power of the remaining PFS operators that continue to supply petrol and diesel will increase. While one retailer told us that it expected to have to continue to price petrol and diesel at a competitive price level and that it would continue to make available a fuel offering for as long as possible, there would, in the CMA's view, be increased scope for PFS retailers to raise pump prices above competitive levels in such circumstances. This would have a particularly detrimental impact on those motorists on lower incomes unable to afford EVs, or those in rural areas or other areas where EV charging infrastructure is less accessible. Additionally, such motorists would face less choice, and potentially further distances to travel for competitively priced fuel.

9.26 The changes in PFS retailers' business models set out in paragraph 9.9 may also affect competition and therefore consumers. As the importance of petrol and diesel in PFS operators' revenues falls and they compete on a wider service offer, the incentives to price competitively on petrol and diesel may be reduced, further weakening competition.

9.27 One large retailer told us that, all else being equal, it would expect to see a reduction in price as customer demand for a product declines. However, it noted that where fuel retailers have a substantial fixed cost base, it would expect that as

[156] Electrical Vehicle charging market study Final report, published 23 July 2021. We also said that: "At this crucial early stage, it is also important to build people's trust in the sector so that they are confident in making the shift to EVs, and to ensure no one is left behind in the transition": page 105.
[157] Page 51, Net Zero Review Analysis exploring the key issues, HMT published October 2021.

fuel volumes decline, some retailers will no longer be able to justify incurring these fixed costs, which could result in site closures and an increase in pump prices, enabling surviving rivals to remain viable for at least a time.

9.28 The same retailer told us:

…in the long run the expectation is that all PFS operations across the UK will close. Our expectation, based on standard economics, is that in the lead-up to this point, the final PFS remaining will likely earn a high margin per litre, to allow them to justify continued operations in the face of ever decreasing demand. This evolution of the industry will likely result in higher gross margins on fuel for a time, but in that scenario true retailer profits [retailer emphasis] will likely remain flat owing to the decline in volumes across which to recover fixed costs and once wider cost and capital requirements are taken into account. There will come a 'tipping point' where it will become unviable for both (i) the customer to purchase; and (ii) the operator to make available a fuel offering, given the overall anticipated market-wide decline in demand for fuel; as against the high fixed cost nature of the operations required to make available a fuel offering.

9.29 As well as the impact on motorists, HMT noted that the transition away from fossil road fuels will have material fiscal consequences for government itself, notably in relation to the reduction in tax revenues earned from fossil fuel-related activity. The government will need to consider changes to existing taxes and new sources of revenue throughout the transition in order to deliver net zero sustainably while avoiding, so far as possible, increasing the economic costs of transition.[158]

Conclusions

9.30 In order to ensure that motorists who remain reliant on petrol and diesel vehicles over this period of decline do not face adverse outcomes in terms of higher prices and less choice as a result of a weakening of competition at retail level, we consider that the sector should be closely monitored to assess the risks of such adverse outcomes materialising, and to understand at what stage they may materialise, with a view to taking any appropriate steps to protect consumers. We consider this further in Section 10.

[158] Page 9, Net Zero Review Analysis exploring the key issues, HMT published October 2021.

10. Remedies

10.1 In this section we set out our thinking on remedies that we consider are appropriate to tackle the concerns we have seen in the road fuel retailing sector. We recommend that the government:

(a) implements an open data "fuel finder" scheme for prices in the retail road fuel sector, and places this on a statutory footing making it compulsory for road fuel retailers to provide details of their prices; and

(b) creates an ongoing "fuel monitor" road fuels price monitoring function for the UK market, by tasking a public body with the role and providing it with information gathering powers needed to generate insights in the complex and changing UK market.

These recommendations reinforce each other in their main aim of increasing the incentives on retailers to price fuel more competitively.

10.2 We also set out our reasoning around potential remedies that we have considered but do not propose to take forward, including various forms of:

(a) price or margin control; and

(b) structural reform of the industry.

10.3 Finally, we confirm our earlier thinking around whether any remedial action is required in the wholesale and/or refining sectors.

An open data fuel finder scheme for the UK road fuel sector

Recommendation to government

10.4 Building on our recommendation in our Urgent Review, we recommend that the government implements an open data "fuel finder" scheme for prices in the retail road fuel sector, and places this on a statutory footing.

10.5 Enabled through compulsory data sharing, a fuel finder scheme will encourage other services – such as fuel comparators and navigational apps – to provide easily accessible, comprehensive and up to date pricing information to consumers to help them find cheaper fuel, at the best location, without them having to drive around to observe prices from the road.

10.6 We recommend that government takes forward this recommendation as soon as practicable - and consider that secondary legislation under the Data Protection and Digital Information Bill is the most appropriate vehicle through which to do this

- to ensure that consumers obtain maximum benefits in as timely a manner as possible, especially as they continue to face cost of living pressures.

Basis for the open data fuel finder recommendation

10.7 Effective competition relies on consumers being able to compare accurately the price and quality of products in a way that drives good decisions. They need to be able to do this easily, and to act on it. While real-time fuel prices are prominently displayed at forecourts, they are not provided by retailers online, and, in the absence of high-quality collated data, consumers have to drive around to find cheaper fuel.

10.8 In many other markets, since use of the internet has become widespread, retailers have displayed their prices in real time online as a matter of course. In road fuel, however, this is not the case. The nature of competition, particularly the fact that competition is driven by several large competitors, competing separately in a large number of local markets, prevents the same incentives from working to encourage retailers from sharing their pricing data on a voluntary basis.

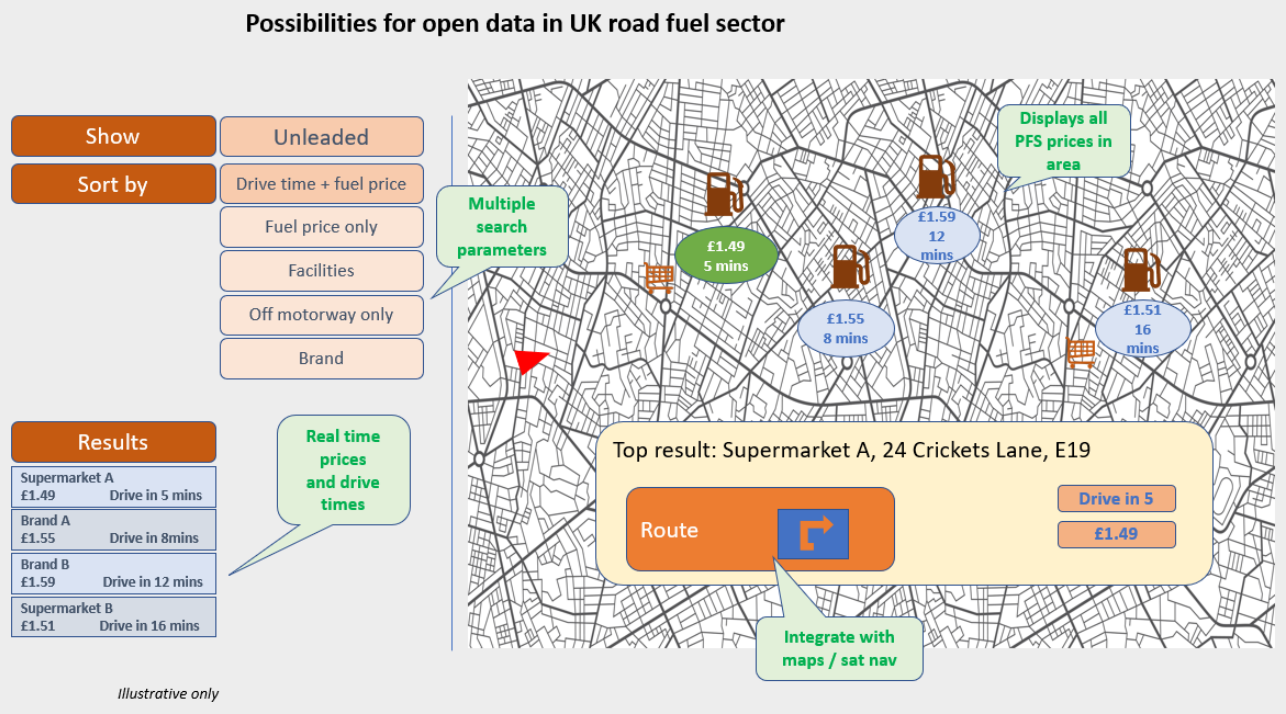
10.9 This lack of real-time, comprehensive and easily-accessible pricing data means that consumers do not have access to the tools they need to drive competition as effectively as possible, by seeking out and buying from the cheapest possible retailer within those areas where it would be make economic sense for them to buy fuel. Many consumers in this market are savvy and engaged, using their own observations of price, sharing information on social media or using online pricing tools to seek out the best prices in their area. However, these consumers are clearly being forced into using second-best options when compared with using a more comprehensive and real-time dataset.

10.10 Given the apparent lack of incentive for retailers to publish these prices of their own volition, and the important role that the availability of this information could play in helping consumers driver greater competition in the fuel retail market, at a time when it seems to have declined, there is a strong case for measures which would make prices more observable in real time. Without this, consumers cannot be expected to be able to drive effective competition, and with the weakening of competition we have identified, particularly in relation to supermarkets, it is essential that they do.

10.11 We have already recommended in the July 2022 Urgent Review an open data scheme through which individual forecourt prices are collected and made freely available. This section develops our thinking on the benefits of such a scheme, in particular as an enabler of other services - such as fuel comparators and navigational apps – which will provide easily accessible, comprehensive and up to date pricing information to consumers to help them find cheaper fuel, at the best location, without them having to drive around to observe prices from the road.

10.12 In turn, we would expect this to have a moderating effect on retailers' behaviour, as PFSs will have to compete harder to attract customers, by lowering prices and/or improving their offering.

10.13 Evidence, including from the Organisation for Economic Cooperation and Development (OECD) and the Australian Competition and Consumer Commission (ACCC), indicates that tools that allow consumers to compare prices, such as those on mobile devices, reduce consumers' search costs and are beneficial for competition, resulting in net savings for consumers. The graphic below illustrates the type of information that consumers could benefit from through for example an app where fuel pricing and navigational data are integrated.



Source: CMA graphic.

10.14 We expand on the basis for, and details of, our recommendation in the sections below.

How better-informed consumers can make savings and help drive competition

10.15 Consumers face unnecessarily high search costs from driving around when comparing prices between different PFSs, because up to date prices are only available at the forecourt, and not available centrally. Research conducted by the OECD Competition Committee in 2013 found that most often consumers only conduct limited comparisons of prices when they must fill up their tanks and are

not aware of all the prices quoted by the PFSs they could reach at a reasonable cost.[159]

10.16 The OECD report notes that better-informed consumers will search more aggressively for low prices, generally leading to stronger competition among suppliers. It reports that visibly posted prices or tools that allow consumers to compare prices, such as those on mobile devices, reduce consumers' search costs. A 2017 speech by the Chair of the Australian Competition and Consumer Commission (ACCC)[160] notes that '*in Australia, where large retailers had been able to see each other's fuel prices for many years, giving that information to consumers empowers them to search for lower prices, rewards lower priced retailers and drives competition in the market*.'

10.17 The ACCC speech goes on to note that fuel transparency apps and websites allow consumers to work out where to buy when they see very large differences in prices between sites[161] and that by doing this, motorists filling up a vehicle with a 60-litre tank could save themselves in the region of AUS $10-15 per tank of petrol.

10.18 Making it easier for consumers to compare prices should drive competition more widely. If consumers modify their behaviour in response to such measures, and become more price sensitive, PFSs will need to compete harder to obtain their custom by lowering their prices or improving their offering. Such behaviour by consumers could also increase the number of competitors PFSs take into account when setting their prices, if motorists are able to determine that in travelling further to a PFS they may still make overall savings, taking into account the distance to travel.

Willingness to search for fuel

10.19 According to suppliers, price, location and customer experience appear to be the most significant factors that consumers consider when choosing where to buy fuel. Price was the factor cited most frequently when parties responded to our request for information on this point, followed by location then customer experience.

10.20 Generally, consumers seem willing to travel a short distance to access cheaper fuel. An RAC Opinion Panel survey from December 2022 found that most people would travel at least 2 miles to find cheaper fuel – only 21 per cent would not travel for fuel that was 5p per litre cheaper and only 14 per cent would not travel for fuel that was 10p per litre cheaper. One supermarket told us they assumed customers would be willing to travel around 10 minutes or 3 miles; another told us that to

[159] OECD Policy roundtables: Competition in road fuel (2013), 4.3 (page 25).
[160] ACCC Fuel price transparency and retail industry competition speech (2017).
[161] The speech notes that during decreasing phases of the cycle, prices can vary across sites in a major city by up to 10-15cpl and that when prices start to increase, the variation can be as high as 25-30cpl.

achieve a balance between price and convenience, they thought customers may be willing to travel and/or deviate from a routine journey by up to 15-25 minutes.

10.21 However, at present it is not generally easy for consumers to work out where to find the cheapest fuel or to assess accurately whether a price saving is worth the extra travel time. Online fuel price search tools do exist in the UK, but they have their limitations, as described in more detail below.

Consumer engagement

10.22 Transparency measures are likely to be of most benefit to consumers who are sufficiently engaged and able to use online tools.

10.23 A 2016 academic study of the impact of mandatory price posting on large electronic signs in Italy showed that less than 10% of consumers use the posted price information effectively.[162] In the UK, a survey undertaken by the RAC in December 2022 found that while 68% of people surveyed who 'kept an eye on the price of fuel' monitored forecourt prices, only 16% used an app. That said, we understand that in Austria, where mandatory transparency measures are in place (see below), and consumers can assess local prices through an online database hosted by a regulator, this is a frequently used national website in the country.

10.24 We note that while an open data scheme would require some level of engagement, consumers are less likely to need to actively search for information, particularly where information is presented passively to them, for example if a navigation app prompts consumers as to where the cheapest petrol in a locality can be found.

Transparency measures in other jurisdictions

10.25 Some jurisdictions around the world have implemented mandatory measures to increase transparency of road fuel prices, and we consider some of these below.

Austria

10.26 Austria's energy regulator, E-Control,[163] operates an online price transparency database[164] and operators of the c. 2800 (business to consumers) PFSs in Austria are required to register their fuel prices in the database. The aim of the database is to enable consumers to determine the most favourable current prices in their

[162] Rossi F and Chintagunta PK (2016) Price transparency and retail prices: evidence from fuel signs in the Italian highway system, Journal of Marketing Research, p409. The article highlights possible limitations to the findings given the nature of the sample, which it indicated may be less price sensitive than the general population.
[163] Unsere Energie gehört der Zukunft - E-Control
[164] Spritpreisrechner.at

vicinity and decrease consumer search costs. Motoring organisations get a feed of the data, so they can use this in apps.

10.27 Results from users' searches display a range of outputs, including the ten closest petrol stations to a user's address, with prices for the *five* cheapest. The rationale for displaying only the five cheapest prices is to '*avoid an upward price orientation*.'[165] At district level, the prices of the five cheapest PFSs are displayed, with a combination of districts provided if there are insufficient petrol stations. At federal state level, the ten cheapest prices are displayed.

10.28 PFSs are slightly restricted in their pricing policy in Austria. They are permitted to *increase* their fuel prices once a day only, at 12.00 noon.[166] However, price reductions are permitted at any time, and as often as desired. Within half an hour of the respective price change, it must be electronically reported to the price transparency database.[167] Penalty provisions exist in connection with the reporting requirements.[168] The restriction regarding a permissible price increase at 12.00 noon was necessary because for a long time before the relevant rules were issued, a number of PFS operators had raised and lowered fuel prices several times during the course of a day, therefore price transparency was considerably limited.

Germany

10.29 Germany established a Market Transparency Unit for Fuels (MTUF) in 2013, in the Bundeskartellamt (BkA) – Germany's equivalent of the CMA – to identify potential violations of cartel law and to share price data with private providers of consumer information.[169]

10.30 Companies operating PFSs are required to report price changes for the most common fuel types in real time (within 5 minutes). MTUF continuously monitors trade in fuels and collects prices from around 15,000 PFSs across Germany.

10.31 In contrast to Austria's model, MTUF does not disclose this data directly to the public itself, but, instead, passes it on to authorised consumer information service providers (CISPs), enabling motorists, via smartphone applications, in-car

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[165] Spritpreisrechner.at – Frequently asked questions.
[166] By virtue of the Austrian Fuel Price Ordinance 'Spritpreisverordnung.' Verordnung betreffend Standesregeln für Tankstellenbetreiber über den Zeitpunkt der Preisauszeichnung für Treibstoffe bei Tankstellen. Price marking at 12.00 noon must be carried out without delay in accordance with the available technical equipment for the price changeover. According to the explanatory notes to the Fuel Price Ordinances the words "without delay" (after 12.00) for the price marking on the totem means that the process may take about 5 to 10 minutes in the case of non-automated changeover.
167 By virtue of rules on transparency of prices 'Preistransparenzverordnung Treibstoffpreise 2011'
[168] Pursuant to the Trade Regulation Act and Price Labelling Act.
[169] Bundeskartellamt - Market Transparency Unit for Fuels. The Act on the Establishment of a Market Transparency Unit for the Wholesale of Electricity and Gas enabled the MTUF's creation and entered into force in December 2012. The legislation introduced a special provision for the fuel sector against Restraints of Competition (GWB), as well as the Ordinance on the Market Transparency Unit for Fuels with more detailed provisions, which entered into force on 29 March 2013.

navigation systems and the internet to find the cheapest fuel prices in their location. CISPs must appoint an ombudsman to whom consumers can report inaccurate information.

Queensland

10.32 Since December 2018, all fuel retailers in Queensland have been required to report their fuel prices as part of the Queensland fuel price reporting scheme to help motorists find the cheapest fuel prices.[170] Retailers are required to report prices within 30 minutes of a price change. Additionally, retailers must report if a type of fuel is temporarily unavailable within 30 minutes.

10.33 To report prices, fuel retailers sign up to the Fuel Prices Queensland Portal.[171] To support compliance, the Queensland Government has put in place a data matching and monitoring system to check that retailers are reporting correct prices.[172]

10.34 Data is disseminated in real time to motorists via a number of independent third-party apps and websites.[173]

Western Australia

10.35 In Western Australia (WA), FuelWatch[174] is empowered to monitor and report on WA wholesale and retail prices.[175] The Petroleum Products Pricing Act 1983 gives the Government of WA authority to enforce price transparency.

10.36 FuelWatch is a price monitoring service, and consumers can access fuel prices via the FuelWatch website. It also provides the Terminal Gate Price (TGP) which provides transparency of petrol and diesel wholesale prices.

10.37 Retailers must notify their fuel prices for the following day by 14.00, stay at the notified price from 6am for 24 hours and display fuel prices on boards in regional areas. Unlike the Austria model, neither price increases nor price decreases are allowed in WA.

[170] Fuel price reporting - Department of Energy and Public Works. The relevant legislation is the Fair Trading (Fuel Price Reporting) Regulation 2018, under the Fair Trading Act 1989.
[171] Fuel Prices Queensland.
[172] Fuel Prices Queensland.
[173] Fuel price reporting apps and websites, Department of Energy and Public Works.
[174] Legislative framework.
[175] Under the Petroleum Products Pricing Act 1983.

Effectiveness of measures in other jurisdictions

10.38 The pro-competitive effects of better-informed consumers, who will be more aware of price differences between PFSs and may therefore shop around more actively, have been acknowledged in other countries.

10.39 The OECD Competition Committee has noted that, while increasing public information on prices via the internet, mobile devices or through large displays at petrol stations is not risk-free, in that it has potentially positive effects on competition because it increases transparency for consumers and reduces search costs, but could also facilitate tacit collusion – most experts think it is beneficial for competition.[176]

10.40 Various studies have been carried out on the impact of transparency measures and associated laws in other countries, and we consider some of these below.

10.41 A 2018 study of the Austrian Fuel Price Fixing Act (which, as noted above, limits the ability to increase prices to once per day) noted that, '*Overall it can be considered a partial success*[177] *as it seems to have fostered competition between retail filling stations and thereby increased consumer welfare.*'[178] Other studies we have reviewed tend to agree that the measures in Austria have been effective in reducing prices, to varying degrees.[179]

10.42 A 2018 evaluation by the Federal Government of Germany of the results of the MTUF to that date confirms, whilst noting the relatively short period of operation of the unit: '*the positive impact of the market transparency unit: in addition to delivering high transparency on fuel prices, the MTUF is no longer registering any significant price hikes in holiday periods*.' It also notes that there are various indicators that the unit promotes competition, with customers switching to small and medium sized filing stations.[180] A 2020 academic study focused on the German market constructed a unique data set to study the effect of mandatory price disclosure in the German petrol market. It found that the policy led to a decrease in retail margins by 1 Eurocent, or 13 per cent of (previous) retail margins.[181] In contrast, a 2016 study found evidence that petrol and diesel prices

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[176] OECD Policy roundtables: Competition in road fuel (2013), page 7.
[177] The study goes on to state: *'Nevertheless, we still find evidence for asymmetric adjustment after the revision of the Fuel Price Fixing Act in 2011. Retail fuel prices seem to adjust more slowly if crude oil prices are relatively low. In contrast, we mostly find negative short-run APT which indicates competitive pressure to delay input price increases. Only if we consider the combined effect of input price shocks, we observe that the speed of pass through has generally become faster for both retail fuel markets. Crude oil price decreases are now passed through slightly faster than crude oil price increases. Overall, the Fuel Price Fixing Act can be considered a partial success as it seems to have fostered competition between retail filling stations and thereby increased consumer welfare.'*
178 Price regulations and price adjustment dynamics: Evidence from the Austrian retail fuel market.
[179] See, eg Price regulations and price adjustment dynamics: Evidence from the Austrian retail fuel market, page 7; Price Effects of the Austrian Fuel Price Fixing Act: A Synthetic Control Study; CESifo Working Paper no. 8819.
[180] Drucksache 19/3693 (bundeskartellamt.de) (German text only) and highlighted in BMWK - Market Transparency and Surveillance
[181] Montag and Winter, Department of Economics, Ludwig-Maximilians-Univesity Munich Price transparency against market power (2020).

had increased, but this appears to be related to specific oligopolistic characteristics of the market, which are not a feature of the UK retail market.[182]

10.43 A review of measures implemented in Queensland reported a small but statistically significant decline in average daily retail prices in most regions across Southeast Queensland, with a statistically significant increase in the spread of prices in 2020.[183] Irrespective of shopping around, consumers as a group were estimated to have also saved about $9.5 million a year in Brisbane and $12.3 million a year in South East Queensland.

10.44 Our assessment of the relevant literature indicates that the impact of any measures depends both on their form and the unique features of the market in question. The 2018 study of the Austrian market concluded that *'it remains difficult to predict how fuel price regulations would affect other retail fuel markets as their market structures are not identical to the Austrian retail fuel market'*. Similarly, the 2020 study of measures in Germany noted: '*Our results inform policymakers by highlighting how the effect of mandatory price disclosure depends on market characteristics*.'[184]

10.45 We also note that the modelling adopted in some of the studies we have reviewed has potential limitations, so care should be taken in drawing general conclusions from these.

Existing transparency measures in the UK

10.46 In the UK, PFSs generally have roadside signs to show how much fuel costs so motorists can see the price before they drive onto the forecourt.

10.47 As we noted in our Urgent Review,[185] there are currently a range of digital comparison tools which help consumers compare the price of fuel. For instance:

(a) The Consumer Council for Northern Ireland provides a Fuel Price Checker which enables consumers to compare the highest, lowest and average petrol and diesel prices in each town in Northern Ireland and is updated on a weekly basis. It does not, however, indicate prices for individual PFSs, or show their specific locations.

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[182] Dewenter, Heimeshoff, Luth The Impact of the Market Transparency Unit for Fuels on Gasoline Prices in Germany (2016).
[183] Final assessment of the Queensland Fuel Price Reporting Trial. The report finds that motorists in Brisbane who fill up at the minimum can save up to $171.60 relative to filling up at the mean price for calendar year 2020. A lack of competition, plus higher cost structures for retail fuel stations reduce this opportunity outside of Southeast Queensland. For example, motorists in Rockhampton (Cairns) could save up to $37.21 ($48.59) per annum.
[184] Montag and Winter, Department of Economics, Ludwig-Maximilians-Univesity Munich Price transparency against market power (2020).
[185] Road fuel review, 6.9 to 6.11.

(b) Price comparison websites, such as Confused.com and GoCompare, and other specialised providers, such as petrolprices.com, allow consumers to identify their nearest PFS and compare petrol and diesel prices in their local area. Other services, such as emails with a weekly update of the cheapest local fuel suppliers, are also available.

(c) Some route navigation apps and physical satnavs incorporate pricing data when displaying PFSs close to a route.

10.48 Many of these tools, and their providers, rely on price data provided by Experian which supplies organisations with information and analysis on PFSs. Others use or incorporate other data sources including crowdsourcing.

10.49 These tools give consumers valuable information, helping them make a more informed choice about where to buy road fuel. However, access to the data can be costly, and there are some limitations in the coverage of some of the datasets and on how frequently prices are updated. We also understand that consumers may face certain restrictions/obligations in accessing pricing data, for example: having to be members of a particular organisation, subscribe to particular services, receive advertising, or face limitations in the number of searches they may make in any one period.

10.50 We heard that usage of such tools is higher when prices are increasing and/or are volatile and that in 2022, the demand for the transparency tools spiked due to the high price volatility.

Risks associated with increased price transparency

10.51 Our assessment indicates that increasing the transparency of pricing information available to consumers can therefore have many pro-competitive benefits. However, if designed and implemented without sufficient care, transparency mechanisms may also risk anti-competitive outcomes.

10.52 One potential downside of increased transparency is a potential increase in the risk of tacit collusion and/or anti-competitive exchanges of competitively sensitive information between market participants – either of which could in theory lead to prices converging at higher levels than otherwise.

10.53 However, we consider that the potential benefits far outweigh the risks, which can be mitigated through the design and implementation of any scheme, and the CMA would stand ready to work with government in the design and implementation of any scheme.

10.54 The key challenge would be designing and implementing it in such a way as to mitigate collusion risks while also achieving the aims of the scheme by providing information to consumers that is genuinely useful and produces competitive

pressure to lower prices. The measures considered in the paragraphs above indicate that this can be achieved.[186]

Principles of the open data fuel finder scheme we are recommending

10.55 Drawing on lessons from other countries, from the findings of our market study and more generally from our experience as the UK's competition and consumer authority, we recommend that an open data scheme is placed on a statutory footing and based on the following principles:

(a) **Mandatory requirement for retailers to participate in the scheme, with robust provisions to ensure compliance**: as well as helping to ensure complete coverage of PFS prices, such an approach will also ensure a level playing field for retailers (eg in terms of compliance costs), and will prevent preferencing those who choose to participate. There should be appropriate provisions to ensure compliance, in particular in terms of the provision of pricing data by petrol retailers, the frequency of provision, and providing the ability to take enforcement action against non-compliance. Such measures could also require retailers to make it clear to consumers when they had run out of types of fuel.

(b) **Covering the entire UK PFS estate**: this will provide motorists with the ability to make the most informed choices from a comprehensive pricing data set. Any calls for exclusions should be given very close scrutiny so as not to dilute benefits to consumers.

(c) **Providing data that is fully accurate and as current as possible, ideally in real time**: this will allow motorists to search based on the most up to date prices.

(d) **Providing data in a format that would allow easy integration by software developers**: in particular, with mapping and navigational software. In our Urgent Review we said that we thought there is value in developing more formalised and comprehensive open data schemes, which could provide commercial opportunities for innovative third-party apps and websites to offer consumers real-time comparisons of fuel prices. Such schemes could also help consumers make choices based not solely on price, but on other parameters, including distance/time to travel; and/or facilities at the PFS.

[186] For example, in 2014 the ACCC instituted proceedings against a petrol prices data aggregator service and several petrol retailers, alleging that the data aggregator's price information exchange service allowed those retailers to communicate with each other about their prices, and had the effect or likely effect of substantially lessening competition for the sale of petrol in Melbourne. The matter was resolved through the data aggregator and retailers agreeing undertakings to make the pricing data available to consumers at the same time retailers receive it. ACCC (2015) Petrol price information sharing proceedings resolved.

(e) **As accessible as possible for consumers**: motorists should not face hurdles to access such data, and consideration should be given to facilitating additional solutions that may assist those that are digitally excluded, or less able to use digital solutions.

(f) **Designed so as to minimise the risks to competition and consumers**: the principles outlined above such as mandating retailers' involvement in any scheme, ensuring robust compliance to ensure accurate information is reported and ensuring data is as accessible as possible to all competitors and consumers will help maximise the benefits to competition and minimise risks of collusion. These risks can be mitigated through process design measures such as:

(i) Outsourcing any central collation and/or validation of pricing information to a third party so as to prevent direct exchange of information between market participants.

(ii) Ensuring disclosure of current prices rather than future pricing intentions to reduce the competitive sensitivity of the information.

(iii) Designing commercial contracts, eg with data aggregator(s), to govern data dissemination, to further mitigate risk of data sharing between market participants.

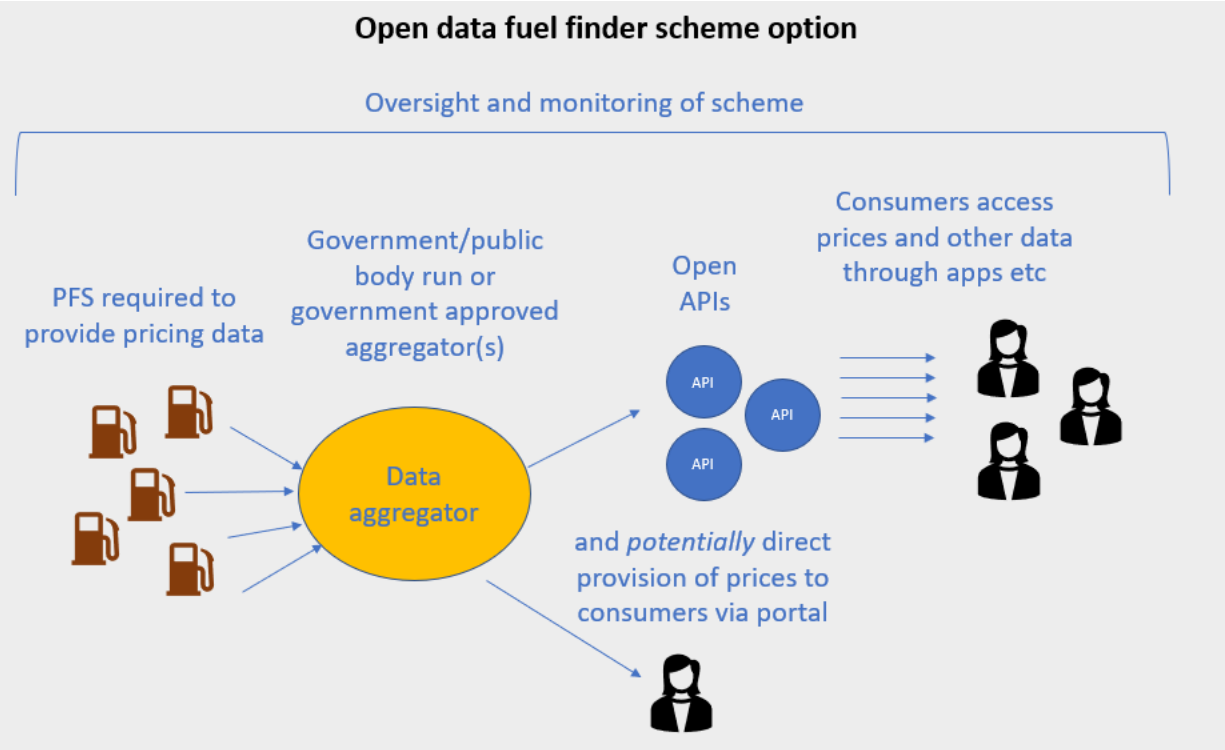
Operationalising an open data fuel finder scheme

10.56 As described above, different countries have adopted different models to facilitate comparisons using pricing data, with varying levels of government and/or regulatory involvement. To illustrate, aggregation of data could be outsourced to a government approved aggregator responsible for collecting fuel pricing data and providing access to third parties via APIs, as is currently the case in Australia. On the other hand, as in the case of Austria, the country's energy regulator aggregates pricing data from market participants and provides this direct to consumers through its online database and to certain third parties for use in apps.

10.57 In any model that is adopted, we consider that data mandated through the scheme should be made freely available to third parties to use and provide innovative services to consumers.

10.58 Government should also consider appropriate arrangements for oversight and monitoring of an open data fuel finder scheme, particularly if any part of it is outsourced.

10.59 The graphic below illustrates how an open data fuel finder scheme could be operationalised.



Implementation of an open data fuel finder scheme

10.60 Draft legislation to enable the development of Smart Data Schemes (The Data Protection and Digital Information Bill) could provide a vehicle through which this scheme could be delivered.

10.61 The CMA has experience of open data schemes in other markets – in particular, we note the benefits brought to consumers and businesses through the implementation of Open Banking following the CMA's retail banking market investigation (and that an open data scheme for the road fuel sector would be comparatively much simpler to implement) - and we stand ready to work with the government if it chooses to pursue this recommendation.

Costs

10.62 While implementing and maintaining an open data fuel finder scheme would introduce new costs, we consider that these would be relatively small and justified given the size and significance of the sector, and our findings.

10.63 In terms of ongoing costs to retailers, we do not think that these would be overly burdensome in the longer term. The regulatory impact statement developed in connection with the Queensland model estimated that '*ongoing costs to fuel retailers will be about an extra five minutes of staff time for every fuel price change to upload data to the aggregator. This time period is the same, regardless of how many fuel types a fuel retailer has at a fuel retail site. There will also be additional*

costs to fuel retailers to initially establish systems and processes to comply with the new requirements and to report fuel prices to the aggregator.'[187]

10.64 We note that in Queensland, prices can be reported in straightforward ways: direct reporting online; data upload via an API; bulk data upload through a third-party agent; or by telephone, if an internet connection is not available.

Ongoing road fuels price monitoring of the UK market

10.65 In addition, and as complement to the open data fuel price finder we recommend above, we have considered the role for an ongoing "fuel monitor" function to oversee the market.

Recommendation to government

10.66 We recommend that government creates an ongoing road fuels price monitoring function, by tasking a public body with the role and providing it with information gathering powers needed to generate insights in the complex and changing UK market.

10.67 The fuel monitor should report on the state of the market, the effect of open data remedies in improving outcomes for consumers, and help the government decide whether or when intervention in this market, or support for consumers, is required, within the context of market dynamics and its wider net-zero transport strategy.

10.68 We recommend that government takes forward this recommendation as soon as possible, using the legislative vehicle discussed below, to ensure that consumers obtain maximum benefits in as timely a manner as possible, especially as they continue to face cost of living pressures.

Basis for the road fuels price monitor recommendation

10.69 We believe that our recommendation of an open data fuel price finder will have a positive effect on competition in fuel retailing, for the reasons set out above. However, we consider it would be well-complemented by a road fuel price monitoring function, for several reasons.

10.70 First, changes we have seen in the market, such as supermarkets competing less aggressively on price, persistent price variation between local areas and higher motorway prices for customers without access to fuel cards may continue to develop, and may still not have been fully felt in the market.

[187] Regulatory Impact Statement: Fuel Price Reporting 2018.

10.71 Second, the expected future path for this sector during the transition from fossil fuel to zero carbon vehicles points to worsening competition in the remaining fossil fuel-based road fuels market. This is likely to occur over an uncertain time period, is likely to be felt particularly by less well-off consumers, and by those living in local areas where competition is already more limited.

10.72 Third, while we believe it will have a positive effect on the market, the exact impact of our price transparency measures is also uncertain, being dependent on speed of roll-out, take-up of the tools it would enable, and the impact of these tools on competition.

10.73 Given these factors, it may become necessary to consider further intervention to increase competitive pressures in this market. In order to do this effectively, it is vital that policymakers, stakeholders and motorists have a clear view of what is happening in this market. Furthermore, getting this clear view is not straightforward, given the complexities of assessing competitive dynamics that have been illustrated in this report.

10.74 Lastly, we note that the updates we have provided during this market study have been followed soon after by price cutting announcements, and/or notable retail price falls. While this shows correlation rather than clear causation, it suggests to us that public scrutiny or monitoring may help reduce prices and so benefit consumers.

The purpose and scope of the fuel price monitoring function

10.75 We therefore propose that the government create an ongoing monitoring and reporting function on the state of the road fuels market. This could provide insight of the type gathered in our market study on an ongoing basis, which in turn could help the government to decide whether or when further intervention in this market, or support for consumers, is required, within the context of its wider net-zero transport strategy.

10.76 More specifically, the monitoring function should:

a) **Provide regular, public updates on the state of competition at a national and local level** in the UK market, using appropriate analysis and metrics

b) **Periodically examine important topical questions in the UK road fuels industry**, for example on potential changes in competition in particular fuels, regions, or other market segments

c) **Consider the performance of open data and any other remedies/ interventions** in the UK market

d) **Be ready to provide advice to government in the medium term on the need for and/or nature of potential interventions to improve competition or consumer outcomes** in road fuel markets

e) **Provide a point of contact for motorists or local communities concerned about specific competition issues in their areas,** responding if and when resources allow

10.77 The monitoring function's remit should be focussed primarily on petrol and diesel road fuel. This because we have identified material concerns in these markets in our market study, and have done so to a greater extent than we have in other road transport markets such as during our 2021 Electric Vehicles Market Study.[188] The monitoring function will, however, need to take account of the intersection of the petrol and diesel markets with the development of zero carbon transport technologies and markets.

10.78 To future-proof its role, the monitoring body's remit should cover all levels of the road fuels supply chain from refining to retailing. However, given the findings of our market study we expect its principal focus to be in the retail sector. Moreover, we would not expect the road fuels price monitor to focus significant work on markets which are beyond the control of UK government and institutions, for example as may be the case in the international extraction and refining sectors.

10.79 As its purpose is monitoring, this new road fuels function would not take additional powers to act or intervene directly in markets. It would instead rely - if needed - on recommendations to government or other existing bodies/ functions.

10.80 We do not recommend that the road fuel prices monitor should set recommended prices or approve retailers who meet them.[189] We set out our reasons for rejecting price regulation below, from paragraph 10.106.

Operationalising the fuel monitor function

10.81 We recommend that the government should operationalise the monitoring function by formally tasking a public body with the role.

10.82 We note that international counterparts of the CMA, for example in Germany and Australia, have been given monitoring roles of differing kinds in the road fuel sector. The argument for agencies of this kind taking such roles is that the issues are primarily related to competition and consumer concerns.

10.83 However, there is also an argument that this function would sit better with a body that has wider responsibilities, for example in overseeing the net-zero transition in

[188] Electric vehicle charging market study.
[189] We are aware a suggestion along these lines has been made by the Fair Fuel campaign: PumpWatch Proposal.

transport. This makes sense when key choices on policy relating to the transition which are or will have a significant impact on consumers in traditional road fuel markets.

10.84 We recommend the monitoring function be given powers to obtain non-public information from market participants, similar to those available to the CMA during a market study. This is due to the complexity and volatility of road fuel markets, and the challenges in providing appropriate insights in the areas we have outlined based on limited information.

10.85 We note that we been able to draw significantly more informed conclusions in our road fuels market study, by drawing on internal, company-specific accounting and margins data, than we were able to do in our non-statutory Urgent Review, which used public and commercially available data on market-wide benchmarks only. Data on fuel volumes has also been important, and is likely to become more so as the sector reduces in size with the EV transition, and this is not available publicly.

Examples of road fuel monitoring functions in other jurisdictions

10.86 Monitoring functions of the type we are recommending exist and play a valuable role in a number of other jurisdictions around the world. This section provides some background on how such functions operate in Australia and Germany.

Australia

10.87 The ACCC has had an enhanced role in monitoring the road fuel market since 2008, when the minister responsible directed them to monitor the prices, costs and profits of unleaded petrol products for a period of three years and report to him by 17 December each year.[190] This followed the publication of the ACCC's inquiry into the price of unleaded petrol, which was published in December 2007. Since then, the direction has been reiterated several times, most recently in December 2022, and has been widened out to encompass diesel and liquefied petroleum gas.

10.88 The monitoring of the prices, costs and profits of unleaded petrol has been undertaken in accordance with Part VIIA of Australia's Trade Practices Act 1974. The ACCC's functions under this part are to:

- hold price inquiries
- examine proposed price rises for goods or services that have been declared by the minister

[190] ACCC Petrol Report 2008.

- monitor the prices, costs and profits of an industry or business under the direction of the minister and report the results to the minister and make them publicly available.

Part VIIA of the Act also enables the ACCC to compel the provision of information and documents (s. 95ZK) where necessary.[191]

10.89 As part of fulfilling this role, the ACCC has published several different types of report:

(i) Annual monitoring reports into the prices, costs and profits of unleaded petrol in Australia, which were published each December from 2008 to 2014.

(ii) Market studies into individual local petrol markets (Darwin, Launceston, Armidale, Cairns and Brisbane), which were published between 2015 and 2017.

(iii) A number of industry reports into aspects of consumer interest in the fuel market, which were published between 2018 and 2021; and,

(iv) Quarterly reports on the Australian petroleum market, which have been published every quarter since December 2014.

10.90 The quarterly reports, which are the ACCC's main current publication under the monitoring function, provide detail on developments in the petroleum industry, ACCC activities in relation to the market, movements in retail prices (and the components of those prices) for petrol, diesel and LPG, and movements in the price of crude oil and refined products.

Germany

10.91 As set out in paragraphs 10.29 to 10.31, above, the German Bundeskartellamt (BkA) runs a Market Transparency Unit for Fuels. The primary function of this unit is to oversee the price data sharing scheme for road fuel. In addition to this, however, it also performs a monitoring function in the market.

10.92 Like the ACCC, the BkA publishes both regular and ad hoc documents setting out data and analysis in relation to the market, including:

(i) A series of annual reports[192] covering developments in the retail price of fuel, the difference between crude oil, refined product and retail prices, and geographic variation in prices.

[191] ACCC Petrol Report 2008, page 6.
[192] Bundeskartellamt: Markttransparentzstelle fur Kraftstoffe (MTS-K), Jahresbericht 2021.

(ii) A sector inquiry into refineries and wholesale fuels, which has so far resulted in the publication of an interim report[193]. Unlike our market study, this inquiry has no formal deadline.

Implementing the road fuel prices monitoring function

10.93 We recommend government should legislate for the powers necessary for a monitoring function, as outlined above, when legislative time allows. This could include, for example, using the Digital Markets, Competition and Consumer Bill which is currently before Parliament as a legislative vehicle.

Collective impact of the open data fuel finder scheme and road fuel prices monitoring function

10.94 We consider that, if implemented successfully, and taken together, our recommendations in relation to an open data fuel finder scheme and ongoing road fuels price monitoring function will address the issues we have seen in the market in the most effective and proportionate manner.

10.95 We would expect an open data fuel finder scheme to have a positive impact on the three concerns we have identified in the retail market:

- We would expect this to go some way towards countering the weakening of competition in the national retail market, via the impact of consumers moving away from higher-priced operators. We would expect to see the premium that higher-priced operators can charge over local market leaders to be reduced as this premium becomes more visible, in real time, to consumers. While this would not necessarily fully restore the incentive of supermarkets to reduce their margin targets toward previous levels, it would provide some incentive in this direction. In particular, it would increase the incentive on a retailer to undercut prevailing prices, because they could expect their lower prices to be clearer to the public, and therefore to gain market share more efficiently.

- We would also expect this to reduce price variation between local areas, in similar ways, by increasing the pressures on retailers to reduce prices. It may also widen the effective search area for consumers locally, by allowing them to more easily consider purchases at a wider range of PFSs. We would not, however, expect this to completely eradicate local price variation as some of the factors that are associated with lower prices in an area, in particular the presence of a supermarket competitor, would remain the same.

- We would also expect this to have some effect on high prices at motorway PFSs. While drivers could compare prices at different motorway PFSs, the

[193] Bundeskartellamt: Mineral oil - Sector inquiry into refineries and fuel wholesalers - Interim report.

clustering of prices we have observed at these means that they may not derive much benefit from this, limiting the competitive pressure that may be exerted in this way. A more likely route would be by making drivers more aware of fuel prices at PFSs located close to motorway exits, or to anticipate fuel needs and plan to fill up near the start or end of a journey, allowing these PFSs to exert more of a competitive constraint on motorway prices.

10.96 However, while we consider such benefits are likely to be material, this may not be sufficient to deliver strong competition in the market.

10.97 First, the expected future path for this sector during the transition away from ICE vehicles points to increased market concentration and worsening competition in the remaining fossil fuel-based road fuels market. This is likely to occur over an uncertain time period, and is likely to be felt particularly by less well-off consumers and by those living in local areas where competition is already more limited.

10.98 Second, while we believe it will have a positive effect on the market, the exact impact of an open data fuel finder scheme is also uncertain, being dependent on speed of roll-out, take-up of the tools it would enable, and the impact of these tools on competition.

10.99 Given these factors, we believe that a monitoring function would have an additional positive impact on the sector in two ways.

10.100 First, it would act as a deterrent to individual firms taking actions that would further weaken competition in this market. Where firms are aware that they are under scrutiny, they will know that the reputational risk of raising margin targets or applying rocket and feather pricing will be increased.

10.101 Second, it would allow for an ongoing assessment of the effectiveness of competition in this market, and whether we had reached the point where further intervention in the market was required, if, as we expect, the market becomes much smaller over time. In order to do this effectively, it is vital that policymakers, stakeholders and motorists have a clear view of what is happening in this market. Without a dedicated monitoring body, getting this clear view would not be straightforward; this study has illustrated the complexities of understanding competition in this market in recent years, which will only be amplified by the great changes the market will experience as we move through the net-zero transition.

10.102 Taken together, these two measures, if implemented, would reinforce each other in providing a significant new source of pressure in favour of greater competition in road fuel retail sector, as well as allowing us to carefully monitor the impact of fundamental change in the nature of the sector that may, in time, require further intervention to protect consumers.

Remedies we do not recommend taking forward at this stage

10.103 Beyond the open data and monitoring remedies set out above, we have considered a range of other remedies, which we are not proposing to take forward at this stage.

10.104 Our decision to reject these measures rests on a consideration of likely costs and benefits; while road fuel retailing has become less competitive, we do not think that this has progressed to the point where the expected benefit to consumers of taking these measures outweighs the expected costs to consumers of doing so.

10.105 As the industry develops, including in response to the expected decline in demand for road fuel in the coming years and decades, however, this calculus may shift. An important element of the monitoring function we are proposing is to provide accurate information to allow policymakers to determine whether this is the case.

Directly controlling price levels

10.106 We considered whether acting to directly control prices would be an effective and proportionate way of addressing the concerns we have in this market. Having considered various ways this could be done, we do not believe it would be feasible to do this in a way that would be likely to improve overall outcomes for consumers at this time, and there would in fact be significant risks of making outcomes worse.

10.107 Costs vary between retailers and PFSs for a number of reasons. These include the volume of fuel sold, the real estate costs associated with the location and different lags in wholesale price terms. Retailers have different revenue streams from other non-fuel sources as well.

10.108 This means that even if an appropriate competitive price could be set for one or some number of PFSs, it would likely be too high or too low for many other PFSs in the market.

10.109 Directly controlling prices to a set level therefore causes significant risks of disruption to supply. If supplying fuel ceases to make economic sense for retailers in certain areas there is a significant risk of creating shortages at the pumps of those retailers who do continue to supply in the short term. In the longer term 'fuel deserts' may begin to appear, as higher cost retailers or PFSs closed their businesses. There is evidence of outcomes of this kind from price caps which were implemented and then withdrawn in Hungary.[194]

[194] Hungary scraps fuel price cap after drop in imports curbs supply.

10.110 In addition to risks to supply, directly controlling price levels could also facilitate price coordination and higher prices, as if the set price is above pre-existing price levels in some areas, it could form a focal point for retailers to converge up to.

10.111 While setting more than one price, for different areas or retailers, could address some of the variation in costs and revenues, with c.8000 PFSs in the UK, it could soon become too complex to be feasible.

10.112 Due to risks of supply shortages, considerable implementation challenges, and losing benefits of competition, we therefore do not recommend this remedy at this time.

Directly controlling margins

10.113 We also considered controlling margins, in particular as a means to counteract the increased margin we have seen at a national level as result of the weakening in competition.

10.114 Focussing on margins could in principle avoid some of the problems of controlling prices which stem from PFSs having different costs bases, as we explained above, by taking them out of the equation.

10.115 However, we consider there would be likely to be similar risks as we have outlined for controlling prices. In particular, fair or competitive margins may vary for different business models and retailer characteristics, for example based on the volume of fuel they sell, and over which they would need to spread their fixed costs.

10.116 The task of setting fair margins for so large a number of PFSs if efforts were made to tailor them based on their specific circumstances would also risking becoming unfeasible.

10.117 Moreover, there are a number of different measures of margins which could be considered, for example fuel margins, operating margins or others, and retailers are likely to use different accounting approaches, making comparisons difficult. Furthermore, there could be incentives for costs from retailers' wider business to be inappropriately allocated to the fuel business.

10.118 Taking costs out of the equation and focussing on margins alone would also remove the pressure for retailers to keep costs low, through innovation and efficiency. This could therefore lead to rising costs, falling productivity, and rising prices for consumers over time.

10.119 Given these considerable implementation challenges and risks, some risk of supply shortages as well as losing benefits of competition and incentives to reduce costs, we do not recommend this remedy at this time.

National/intrabrand pricing rules

10.120 We have considered whether there could be a role for national or 'intrabrand' pricing rules to limit the significant degree of price variation we have found between and within local areas, and about which we have received many queries and complaints.

10.121 This approach would involve requiring all or a subset of retailers with a sufficiently wide geographic footprint to price at a single level, or within a band, at all of their PFSs.

10.122 The actual price level would be set by each retailer, most likely by choosing an optimal price for their estate as a whole, rather than as they currently do for individual PFSs. Since the price would be set by individual retailers, it would avoid the difficulties of an external body setting a level for them, as we have described for price and margin controls.

10.123 There could be benefits for motorists in areas with higher prices and less competition, however those in areas with low prices and stronger competition could lose out. The overall impact could be higher rather than lower fuel prices on average.

10.124 Retailers without a national footprint could be significantly affected, for example if they were based solely in a generally higher cost area, they may struggle to compete and remain open against lower cost national rivals, and this could reduce the number of PFSs available to consumers.

10.125 There is also a risk that changing the basis of competition from a local to national or regional level could create an opportunity for retailers to raise prices, for example if it provided a new focal point for doing so.

10.126 There is a further risk that companies could reconfigure their estates in response, by buying or selling higher or lower cost PFSs, and by so doing change their overall position in the market, potentially circumventing the intention of the remedy.

Fiscal measures

10.127 The Rural Fuel Duty Relief Scheme gives 5 pence per litre reduction to fuel retailers in the specified rural areas on the standard UK rate of excise duty for unleaded petrol and for diesel. This applies to the following areas, which were chosen because they exhibited high prices, high fuel transport costs and low sales volumes:

- Inner and Outer Hebrides

- Northern Isles
- Islands in the Clyde
- Isles of Scilly
- post town of Hawes (Northern Yorkshire)
- post code districts in:
    - England — EX35, LA17, NE48
    - Scotland — IV14, IV21, IV22, IV26, IV27, IV54, KW12, PA38, PA80, PH19, PH23, PH36, PH41

10.128 While it may be possible to reduce local price variation by amending this scheme, or adopting other fiscal measures, we did not consider this in our market study. Any fiscal intervention of this sort would be aimed at achieving distributional goals (by distributing taxpayer money to fuel purchasers in specified areas) rather than making the fuel market work more effectively. As such, this is an issue for the government to consider, rather than the CMA.

Structural changes to the industry

10.129 Finally, we considered whether there were options to fundamentally change the structure of the industry that could effectively and proportionately address the concerns we have observed.

10.130 One option to do this would be to create regulated monopolies on a franchised basis, as has been used in the rail sector and elsewhere. Another option would be to create publicly-owned retailers in areas of lower competitive intensity.

10.131 These options could have potential benefits in terms of allowing for greater visibility of costs to any potential regulator, and so aiding with price-setting, and in terms of increasing supply and competition in areas where this is currently lower.

10.132 These options would however significantly reduce the market pressure for cost reduction and innovation which comes from competition, both in terms of individual retailers' own operations, and through impact on other companies in the market.

10.133 There would also be significant costs and time involved in making the transition to any such new structure.

10.134 As a result, there is again a significant risk that this would result in consumers in general paying more than they would without this intervention. We therefore do not believe it would be appropriate to pursue this type of intervention at this stage.

Wholesale

10.135 We have considered whether the pricing of biofuels in contracts may be leading to retailers and therefore consumers being charged a price that does not accurately reflect the cost of biofuel components.

10.136 In the current circumstances of the market, we are concerned that the use in supply contracts of the FAME-10 benchmark (as opposed to UCOME, which is the type of biodiesel actually used) has increased both the average price paid by retailers, and hence by consumers; and the volatility of those prices.

10.137 We are publishing our findings (including in Annex E) to inform the approaches of market participants, particularly as they enter contract negotiations.

10.138 We are particularly concerned that high FAME-10 prices have at times caused the biofuel component of wholesale prices to exceed the level implied by the RTFC buy-out price which the Government intended to protect consumers, and that this could happen again. This has arisen because the design of the RTFO includes the buy-out price as a safeguard to protect drivers from very high costs being passed on at the pump, but this is typically not reflected in contracts. We consider that there is a case for intervention in relation to this issue.

10.139 We therefore consider that it may be appropriate and proportionate for Government to consider whether there is any mechanism that can be put in place to help ensure that the biofuel component of wholesale prices does not exceed the level implied by the RTFC buy-out price in new contracts.

Refining

10.140 As set out in Section 8, we have not found any concerns around competition in the UK refining market, and therefore we do not make any recommendations for intervention in relation to refining.

Next Steps

10.141 If implemented, we believe that our proposed remedies will work to both improve the functioning of the road fuel retail market and guard against negative consequences arising from the repetition of some of the problems we have recently seen in the market and the emergence of new pressures as we move through the net-zero transition.

10.142 We will therefore engage with policymakers to explain our findings and recommendations, encourage the UK government to accept them and, if they do so, work with them to develop the most effective policy approach to help motorists

to get the best possible deals, and protect them from any ongoing or emerging deficiencies in the functioning of this market.